

THIRD EDITION

4



Skills for Success

READING AND WRITING

Karen Hamilton

Teacher's Handbook
WITH TEACHER ACCESS CARD

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Critical Thinking Foundations: Implications for the Language Classroom

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Critical Thinking has become a buzzword in education over the past decade (Finnish National Board of Education, 2004; Moore, 2013; Mulnix, 2012; Scriven & Paul, 2007) and for good reason—it is a very important skill for life. But how should we, as educators, best integrate critical thinking into our language learning classroom? This article will give a working definition of critical thinking, shed light on the foundations of critical thinking, and provide some concrete avenues to introduce it into your classroom.

What is Critical Thinking?

It can be very difficult to get a good grasp on what critical thinking is because it can be a particularly nebulous concept, made up of sub-objects which form the foundation of what most people envision as critical thinking (Scriven & Paul, 2007; van Gelder, 2005). To understand critical thinking, we need to first understand what it is made up of. The building blocks of critical thinking are higher-order thinking skills (HOTS). These skills, which are the fundamental skills utilized during the process of critical thinking (Dalton, 2011; Ford & Yore, 2012), are essential to understand in order to start students on the path toward being critical thinkers. Textbooks like *Q: Skills for Success Third Edition*, which integrate language practice that focuses on the implementation and development of HOTS in a second language, help to enable students to become more critical thinkers.

What are Higher-Order Thinking Skills?

Higher-order thinking skills are derived from Bloom's Revised Taxonomy (Krathwohl, 2002) which gives us a simplified, yet powerful, way to look at how students use their brains to remember, process, and use information (Fig. 1). The top three sections of Bloom's Revised Taxonomy are what many consider the higher-order thinking skills, or activities, if you will. One of the best uses for the taxonomy is attributing verbs to each tier in order to help an educator build activities that utilize these skills. Each skill has a myriad of verbs that comprise the level of thinking which, when integrated into a textbook, help students develop their understanding of a new language, and also foster the ability to think more critically about the information presented to them in the classroom or even in life.

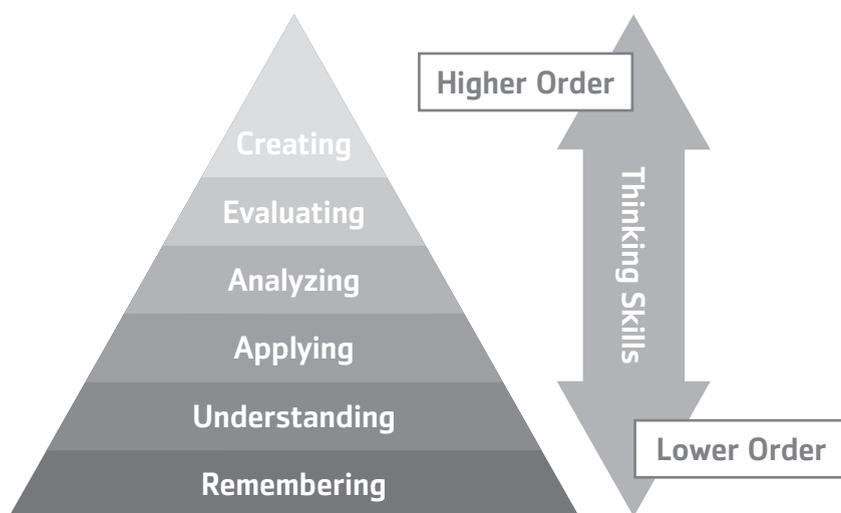


Fig. 1: Bloom's Revised Taxonomy

The verbs that are associated with the higher-order thinking skills are essential for developing the potential for critical thinking. The following are a few verbs, with activity suggestions that come from *Q: Skills for Success*, for the higher-order thinking skills that you can use in your classroom.

Analyzing

Analysis in language learning has a few beneficial effects. First, students are introduced to using their own judgement in the process of learning a new language. This helps in the development of pattern recognition and familiarization with the structure of knowledge. This aids in the student's ability to distinguish between items, recognize fact or opinion, and compare and contrast items. These skills are valuable in the production of both written and spoken English.

One way to integrate analyzing into language learning is to have students order information by a metric. Students are given a list of data and are asked to organize it into an order. This order could be derived from categories, a hierarchy, a taxonomy (like Bloom's), time, location, and importance. This can be further developed into a more challenging task by asking students to distinguish data from a series of similar information. With words that are similar in meaning to each other being used in the same text, it could be beneficial for students to practice differentiating these words and identifying how they differ from each other. Words like *tasty* and *mouth-watering* are very similar but have different depth or connotations.

You can push these activities to have a critical-thinking bent to them by asking the students to justify and explain their organization of data to a partner or a group. By explaining their thought process on how they organized the information, they open themselves up to questions and deeper reflection on how they used the information activity.

Evaluating

From simple sentences to complicated grammatical structures and vocabulary, all students can give an opinion. The important thing is to make sure their opinion is well formed. This is where evaluating comes into play. It can help students make judgements about information, opinions, and items. It is used to form judgements that are sound and based in logic. This leads to more complex usage of language and the development of more intricate sentence structures.

A good way to introduce evaluating into language practice is to have students assess the validity of an opinion/information. When a student hears or reads an opinion or some information in a textbook, it is important to encourage them to ask questions about it. Where did the information come from? Is it factually correct? Does it stand up to the norms of the student's home culture? With the aforementioned activities in mind, you can ask students to start making their own opinions about information presented to them in a textbook and from the research they do on their own. In addition to the forming of opinions, it is just as important to require students to justify their answers with the information they found from the research.

Creating

Finally, we come to the act of creating. The highest tier of the HOTS taxonomy, creative thinking is essential for getting students curious and using English in situations not covered in a textbook. Creation is beneficial for mental flexibility, originality in producing language, and making critiques on what students read and hear. These abilities are core to developing fluency and spontaneity in academic and everyday interactions.

Teachers can bring students into creation in language activities by expanding topics into active learning opportunities. By taking a textbook's topic further and expanding on the initial setting or information, students can use real-world problems to acquire new knowledge. By creating solutions to problems, advice for friends, and even recipes for food, students are engaging in the act of creation. These activities can be further expanded into critical thinking activities by having students analyze shared recipes, research substitutions for advice, or justify the solutions they create (using facts and information found in research).

Conclusion

As you can most likely see, many of the higher-order skill activities tend to build upon one another. This is because each step in the hierarchy depends on the lower rungs of knowledge. These skills then form the foundation of critical thinking and encourage students to participate in intellectual pursuits to further their language acquisition experience. These types of activities can help students in developing fluency and achieving higher test scores (Dunn, 2016; Parrish & Johnson, 2010; Wong, 2016). All students, regardless of home culture, have the innate talent to utilize Critical Thinking Skills. These skills have the ability to impact almost every aspect of a student's life, from job hunting to gaining promotions and even making friends. By integrating higher-order thinking skills into language practice, educators can have an impact on a student's life even outside of the classroom.

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TIPS

Critical Thinking tips for Q Third Edition

As you start getting into *Q: Skills for Success*, you will find that higher-order thinking skills and opportunities for students to utilize critical thinking are well integrated into each unit. While it would be completely possible to use only the book (and the online activities) to improve a student's ability to utilize critical thinking, some educators may look to expand activities and get students to look deeper into the subjects introduced in the text. Below are three suggestions for expanding activities in the Student Book that will help you get the most out of it and your students.

1 Change the terms of an activity

When doing an activity, it can be beneficial for your students to tweak the parameters of an activity. *Q: Skills for Success* comes with excellent activities that utilize higher-order thinking skills to promote critical thinking. An example of this could be an activity that asks students to categorize information, for example, categorizing family members by age. The categorization metric, "age," could be changed to something else entirely.

Change the metric: Have students categorize family members by height, employment, or even how much they like each family member. This encourages mental flexibility and primes the student for creative use of English.

Get the students involved: Ask students to come up with new ways to approach the activity and use these ideas to expand on the topic, vocabulary, and skills they can practice.

2 Get online

Twenty-first century skills have come to the forefront of the educational mindset. Giving students the opportunity to go online, use English, and even go beyond the Student Book is important for utilizing skills that students may need to be a global citizen. *Q: Skills for Success* comes with a host of online practice that utilizes and expands the topics, vocabulary, and grammar in the textbook.

A jumping-off point: Educators can push students even further into online research and expansion of the learning topic. Have them investigate aspects of a topic they find interesting.

The class consensus: After students do their own research, have them share their findings with the class and write them on the board. After everyone has shared, you can discuss the results from a whole-class perspective.

3 Expand into deeper critical thinking skills

Q: Skills for Success Third Edition has an array of first-rate critical thinking and higher-order thinking skills built into each unit with activities in the Student Book and in the Online Practice. Once the activity is finished, you can further move the class toward critical thinking skills by having students share their answers, ask questions about how they came to those answers, and justify their answers to each other.

Give students the chance to compare and contrast: By giving students the opportunity to share answers with each other and compare their findings, you allow them to brainstorm new ideas, evaluate each other's answers, and develop debate skills naturally.

Justify justify justify: Whenever you have your students give an opinion, make sure they are justifying their opinions with evidence, life experience, or both. Circular logic like "I like pizza because it is delicious, and it tastes good." is something that needs to be avoided. A better answer would use their life experience to justify their like of pizza such as, "I like pizza because it is delicious. Tomato sauce is so great and even a little healthy!" Strive to have students give good opinions at all times.



Making Assessment Effective

Elaine Boyd Q Series Consultant, Assessment

In most educational settings nowadays, the requirement for assessments, both classroom and summative at the end of a course, is increasing. Teachers regularly assess their students informally in class, but they often get very little support or training in what and how to assess in a more structured way so that the tests are valid for learning and give reliable information to the teacher. Teachers intuitively understand that any assessment needs to be fair—both in terms of what is expected of the students and in the results that reflect the students' ability or competence in language. A learning program should include ongoing assessments that feed back into the classroom, give students information about what they need to focus on, and allow teachers to plan class content according to their students' needs. This is commonly known as Assessment for Learning and, although these assessments are usually conducted informally in class, they still need to be designed and delivered in a way that is fair and valid if the tests are to support learning effectively. What can help teachers to both manage and deliver fair and meaningful assessments that progress learning is an understanding of the principles that underlie assessment, why these principles are important, and how to make sure any assessment aligns with the principles.

The main points to consider when implementing an assessment program is the purpose of the assessment, its suitability for the intended test-takers (i.e. the students), and the reliability of the results. We capture these by implementing three principles—validity, reliability, and fairness/fitness for purpose. Let's consider each in turn.

Testing principle 1: Validity

We say a test is valid when we know it is testing what we intend it to test and that the testing focus (or construct) aligns with what the test-takers needs are. Put simply, this means you need to have a very clear idea of what construct (or sub-skill/competence) you are testing. For example, if we want to test a speaking skill, we don't set a task that involves a lot of reading because we will not know if the student has given a poor performance because of a lack of competence in reading or in speaking. Equally, if we want to assess a student's discourse competence, such as the internal organization of a piece of writing, then we need to give them a task that gives the test-taker a good opportunity to demonstrate this. Each test task needs to have a tight focus on what it is testing and not aim to assess too many things at the same time. This is why tests often have a variety of task and item types. This is arguably the most important principle, and if a test is not valid, it will never be reliable or fair.

Testing principle 2: Reliability

Reliability is very important for major summative tests, which can be very high stakes in that they can have a life-changing outcome. But many teachers do not realize that reliability is important even for classroom tests. We need to be sure that the information we are getting about the students' learning or achievement is correct because actions ensue from these results. This means even for informal classroom and ongoing assessments, we need to aim to make any assessment reliable. We do this by making sure the instructions are clear, that the tests are standardized so that even different versions are testing the same skills or competences, the marking is standardized, students are only tested on what they have been taught, etc. This can be a particularly challenging issue when we think about productive skills, which are core to communicative competence, but it is important to be as consistent as possible so that our students feel that they have been fairly assessed.

Testing principle 3: Fairness

In many ways, fairness is what drives the need for valid and reliable tests, but there is another aspect to fairness that can make a real difference to the test-taker and that is their involvement in the process. This involvement includes communication with students about what is expected of them and why, ensuring they are aware of what they will be assessed on, e.g. performance criteria of grading scales, and always giving meaningful feedback regarding the results of the assessment. This is especially important in ongoing classroom assessment models.

Effective feedback

Arguably the whole purpose of an ongoing classroom assessment program is to generate feedback, which will help both the students and the teacher. It is important for students to understand both what they have been successful at, as well as where they could improve. At the same time, classroom assessment also generates feedback for teachers so they can understand where they may need to implement a remedial or alternative approach to the learning objectives. Research evidence indicates that feedback works best (a) when it is given as soon as possible, (b) when only one or two points are targeted for improvement, and (c) where good guidance is given to learners on how they can improve, i.e. the specific action they need to take to help them. Remember all the tests have an extended answer key which explains why one answer is correct and others are not. This is to support teachers with any explanations and for students who may wish to reflect on any incorrect answers.

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TIPS

Assessment tips for Q Third Edition

1 Make sure students know what is expected of them

Before starting any test, discuss with students what they will be assessed on. This might be a skill or a vocabulary set or a range of language features.

Students need to know how they are being assessed, so go through the rubrics for Writing or Speaking (this will be one or the other – Writing for *Reading and Writing*; Speaking for *Listening and Speaking*) with them to make sure they understand the different assessment criteria and how these link to their learning.

2 Give feedback as soon as possible after the test

Discuss or point out what students have done well and then give them, either individually or as a class, a single point to improve. Discuss ideas with them around how they might improve but make sure you also have some suggestions to support them.

3 Use the student reflection worksheet

Make sure students understand each question in the worksheet; then allow them to complete it individually. Students can then discuss their answers in pairs, groups, or as a whole class. You can vary this throughout the course so everyone can share ideas. It's a good idea to build up a list of options for Questions 4 and 5 that everyone can have access to.

4 Use the expanded answer key effectively

The answers can either be discussed with the class or you may wish to ask students to do their own analysis first and then check how close their understanding is. If, after checking, students are still unsure of why an answer is incorrect, use the expanded key to discuss as a class and/or to prepare any remedial activities.



Using Video in Language Learning

Tamara Jones Q Third Edition Author

Did you know that approximately 300 hours of video are uploaded to YouTube every minute? From clips of popular TV shows to music videos to online talks, there is a seemingly infinite variety of videos out there for teachers and students to use as language learning resources.

In fact, there is so much out there, it can actually feel a bit overwhelming. It's incredibly time-consuming to weed out the videos that aren't appropriate or aren't at the right level. Once educators find a video for use, we have to figure out how to transform it from a passive activity to an opportunity for language learning. But creating a worthwhile activity that matches the learning outcomes for the lesson and pushes students to produce language takes time, something today's educators have precious little of.

So before we dive down the YouTube rabbit hole, it's important to keep in mind the reasons why we use videos in our English lessons and how we can save time by taking advantage of videos already tailored to our lessons.

The Benefits of Using Video in Language Learning

First, videos provide an excellent scaffold for academic topics. The visual support they provide can give students access to content that otherwise might be beyond them. For instance, if students are learning about the laws of science, as they do in *Q: Skills for Success Third Edition, Listening and Speaking Level 4*, watching a video on Moore's law can help students understand better what they are hearing.

In addition, students of all ages genuinely enjoy watching videos. Watching TV is a popular activity for relaxation around the world, so learners tend to associate it with positive emotions. Neuroscientists assert that positive emotions tag learning events and give them prominence in the memory. What this means is that there is actually a biological purpose for making language learning fun, and using videos is one way to achieve that goal.

Finally, videos are an increasingly common source of information in the world nowadays. Where people used to get their news and information from articles and books, now they might also search for video clips on a topic as well. So exposure to video and incorporating them into teaching regularly is a useful 21st-century skill. However, as alternative sources for information have flourished, the need for students to become skeptical consumers has also grown. Critical thinking skills, therefore, are an important part of learning from videos.

Using Authentic Videos

The internet is crammed with all kinds of videos. But which ones will best meet the needs of our learners? Most teachers would probably agree that using authentic videos, in other words, content that was created with a purpose other than language learning in mind, grabs the attention of students and can motivate them and challenge them. The problem is that "real" videos are often very difficult for people who are not yet proficient users of a language to understand.

The most obvious solution to this problem is for teachers to turn to graded videos. For instance, beginning level students would probably be frustrated if they had to watch an American news report about the emotional benefits of running. The pace of the speaker would be too fast and the students probably wouldn't know much of the vocabulary. However, a graded video covers the same topic and the same content, but with vocabulary and grammar structures that are familiar to the learners and at a pace that is manageable. Luckily, teachers who use *Q: Skills for Success* can take advantage of the videos and accompanying activities presented in the Student Book and online. These videos come from authentic sources, though the language is often graded at lower levels to make the content accessible and level-appropriate.

Using Teaching Videos

The internet is chock-full of English teaching videos, too. There are lessons on everything from grammar points to conversation strategies to pronunciation tips. Sometimes these skills videos are great. Because the information is under the control of the students, they can watch them again and again and even use them to review for quizzes or brush up on their skills. Certainly, these videos allow students a certain degree of autonomy over their learning.

However, it can take a while to find videos that are relevant to the lesson. Unfortunately, not all the skills videos out there are accurate or of a high-quality. Sharing skills videos such as these with learners requires a teacher to spend time searching for videos that are a good match for the students and the lesson, are well-made, and (most importantly) are actually correct.

Again, *Q: Skills for Success* comes to the rescue. The skills videos that accompany each unit are professional quality, level-appropriate, and reliable. These videos can be used to introduce new concepts, provide additional support for struggling students, and allow opportunities for review.

Using videos in language learning is certainly fun, but it's not just fun. Videos can help students learn more easily and remember more. Although it can require a time commitment from teachers (unless you are using the *Q* videos, of course), most students would agree that it's time well spent!



TIPS

Video tips for Q Third Edition

1 Prepare

Using a video in class involves a lot more than just playing it. After all, the key is to make the video more than just the video; there always has to be a pedagogical purpose to everything we do in the classroom. So it's important for teachers to plan follow-up activities, such as answering comprehension questions, defining new vocabulary, writing sentences, or completing a T-chart. *Q: Skills for Success* offers scaffolded activities like this that have been created with your learners in mind; however, you can always include a few more activities if your students find a topic particularly engaging.

2 It's not just for listening

Consider using videos for more than just listening comprehension. You can integrate video expansion activities into every skill area—reading, writing, listening, speaking, grammar, vocabulary, and pronunciation! The *Q: Skills for Success Teaching Notes* contain many out-of-the-box ideas for squeezing every last drop out of a video clip. You might be surprised to learn all the different ways to use videos in the language classroom that go far beyond the traditional fill-in-the-blank activity.

3 Use the transcript

When possible and appropriate, make sure students have the opportunity to read the transcript as they watch a video. The act of listening while reading is enormously helpful to English learners because it reinforces sound/spelling correspondence and helps weaker listeners develop bottom-up listening skills like segmenting speech into words.

4 Flip the classroom

Experiment with using videos to flip the classroom. Assign skill videos from *Q* or those developed by other teachers online as homework. Make students accountable for watching the video by giving them a handout that asks questions about things that appear in the video as well as about the skill itself. Then in class, set aside a little time to address questions before transitioning into interactive practice activities. Flipping the classroom reduces the amount of teacher talk time and increases the amount of time that students have for producing the language. As well, struggling students can watch the skill video again and again until they understand, as opposed to having one chance at hearing the information in a teacher's lecture in class. It's a win-win!



To go online or not to go online?

Chantal Hemmi

Chantal Hemmi suggests a hermeneutical process to finding out about student progress and future needs.

A hermeneutical process is all about being a good listener and observer of student progress over time: 'Essentially, hermeneutics accords an important role to the actors and demands sensitivity and ability to listen closely to them' (Young and Collin, 1988:154).

With increasing learner access to both authentic materials as well as materials written for language learners online, teachers are faced with a question: Shall I go online in class or not? The same goes for homework. One way to make this informed choice is for teachers to think critically about the aim of the lesson. Here are some questions we could ask ourselves:

- Will the activity raise interest in the new topic area?
Is it more effective to go online to stimulate interest in the subject, or do we want in-class activities that incorporate an interactive, kinesthetic element with the use of cue cards or pictures to encourage students to brainstorm activities interactively?
- Do we want to go online to do a reading or listening exercise, or a vocabulary learning activity for input? Can this be done more effectively online, or are your students in need of more face-to-face scaffolding of content and language before you go online?
- Are we encouraging students to develop their autonomy by going online to do some research on an essay or presentation topic? Do the students have access to a library from which to borrow books or download reliable materials? Which is the better option for them, to go online or to use paper-based publications, such as books?

The choice must always link into the aims of our courses. We have to bear in mind the strategy we want to take in order to develop students' knowledge of the content, the language they need to function in the class, and also the opportunity for students to think critically about what they are learning. Teachers must decide what mode of input and output we want in order to scaffold the content, language and skills students need to deal with communication in our diverse global communities.

How do good teachers that I know find out about what is authentic to the learners? Some go for needs analysis questionnaires. Others opt for interviewing or focus groups where you set a list of semi-structured open-ended interview questions that you want the learners to discuss.

In my view, teaching itself is a hermeneutical process of finding out about where the students are with their learning, what they have learnt and what they are still not confident about, and how they want to get the input, online or through basic scaffolding through classroom interaction, with the teacher facilitating the construction of new knowledge or language input. Not only should we be a good listener and observer, but also we should have the ability to choose tasks that best fit the class learner profile, based on our observations about where they are with their learning.

Thus, a hermeneutical process of finding out about student progress and future needs does not only look at snapshots of learners at a point in time, but looks at what happens over a term, or over the whole academic year. For example, a short speaking or writing test taken before mid-term can show a snapshot of the student's ability at that point in time. But we can include different modes of assessment such as group interviews, presentations, and essay-writing tests to see what kind of progress is observed over time. The key to making the process hermeneutical is to construct a dialogue through online or paper-based learner diaries so that students can reflect on their progress and about what they are learning. The teacher can make comments about student observations and thus sustain the dialogue over a period of time.

I myself learnt through experience that when I am still being controlled by the actual technology, blended learning cannot help to manifest the aims of the course. The beauty of an effective blended learning journey will only be actualized when the teacher gains control over the technical as well as the methodological knowledge and skills to design courses so that in every lesson, the teacher knows why he/she is going online or choosing to stay with face-to-face input. Blended learning is a site of struggle, because the teacher has to question his/her role and to become skilled in making those important decisions that are going to play a crucial role in the design of our courses. Ultimately the aim is to conduct activities that benefit our learners with varying needs. Finally, blended learning also gives the teacher and students opportunities to explore effective modes of learning and to make the learning experience authentic to the learner.

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TIPS

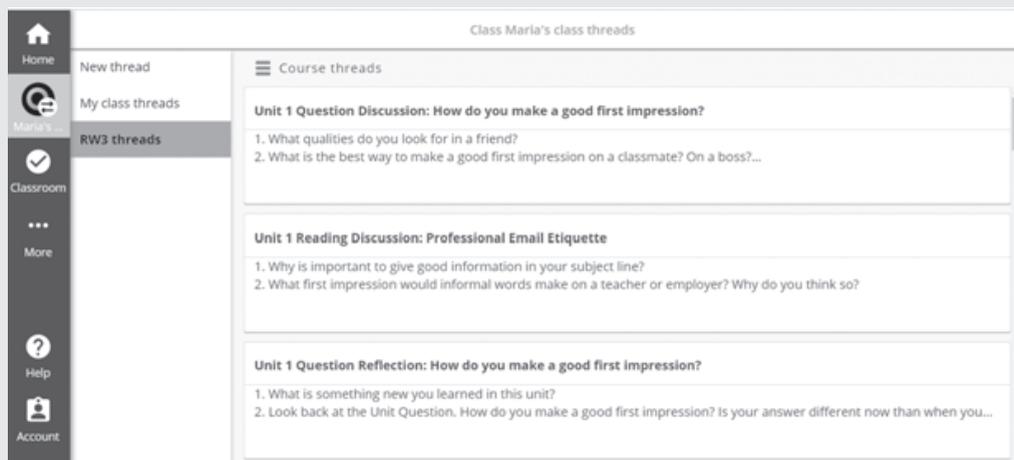
Blended learning tips for iQ Online

1 Always think what your end product is going to be at the end of a unit

What do your students need to be able to do at the end? What kind of content, language and skills input do they need to be able to reach that goal?

2 To go online or not to go online, that is the question!

At the start of the unit, students have the opportunity to discuss the unit question online. Ask whether it is the right time to take the students to the Online Discussion Board or not. Have the students already got a rapport with each other to work collaboratively face to face? If so, this might be a good time to do some learner training to demonstrate how the Online Discussion Board works.



3 Reading an online article: applying the study skills learnt off line

Go online to guide students to preview the vocabulary, read the paragraphs and do Quick Write. This is a good way to encourage students to interact with the text online. The reading exercises present examples of sentence structures and vocabulary needed to do the final writing task. This is a nice way to integrate the reading and writing activity.

4 The end product: the writing assignment

At the final writing stage, a writing model is presented to scaffold the shape of the writing task. This is followed by graphic organizers that show the structure of the paragraph, and grammar exercises online.

Students plan and write the assignment online. After writing, there is a peer review exercise that could be done. If my students need practice in writing offline, in handwriting, I might ask the students to do so without going online.



Using Communicative Grammar Activities Successfully in the Language Classroom

Nancy Schoenfeld

Have you ever tried to use a communicative grammar activity in class only to have it flop? Have you ever stood helplessly by as students look blankly at each other and then commence to talk with one another in their native languages? I have. It is an unpleasant feeling to watch your students have an unsuccessful experience in the language that they are trying to learn, especially when you chose the activity. I admit, too, that after such an experience I've thought that communicative activities just don't work.

Fortunately, I have discovered that communicative grammar activities DO work, that students enjoy them immensely, and they have an impact on language learning. Communicative activities in general encourage students to learn in creative and meaningful ways while promoting fluency (Richards & Rodgers, 2001). I have also discovered that HOW the language teacher executes the activity is just as important as the activity itself. I hope that these suggestions will help you as you plan to use communicative grammar activities in your own classrooms.

Sequencing

First of all, it is important that communicative grammar activities are positioned properly in the overall grammar lesson. (see Fig. 1). One mistake that I made was to have my students attempt to do a communicative grammar activity too soon. Ur (1988) suggests that there are four parts to grammar lessons: presentation, isolation and explanation, practice, and test. However, the "practice" step can be broken down further into three additional steps which build upon each other (Ur, 1988).

The first type of practice activities should be devoted only to the form of the grammar being taught. This gives a chance for students to understand the rules. The next type of practice activities allows students to focus on form plus the meaning of the grammar point. Last are the communicative grammar activities which allow for freer expression by students while still utilizing the taught forms. As you can see, there is a lot of work to be orchestrated by the instructor before attempting these activities.

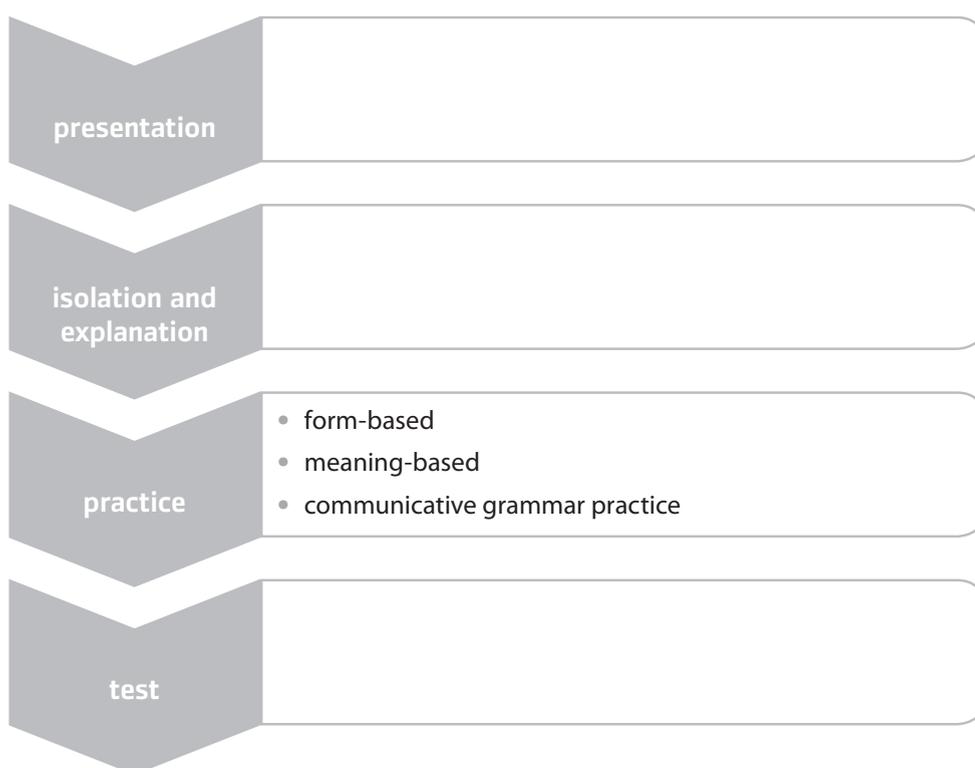


Fig. 1 Sequencing grammar lessons (Ur, 1988)

Modeling

Before launching into a communicative activity, it is important to **model** the activity properly. It is not enough to merely *tell* your students what to do, you need to *show* them how to execute the task. For example, if the task is to practice question forms and I've given my students a list of questions to ask three other students, and a place to take notes, I would model the activity by having a student join me up in front of the class while I ask him some of the questions and record the answers. Then I ask another student to join me and so forth.

It is also important to show your students what they *aren't* supposed to do. To use the above example, it is tempting for students to form a group of four students with one person answering the questions and the three others recording the answers. This severely limits the amount of language practice the activity was designed for. And if you don't want students to look at each other's papers, such as in an information gap activity, mime holding your paper close to your chest so students understand that they are to talk and listen and not read.

Observing

During the communicative grammar activity, it is important to circulate around the room. The purpose for this is two-fold. First, you want to make sure that all students are participating fully in the activity and that they are not facing any difficulties. Sometimes students are stuck on the meaning of a word and this is preventing them from completing the activity. Your attentiveness can help them get unstuck and proceed. It is also a good opportunity to listen in on how students are using the grammar being practiced. If you hear a lot of errors, note them down and address them when the activity has finished.

Being persistent

Finally, it is important to not give up if your first forays with communicative grammar activities are not as successful as you hoped. Our students come from a variety of educational backgrounds. If they have had negative English language learning experiences, they bring those instances with them into our classrooms. Some students may be reticent to speak because errors brought punishment, belittlement or embarrassment. Others may have just been conditioned to take high-stakes language exams and have had little opportunity to actually communicate in English. In his excellent book on student motivation, Dörnyei (2001) describes different strategies that teachers can utilize to overcome these difficulties. These include making sure that language tasks can be completed successfully by students, that the activities themselves are fun and relevant, and that the teacher makes the classroom environment as comfortable as possible for students.

I will never forget the first time I conducted a successful communicative grammar practice activity. The classroom atmosphere changed completely. My students were smiling and laughing, grateful for a chance to move around and actively communicate with each other instead of just being passive listeners. I was thrilled because they were getting vital practice in an enjoyable and meaningful way. I was also pleased with myself because I hadn't quit trying to make this moment possible. Yes, successful communicative grammar activities require a lot of thought and planning on the part of the teacher, but the dividends are gold. May you and your students experience many of these golden moments.

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TIPS

Communicative grammar tips for Q Third Edition

The practice stage of a grammar lesson has three distinctive parts: form-based practice, meaning-based practice, and communicative activities. Here are examples of all three types of practice activities focusing on conjunctions.

1 Form-based practice

Students practice when and when not to use commas while using conjunctions. The conjunction is provided for students so they don't need to worry about the meanings of conjunctions at this stage.

Directions: Insert a comma where necessary.

1. I like to eat chicken but not fish.
2. I lost my credit card so I need to get another one.
3. We will visit Paris and then we will fly to London.
4. Do you want tea or coffee?

2 Meaning-based practice

This next practice activity requires students to add the correct conjunction according to the meaning of the sentence.

Directions: Add *and*, *but*, *or* or *so* to the following sentences. Add a comma if necessary.

1. They were hungry _____ they ordered some pizza.
2. Do you want to go out for breakfast _____ lunch?
3. I have six brothers _____ sisters in my family.
4. I like this bag _____ it is too expensive. I can't buy it.

3 Communicative activity

A communicative activity allows for freer communication while still practicing conjunctions. Each student will have different answers which makes the activity interesting.

Directions: Ask 5 students the following questions. Students should use *and*, *but*, *or* or *so* and complete sentences when answering.

1. What is your favorite food? What food do you not like?
2. What two places would you like to visit on your next holiday?
3. What are two things you usually do on weekends?
4. What reason do you give your teacher when you are late to class?

In Q Third Edition, each unit has a communicative grammar activity designed to give students freer and meaningful practice using the grammar introduced in the unit. You can download these Communicative Grammar Worksheets on iQ Online Practice.

Freewriting:

- Students write non-stop for 5–10 minutes about whatever comes to mind that might relate to the topic, again without censoring themselves. Next, students reread what they wrote and circle words that seem important to what they want to say. Include words that describe facts, important names, opinions and feelings. Include synonyms that are related words in different registers.
- Using these selected words, describe your plans to a partner.

Paragraph Analyses:

Select a paragraph that is written in the same genre or on the same topic as the assignment. Provide copies or project on a screen. Read together as a class, drawing attention to vocabulary with questions such as:

- Which everyday words are used here?
- Which academic words are used here? (See examples at oxfordlearnersdictionaries.com/wordlists/opal).
- Focus on one well-used word at a time; what is behind the author's choice of each word? Select another paragraph and repeat this activity. Pairs work together to answer the same questions as above. Compare answers.

Bottom Line for Your Students

Different types of writing use different types of words. Even very academic papers don't use a large number of academic words, but they use them effectively. Academic texts contain an average of 10% academic words (Coxhead, 2006).

Drafting Stage

In this stage, vocabulary activities can evolve from a focus on meaning to a refinement of meaning, always related to whom you are writing for and why you are writing.

- As your students begin their first draft, refer to the words they identified during prewriting. Organize the way these words relate to each other as they develop their first draft.
- Return to the source text for the assignment or other relevant articles on the same topic. Identify words that stand out to your students as interesting and important to the message. Use these words in the writing.

Bottom Line for Your Students

Word learning doesn't just mean to learn new words, but also to learn to have confidence to use words that you recognize but don't use often. Writing gives you a chance to use partially-known words and to build your knowledge of these words.

Revision Stage

The revision stage is a time to check that your students' writing responded to the prompt, and that it focused on the purpose and audience as intended. Examples of doing this with a focus on vocabulary include:

- Ask your students to re-read the prompt and then re-read their papers. Do they address the prompt? Are there any words in the prompt that can be added to their papers for the purpose of congruity?
- Read through the papers and look for vague words (*good; nice; very*). With purpose and topic in mind, change them to be more specific and clear.

Bottom Line for Your Students

A study of 178 university professors found that the greatest problem with the writing of non-native speakers in their classes was vocabulary. They said vocabulary (more than grammar) kept them from understanding the meaning. (Santos, 1988) Your word choices are very important.

Editing Stage

The editing stage can be used as a guided opportunity to check for details of word-use including subtleties of meaning, lexical variety, grammatical features, derivatives and collocations. With this stage, students work with a final or near-final draft. Guide students to read through all or part of the paper, *focusing on one task at a time*:

- Lexical variety: Did they over-use any words? Did they repeat the same word in the same sentence?
- Noun use: Check their accuracy: Are they plural? Singular? Countable? Uncountable?
- Verb use: Do they "agree" with the nouns in plurality? Check for verb completion. Do the verbs need to be followed by an object? Do they need a "that" clause?
- Academic word use: Underline each academic word used. Has the student used them correctly? (When in doubt, check a dictionary.) Do they have enough? Too many?

Bottom Line for Your Students

You may have been taught to focus on grammar when you edit your paper, but grammar and vocabulary often overlap. Take time to focus on individual words; do they say what you mean and say it accurately?

Writing instruction and word learning belong together. These are some examples of ways to engage vocabulary development in writing.

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TIPS

Vocabulary tips for Q Third Edition

1 Prioritize important words

Help students to focus on the words that are most useful for them to learn, and encourage them to use those words. *Q Third Edition* incorporates both the Oxford 3000 or the Oxford 5000 and the Oxford Phrasal Academic Lexicon (OPAL), corpus-based lists that identify the most useful words to know in a general and academic context.

2 Use model texts to draw attention to vocabulary

Before starting the writing task, project the writing model on screen. Read together as a class, drawing attention to vocabulary with questions such as:

- Which academic words are used here?
- For each OPAL word, suggest a less formal word that the author might have used. What did the OPAL word add?
- Which everyday words are used here? What do they add?

3 Use the vocabulary from the reading

Students will have been exposed to relevant vocabulary in the reading part of the unit. Ask them to go back and refer to the earlier reading texts and Quick Write, and circle important words that they want to use in the writing assignment.

4 Encourage awareness of academic vocabulary

Students can highlight OPAL vocabulary in their writing. During the editing stage, check the following:

- Are there too few academic words? Too many? Does each academic word mean what you intend?
- Collocations: Are words combined accurately?
- Lexical variety: Are any words over-used? Or are the same words repeated in the same sentence?

5 Use technology to motivate students

Students can practice vocabulary online. For example, the vocabulary activities on *iQ Online Practice* make for a good revision tool. Each word has an audio file for pronunciation. This helps with memorizing the new words.



Why Take Notes?

Margaret Brooks Q Third Edition Author

Whether in the context of taking a phone message or listening to an academic lecture, note-taking is an essential skill for most language learners. In order to help learners acquire this skill, it is important to consider first the special challenges language learners face when trying to listen and take notes.

Short-term memory

One of the most self-evident issues is that it takes a language learner longer to process audio input than it does a native speaker. One reason for this is that a person's short-term memory is shorter in L2 than in L1. People employ short-term memory (usually measured in seconds) when processing audio materials. For example, when listening to a long sentence, the listener may need to hold the whole utterance in his/her mind and review it in order to comprehend it adequately. For the L1 listener this happens naturally, without the person being aware of it. However, for the language learner, this mental review process may not always be possible in the available time (Rost, 2005; Martin and Ellis, 2012).

Language structure

Another factor is the need for a mental map of the language, an internalized knowledge of the vocabulary and structures. A native speaker is grounded from childhood in the structures of the language and knows what to expect. We know, in fact, that people do not actually hear every word when they listen. But they hear enough to be able to parse out the meaning or reconstruct the sense quickly. They can "fill in the blanks" with words not actually heard.

Cultural expectations

Finally, in addition to being familiar with the semantic and syntactic aspects of the language, a listener may need to know of certain cultural expectations. Names of people and places and knowledge of events or history familiar to the average native speaker may be unfamiliar to the learner. All of these are things that may cause the listener to hesitate, stop listening, and try to think about what was said, while in the meantime the speaker continues. The listener then loses the thread and finds it difficult to bring attention back to the task.

How note-taking can help

In the face of these challenges, it may seem that adding note-taking to the listening tasks in the classroom may be a step too far for many. How, for example, can we expect high beginning students to listen and write at the same time? However, when the tasks are appropriate for the learners' level and carefully implemented, note-taking can actually improve comprehension.

Taking notes helps the student maintain focus and attention. It encourages a more engaged posture, such as sitting forward in the seat. The act of handwriting also aids in attention. Interestingly, studies have shown that students taking handwritten notes performed better on comprehension tests than those taking notes with an electronic medium such as a laptop or tablet. The reason for this is that handwriting is slower than typing. The writer has to summarize content, which involves more mental processing than faster typing. This in turn leads to better understanding and retention (Mueller and Oppenheimer, 2014).

The following are some examples of note-taking practice activities for the language classroom:

Preparing to listen

Although this is not a note-taking skill in itself, it is a necessary first step in the classroom. In real life, people do not usually approach something like a lecture or other listening context without some idea of what they will hear. They will have read assignments leading up to a lecture, received the agenda for a meeting, or at the very least know something about the topic.

We often put learners at an unfair disadvantage by starting a listening task by just saying, “OK, now listen to this.” Pre-listening activities level the playing field by giving learners realistic preparation for the task. These can consist of things like pre-teaching key words, exploring students’ prior knowledge of the topic, or short reading selections related to the topic.

Focusing on main ideas and key words

Some students have a tendency to equate note-taking with dictation and set out to try to write every word – something impossible even in L1. Activities that focus on writing only main ideas and key content words address this issue and help develop short-term, as well as long-term, memory. When students write down a few important words as they listen, seeing the words is a memory aid and helps them follow the flow of the ideas.

This strategy is essential when dealing with authentic listening texts at higher levels of language study and, by extension, in real-world situations. Authentic texts are likely to contain chunks of unfamiliar language that become “roadblocks” if students are not able to move past them and keep listening for key words.

Using a variety of organizational systems such as outlining, the Cornell Method, or even word webs

This enables students to follow the development of a speaker’s ideas and “remember” them from start to finish as they listen. Presenting several ways of organizing notes shows that note-taking is essentially a personal task. Each person has to find a system that works for them.

Reviewing and adding to notes soon after a lecture or presentation

The purpose of note-taking in an academic setting is to provide students with a tool for study and review. In a business setting, notes from a meeting might be used to write a report or prepare a task list for a project. Notes consisting of just words and short phrases will not serve the purpose, as the note-taker will quickly forget how to put these together into a coherent record of a lecture or meeting, for example. In the classroom, students can review notes and expand what they have written. Also, even though there is no “rewind” function in a real-world lecture hall, it is useful practice for students to listen again and add to their notes.

Collaborating with others

Students often suffer from the mistaken notion that asking questions or getting help from others somehow diminishes them, makes them seem “stupid”. They forget that even native speakers do this all the time and it probably comes naturally to them in their first language. In the classroom, students can compare notes with classmates, ask questions about things they didn’t understand, and listen again to verify information.

Providing students with an opportunity to practice note-taking in a controlled and “safe” environment not only gives them a skill that will be useful in a variety of settings from the lecture hall to the meeting room, or even a doctor’s office, but also helps them become more attentive listeners and improves general comprehension.

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TIPS

Note-taking tips for Q Third Edition

1 Foster a welcoming environment for critical thinking

Give attention to pre-listening activities. Teachers sometimes feel that this is “giving away” too much information and that the listening will not be a good “test” of students’ skills. Remember that the listening tasks in Q are practice, not a test. Pre-teaching vocabulary and bringing out students’ prior knowledge simply gives them tools that an L1 listener would bring to the task.

2 Acknowledge the adult learner’s prior experience in academic settings

When presenting a strategy, ask if students have used a similar strategy in their L1 note-taking experience. For example, in Level 2 the note-taking strategy has students sketch plants for their notes. This is a quick way of recording information that would be difficult to put down in words. Ask if students ever use sketches in their L1 notes. For what subject matter would they be likely to do this?

3 Do as much as possible to lower stress levels as students listen

The controlled practice in each note-taking presentation in Q is an accessible activity designed to build confidence. For challenging material, you might want to “warm up” first. Tell students that you are going to play a portion of the recording and that you want them to tell you just one thing that they understood—even if it is only a few words. Play a short segment of the recording and then elicit answers from the class. This gives students a feeling of success and as they listen to their classmates’ responses, they get more insight into the content of the listening.

4 Encourage students to use charts and other graphics to organize their notes

Elicit suggestions from students as to what type they might use. Does the listening describe a process? Then some kind of flow chart might be useful. Does it contrast two things such as pros and cons in an argument? Students might consider a T-chart.

WORK WITH THE LISTENING

A. LISTEN AND TAKE NOTES Listen to the presentation about sudden wealth. Take notes in the chart as you listen.

Q RESOURCE: Go online to download extra vocabulary support.
Resources > Extra Vocabulary > Unit 7

Sudden Wealth	
Positive effects	Negative effects

5 Provide feedback and follow-up activities after a listening

In real life, students often compare notes after a class. Many Q activities replicate this process in the classroom, asking students to compare notes with a partner, ask and answer questions about what they have heard, or add more information to their notes.



Writing is a complex language form practiced by users of all languages (both native and non-native) for everyday social and communicative purposes and, for many, for vocational, educational, and professional needs. It has been variously described as a *product*—a piece of writing with a particular form and the expectation of “correctness.” And as a *process*—a journey that takes writers through stages where they discover they have something to say and find their “voice.” From the cognitive perspective, it is seen as a set of skills and knowledge that resides within the individual writer and from the sociocultural perspective as a socially and culturally situated set of literacy practices shared by a particular community (Weigle, 2014). With these perspectives in mind, all teachers of writing must ask: How can I help my students improve their writing and what are best practices in the classroom?

Needs assessment

An important first step is undertaking a needs assessment, whether informal or formal, to learn what kinds of writing students need. From this assessment, a syllabus or curriculum can be developed or a textbook series selected that is a good match with your students’ needs. Typically, the instructional sequence starts with *personal/narrative* writing in which students have to describe or reflect on an experience or event. This usually leads to *expository* writing in which students learn to develop a thesis statement and support this controlling idea in the body of their writing. *Analytic* or *persuasive* writing is the most challenging type of academic writing because students must learn to state and defend a position or opinion using appropriate evidence (Ferris, 2009). These kinds of academic writing tasks require students to become familiar with a variety of text types and genres.

Improving vocabulary and grammar

The academic writing class also provides the opportunity for students to fine-tune their grammar and expand their academic language vocabulary. Typically, by the time our second language students are engaged in academic writing, they have been exposed to the majority of grammatical structures in English (e.g. complete tense system; complex constructions such as relative clauses and conditionals), but they still may need to learn how to integrate these structures into their writing. They also need to match text types with the kinds of grammatical structures needed. For example, in order to write a cause/effect essay, students need to use subordinating clauses with *because* and *since* and they need to use the appropriate transitional expressions like *therefore* and *as such*. Students will most likely have learned these structures in isolation but now need extensive practice and feedback to use them accurately in their writing. In terms of academic vocabulary, students need to differentiate the types of vocabulary found in everyday usage (e.g. the verbs *meet* and *get*) with their more formal academic counterparts *encounter* and *obtain* (see Zimmerman, 2009, for many other examples.)

In sum, the English for Academic Purposes curriculum must integrate reading and writing skills, and, as mentioned, grammar and vocabulary. Cumming (2006) points out that a focus on reading can lead to writing improvement and an opportunity to learn discipline-specific vocabulary. It also gives students something to write about. Combining reading and writing also provides needed practice in analyzing different text types so students see the features of these models. These kinds of activities create opportunities for more complex tasks such as summarizing and synthesizing multiple sources. A curriculum that integrates reading and writing also exposes students to graphic organizers for reading comprehension which students can recycle for pre-writing (Grabe, 2001). Finally, students need many exposures to similar tasks in order to master the complexities of academic writing and build confidence in their abilities.

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TIPS

Academic writing tips for Q Third Edition

1 Use prewriting activities to generate ideas

Process approaches such as Quick Writes give students a chance to focus on their ideas for the unit assignment without being overly concerned with grammar, spelling, and punctuation at this early stage. You can then use open-ended questions to help students expand their ideas based on what they have learned in the readings and rethink and clarify their thinking before writing the unit assignment.

2 Model different kinds of texts

Students are shown the specific features of the text type required in the unit writing assignment (e.g. compare and contrast). Have students read and critique the model. Through the models, students develop awareness of the discourse features inherent in the kinds of writing required in each unit writing assignment.

3 Analyze good examples

Students learn to analyze different types of writing. For instance, they are provided with a list of features of a good summary, then they have to analyze and compare sample summaries and decide which samples best exemplify the features of a good summary.

4 Teach grammar in context

The grammar component tightly integrates the structure under focus with the text type of the unit. So, for example, students learn how to use the grammatical notions of parallel structure and ellipsis and then apply these to their unit writing.

5 Encourage strategic learning

Q encourages students to be strategic learners in all domains. Writing tips, for instance, guide students toward understanding the notion of unity in writing. Students learn that their thesis statements must be supported by details; doing so will create more coherence in their writing.

WRITING TIP

When you are freewriting, remember to write whatever ideas come to you. You can improve and revise your ideas later.

Using the Online Discussion Board

Notes and guidance on why and how to use the Online Discussion Board on *iQ Online Practice*.

Using Discussion Boards for Language Learning.....33

Sigrun Biesenbach-Lucas, Ph.D. and Donette Brantner-Artenie, M.A.
Discussion Board Consultants

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Discussion Board: Students.....50



Sigrun Biesenbach-Lucas, Ph.D., Senior Instructor
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Many students beginning their academic study today come to campus equipped with strong technology skills, yet they soon discover that they need to make the transition from experienced users of technology for social purposes to effective users of technology for academic purposes. Becoming familiar with and engaging in a variety of genres is part of academic study and is critical for both native (NS) and non-native English speaking (NNS) students. For NNS students, however, “learning to function in the genres and with the discourse conventions of their discourse communities poses a particular challenge” (Cheng, 2010, p. 74). Academic writing is one of the many discourse communities in which ESL students need to function and to follow specific conventions. While ESL programs have long prepared students for traditional academic writing assignments, like essays and research papers, formal online writing is often neglected in ESL instruction despite the growing need for such preparation.

Reasons for not including formal online writing assignments can range from limited resources, instructors’ lack of confidence in their own technology skills, and questions about the relevance of this type of writing. A potential consequence of not addressing such writing is that NNS students may be less prepared for these types of assignments, which are becoming more common within hybrid classes, or blended learning contexts, or even in courses that are fully online. If ESL programs want to ensure that they prepare ESL students adequately for academic study, they need to consider ways to incorporate online writing components into their classes. In addition to serving as a “pathway to academic literacy development” (Cheng, 2010, p. 74) for

ESL students, online writing, through discussion boards or blogging tools, can offer them a greater variety of language learning opportunities to motivate autonomous language learning experiences. The same advances in technology that have afforded academic instructors with a variety of media that students use to demonstrate comprehension and applications of course content also need to be considered as additional tools for ESL teachers to use in their language teaching. The *Q: Skills for Success* series follows a blended learning approach that prepares students for future success and incorporates the benefits of online academic writing that are specific to language learning (Fig. 1).

Among online technologies, the discussion board is one of the easiest tools to use (TeacherStream, 2009), but students need to use the technology appropriately for formal online writing. Consequently, instructors need to make sure that they use this type of writing assignment effectively. More specifically, discussion board interactions should not involve informal or brief, undeveloped contributions resembling text messages or chats; rather, they should be carefully structured to generate well-supported, reflective ideas. “[A]lthough generally shorter and narrower in focus than a traditional essay, discussion posts should be as coherent and scholarly in tone [as essays]” (Discussion posts, 2014, para. 1). In this paper, we will first address the learning benefits associated with the use of discussion boards and then outline a structured approach to implementing discussion boards that maximizes their benefits and reinforces the idea that writing in online threaded discussions should be treated as a legitimate formal genre of academic writing.

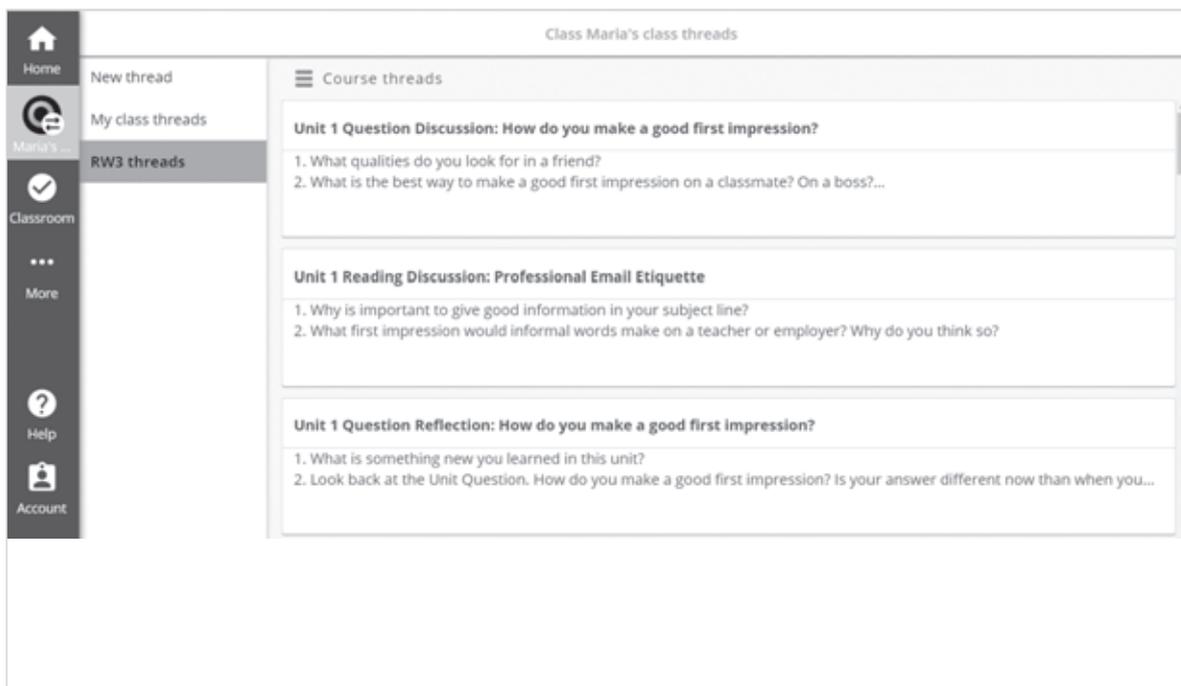


Fig. 1 Q: *Skills for Success* Third Edition, iQ Online Practice Class Discussion Board

Benefits

An examination of various sources that focus on the use of discussion boards with native speakers in educational settings (e.g., Blogs and discussion boards, 2014) shows that “the discussion board is the place where some of the most important learning can happen” (Generating and facilitating engaging and effective online discussions, n.d., p. 1), but only if implemented effectively. These types of posting activities typically include responses to and reflections on questions posed by the instructor or the textbook as well as replies to other students’ posts. Some discussion board activities may also require students to integrate ideas from course materials (e.g., articles, lectures) or from their classmates’ posts into their own posts.

Students in both content and language courses can benefit from discussion board writing activities. One outcome of these online tasks is that they prepare NNS students for future course work by developing their academic literacy skills (Cheng, 2010; Kingston, 2011) because a discussion board affords regular opportunities for students to practice their writing while following conventions for traditional types of academic writing, such as assignments with multi-paragraph structure, a main idea, and adequate support. At the same time, such regular practice

affords NNS students additional opportunities for language learning: teacher feedback provides added focus on grammar, vocabulary, and mechanics; classmates’ reactions to language choices increase students’ awareness of issues in their writing, such as lack of clarity and ambiguity.

Students also hone their critical thinking skills through discussion board writing, partly because of the asynchronous nature of the tool: students can take more time to reflect on their ideas or conduct research before they craft a post than they can in face-to-face classroom interaction (TeacherStream, 2009; Wijeyewardene, Patterson, & Collins, 2013). This deeper reflection usually results in more complex responses to the discussion board questions (Wijeyewardene, Patterson, & Collins, 2013) than are possible in oral discussions that take place in the classroom. Students who are shy, and therefore less likely to speak in class, can find a voice and take part in conversations online (Meloni, 2011). The confidence that students gain in online interactions can also transfer into the classroom.

Another outcome is that discussion board writing increases students’ sense of audience. Because their writing is posted online, students are aware that their classmates can access and read their posts. This means that the typical classroom writing audience of one (i.e., the

teacher) is expanded into an “authentic audience” (Blogs and discussion boards, 2014, para. 7) of many. Students are “exposed to a greater range and variety of interpretations of the topics they encounter in the course materials” (Goodfellow & Lea, 2005, p. 264). The heightened sense of audience and building of trust fosters a sense of learning community (Holland & Holland, 2014; Kingston, 2011; TeacherStream, 2009).

Considerations for the Teacher

Before implementing discussion board activities, teachers need to decide how and for what purposes these activities are going to be used. Traditionally, through their responses to questions posted by the instructor or through replies to specific classmates’ posts, students can demonstrate authentic and meaningful use of language. Effective discussion board tasks require students to explain opinions and ideas clearly, to integrate their own ideas with those from other sources (including those of their classmates), to synthesize ideas from multiple sources, and to use appropriate language to react to other people’s ideas. Through this process, instructors can guide students in demonstrating their knowledge of key concepts from class material, reflecting on and thinking critically about course topics, and working together to reach agreement on assigned topics (Lafford & Lafford, 2005; TeacherStream, 2009). Effective writing assignments in blended courses, both academic and ESL, seamlessly integrate discussion board writing prompts with the structure and content of the textbook or other class materials in one coherent framework. The authors of the *Q: Skills for Success* series follow this approach through their integration of the materials and activities in iQ, the online component of the series, and the Student Book.

Prior to implementation, instructors also need to assess the level of students’ skill in using the online courseware that is available to them. To ensure that students approach the task with a clear understanding of the instructor’s expectations, it is important for teachers to demonstrate to the class how to use the tool in an “orientation tutorial” (Wozniak & Silveira, 2004, p. 957) and allow the class to practice navigating the discussion board site before the

first formal assignment. Teachers should also have students explore model posts to discover the differences between discussion board writing and other forms of online communication with which students are more familiar (e.g., social media posts, text messages, email) (Generating and facilitating engaging and effective online discussions, n.d.).

Another consideration is the level of teacher participation in the posting activity. Based on students’ level, instructors’ choices can range from posting regularly—and, thus, serving as writing models for their students—to remaining an observer. However, at some point, all instructors need to shift from online participants who facilitate effective discussion board interactions to offline observers who monitor students’ interactions (Online discussions for blended learning, 2009; TeacherStream, 2009) so that the class can learn to maintain effective communication that is independent of the teacher’s guidance and modeling.

Since major goals of discussion board writing include developing critical thinking skills and reacting effectively and properly to the ideas of others, teachers should ensure that writing prompts contain questions that provide natural practice in these skills. Assigning a topic is not sufficient; good discussion board prompts encourage higher-order skills through *wh*-questions; questions that encourage students to reflect, interpret, analyze, or solve a problem; questions that draw out relevant personal opinion/experience; and questions that ask students to draw connections (Sample discussion board questions that work, n.d.). The materials in the *Q: Skills for Success* series, both the textbooks and the online supporting material, include such questions and allow instructors to pose their own questions/prompts based on these principles (Fig. 2).

Once teachers have decided which prompts to assign or which questions to post, they need to set expectations for and provide instruction in how to compose a quality post (Blogs and discussion boards, 2014; Boothon, 2012; Discussion posts, 2014; Goodfellow & Lea, 2005; Kingston, 2011; Online forums: Responding thoughtfully, n.d.; Wozniak & Silveira, 2004).

Unit Question: What makes food attractive?

1. What kinds of food do you eat every day?
2. What kinds of food do you eat on special occasions?
3. Look at the photo. Do you think how food looks— its presentation—affects how it tastes? Explain.

[Go to the Discussion Board to discuss these questions.](#)

Fig. 2 Examples of discussion questions from *Q: Skills for Success* Third Edition

Teachers should plan to address the following elements:

- requirements for participation and time parameters as well as expectations with respect to quality, length, and level of formality;
- a framework for composing well-developed paragraphs that address multiple questions, a format that tends to be characteristic of discussion board writing in academic courses; in ESL contexts, this framework should be designed to reflect the proficiency level of the students, progressing from the simple paragraph level to multiple integrated paragraphs;
- appropriate responses to classmates' posts that employ respectful and formal language, especially when there is disagreement about ideas;
- thoughtful responses to classmates' ideas that go beyond simple statements like "I agree with you," which are not constructive and do not promote further interaction among the students; responses that build on classmates' contributions and show critical thinking describe personal experiences, extend ideas to

other contexts, and/or support agreement or disagreement with sufficient examples; and

- effective incorporation of ideas from outside sources, such as class readings, lectures, and other material, and integration of ideas from multiple classmates' posts, especially when students are at higher levels of proficiency.

The discussion board activities in iQ gradually increase in complexity by level and require students to show increased skill in reflecting these elements of effective online writing.

In order for students to view discussion board writing as a legitimate academic genre and a relevant component of a course, it is critical that teachers provide routine, structured feedback (Blogs and discussion boards, 2014; Kingston, 2011; TeacherStream, 2009). One common approach to providing constructive feedback is through rubrics that assess quality, quantity, and language use as well as the observance of proper posting netiquette, which is defined as polite behavior for communicating online in a public forum. It is important that students become familiar with the writing criteria that their

teacher will assess; in the iQ Discussion Board Teacher Pack, one of the reproducible worksheets is a discovery activity in which students apply a sample rubric to a model post. For the teacher's convenience, reproducible rubrics are also included in the iQ Discussion Board Teacher Pack. Once students are aware of the criteria in the rubrics, instructors can encourage them to use these rubrics as pre-submission checklists and for informal evaluations of their own writing.

Conclusions

When used effectively, discussion board activities offer NNS students a platform for “rehears[ing]” academic writing (Cheng, 2010, p. 74) and composing “thoughtful, constructive responses” to others’ ideas, with which they may or may not agree. Students are likely to encounter the need for such language functions in future academic and professional contexts (Online forums: Responding thoughtfully, n.d., para. 7). Given that gaining proficiency this genre of writing poses specific challenges to language students, it is essential to implement online academic writing within ESL courses.

Regardless of the extent to which instructors incorporate discussion board writing with other required academic writing assignments, they need to guide students in establishing connections between their learning in the online environment and their face-to-face interactions in the classroom (Wozniak & Silveira, 2004). These connections ensure that ESL students understand

that discussion boards are an important learning tool that they can employ and through which they can improve their academic language skills. For these reasons, discussion board writing activities are a valuable tool in ESL instruction.

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Teaching Notes

Objectives

A fundamental objective of a Discussion Board writing activity is for students to gain awareness of the conventions applied in the genre of online academic writing and to practice writing in this genre.

At the beginning of a unit, students use the Discussion Board activity to further activate prior knowledge about a new unit theme after discussing the initial Unit Questions and listening to *The Q Classroom* online. Students are again directed to the Discussion Board after the *iQ Online* Reading Comprehension activity in each unit to discuss the online text. At the end of a unit, the Discussion Board tasks provide opportunities for students to apply content knowledge, grammar structures and vocabulary, as well as writing strategies that they learned in the unit.

All the Discussion Board questions are designed to encourage critical thinking. Instructors can decide if they would like their students to respond to all of the given questions or select specific questions which they want their

students to address. Additionally, instructors can post their own questions to which students respond.

Teacher's Pack Organization

Prior to introducing the Discussion Board to your students, it is necessary to familiarize yourself with the contents of the Discussion Board, the specifics of its navigation as well as deciding on an implementation strategy. These teaching notes discuss all three items.

In order to help you maximize the efficacy of the Discussion Board, additional resources have been provided. These will be referenced and explained within these teaching notes: grading rubrics, teacher navigation instructions, printable student navigation instructions ("Posting to the Discussion Board") and a student worksheet for classroom use ("Example Discussion Board Post," which consists of "Part One: Responding to a Discussion Question," and "Part Two: Responding to a Classmate's Post").

Implementing the Discussion Board

Discussion Board Content

The Discussion Board contains three threads per unit. The Unit Question Discussion takes place at the beginning of the unit and contains a few questions to further the discussion of the Unit Question after completing *The Q Classroom* activities in the Student Book. Next is the Reading Discussion thread, which accompanies the Reading Comprehension activity in *iQ Online*.

This thread encourages students to engage with the topic of the online reading text. Finally, the Unit Question Reflection is provided at the end of the unit so the student can reflect upon what he or she has learned. In addition, the teacher may create new threads either by using the supplemental questions provided, the Challenge Questions, or any other question he or she deems appropriate.

Teaching Strategies

In terms of teaching strategies, the teacher must decide upon his or her level of involvement. You should decide if you want to participate in the online discussions or if you only want to read and evaluate your students' posts. If you post to the discussions, students can be encouraged by your engagement, but if you remain a reader, you can retain the focus on the students' writing and ideas.

In Level 4, students compose two basic types of posts: an initial reaction to the assigned questions and a response to a classmate's post. Depending on the ability level of the class, the teacher can assign one or both of the optional Challenge Questions. In addition to the initial post to these Challenge Questions, the teacher can decide to assign replies to Challenge Question posts.

The structure of both types of posts should follow similar structure in that they should have a brief introduction, body with support (approximately 2 to 3 paragraphs), and a brief conclusion. A strong post contains about 300 to 400 words; clearly, this suggested length needs to be adjusted to your students' level. If you want to make the task more challenging, you can require that students refer to specific sources, such as the readings from the unit (see example in Part One of the Student Worksheet).

In a response to a classmate's post, it is again critical that students present specific ideas in support of their main points. This means that the student's reply is directly connected to the ideas in the classmate's post, and this connection needs to be made explicit through reference to the original writer's words. For example, you can encourage students to use reporting signals, such as "You describe ..."; "Your example of ... is ...";

or "You also refer to" You can provide other examples as appropriate.

Rubrics have been included to help grade the student's posts and their replies to a classmate's post. It is important that students write an effective response that includes a variety of sentence structures used correctly and uses formal language. It is important that students use the Discussion Board to express themselves and do so in a way that is appropriate for the classroom context.

In addition to using the rubrics, assess students' posts by printing them out or making electronic copies and adding questions, comments, and other feedback. With students' permission, you can use good posts as models to illustrate strategies for effective writing. You can also collect language use examples from students' posts to illustrate grammar points and use these for group editing practice.

Classroom Instruction

Prior to First Post: Example Discussion Board Post Worksheet

Included in the student materials are instruction on the use of the Discussion Board as well as a two part student worksheet on how to write good posts. In Part One, "Responding to a Unit Discussion Question," there is an example of a discussion board post that you can review with students to discover the structure and content of an effective post and to see how the instructor will apply the evaluation rubrics. In Part Two, "Responding to a Classmate's Post," there is an example of a student's response to the classmate's post from Part One. The example response models the structure and the language that are appropriate for responding to other students' posts.

You may choose to do Parts One and Two of the worksheet together or separately. In either case, be sure to review the instructions on how to post to the Discussion Board. Use the page entitled "Posting to the Discussion Board: Student Instructions." Follow up with a test post to ensure that all students know how to use the tool properly.

Part One: Responding to a Discussion Question

1. After talking in class about the Unit Question and the Unit Question Discussion questions, tell students that they will extend those ideas that they discussed in an assignment outside of class.
2. Distribute the student worksheet, "Example Discussion Board Post," to students. Tell them that they are going to learn how to write on a discussion board online and share information

with their classmates and instructor when they are not in the classroom.

3. Review the sample Unit Question Discussion. Start with the unit academic subject area, Climate and Environment. Then, review the Unit Question and the Unit Question Discussion questions with students. Point out that, in addition to the overall Unit Question, there are two other questions that the students should address. Note that this is only an example unit and does not appear in the book.

4. Have students read the example post and answer worksheet questions 1 through 6. Have students compare their responses with a partner before checking answers with the whole class. If possible, project the post on the classroom screen, and highlight the relevant parts as you identify and discuss them with the class.
5. Review the discussion board rubric with students in task 7 of the worksheet. Have students apply the rubric to the example post and try to explain why they would give a certain rating in each category.
6. In the last task on the worksheet, the “Follow-up” task, have students brainstorm, in groups or pairs, ideas for responding to a new example question. Debrief with the whole class and check that students understand the process.
7. *Optional:* Review instructions on how to post a response to a classmate’s post. Use the page entitled “Student Instructions: Posting to the Discussion Board.”

Assigning the First Discussion Board Post

1. Assign the first Unit Question Discussion response, and indicate the deadline for the post.
2. After all responses have been posted, have students read all of their classmates’ posts. Then in class, have students discuss the ideas in the posts to find commonalities and differences or to put ideas into possible categories.
3. Use the same process for the Reading Discussion and the Unit Question Reflection.
4. *Optional:* At the end of each unit, the teacher can assign one or both of the Challenge Questions. Follow the same process as for the other assignments. See the complete list of Challenge Questions for all units.

Part Two: Responding to a Classmate’s Post

Prior to the first response assignment, it will be helpful if the teacher discusses with the class the appropriate approach to responding to classmates’ ideas. Part Two of the sample worksheet, “Responding to a Classmate’s Post,” provides an example response to a classmate’s

post and comprehension questions. Three major techniques that students can use in a response task could include “agreeing/disagreeing” with ideas in the original post, or “making connections” between ideas in the original post and own knowledge/experience, or “applying” ideas from the original post to a new context. Other useful points to consider include:

- Using formal and polite language
 - Avoiding judgments – both positive and negative, especially if these judgment are forced on the writer and not his/her ideas
 - Providing support for a response by referring to specific points from the classmate’s post and/or adding own examples as evidence (for example, if agreeing or disagreeing, note the specific ideas of agreement or disagreement, accompanied by explanation)
1. Distribute Part Two of the example Discussion Board worksheet, “Responding to a Classmate’s Post,” to students. Tell them that they are going to learn how to respond appropriately to a classmate’s writing.
 2. Have students quickly review the original example discussion board post in Part One.
 3. Have students read the example response and answer worksheet questions 1 through 5. Have students compare their responses with a partner before checking answers with the whole class. If possible, project the post on the classroom screen, and highlight the relevant parts as you identify and discuss them with the class.
 4. Review the discussion board rubric with students in task 6 of the worksheet. Have students apply the rubric to the example response and try to explain why they would give a certain rating in each category.
 5. In the last task on the worksheet, the “Follow-up” task, have students brainstorm, in groups or pairs, ideas for another response. Debrief with the whole class and check that students understand the process.
 6. *Optional:* Review instructions on how to post a response to a classmate’s post. Use the page entitled “Student Instructions: Posting to the Discussion Board.”

Assigning the First Response to a Classmate's Post

1. Have students read all their classmates' posts. Assign students a response task. Indicate the deadline for the response. Options for response tasks include the following:
 - a. Students make their own choice when selecting a classmate's post to which they respond. (It is helpful if you require that students respond to a classmate who has not yet received any replies.)
 - b. Pair students with a partner and require that they read and respond to their partner's post.
 - c. In a more advanced group of students, you can assign students to respond to more than one classmate. For example, students can be asked to respond to a classmate with whom they agree and to one with whom they disagree.
2. After all responses have been posted, have students read their classmates' response or responses. Then in class, if necessary, have students discuss any unclear, surprising, or additional points from the responses.
3. Use the same process for the Reading Discussion and the Unit Question Reflection.
4. *Optional:* At the end of each unit, the teacher can assign one or both of the Challenge Questions. Follow the same process as for the other assignments. See the complete list of Challenge Questions for all units.

Discussion Board Instructions

Before introducing this tool to your students, review "Posting to the Discussion Board: Student Instructions" to familiarize yourself with the online writing process. The student instructions are included in the student materials.

After completing the "Example Discussion Board Post" worksheet and reviewing the included rubric with your class, go over the student instructions with the students. If you have computer projection in the classroom, you may go online and demonstrate this process to the students.

Remind students that when they post to the Discussion Board, they need to make sure that they choose the correct Unit number and the correct question.

Logging In to the Discussion Board

1. Log in to iQ Online Practice.
2. Choose your class (under your level).
3. Choose Discussions.
2. In the subject line, write: "Unit X: Challenge Question 1" or "Unit X: (Your own writing topic)." Note: It is important that you identify the unit number as this will not be automatically added.
3. Copy and paste your selected Challenge Question, or type your own question, in the text box.
4. Choose Send.

Responding to a Post

If you wish to participate in a Unit Discussion, you can follow the same instructions that the students use.

Creating a New Discussion Topic

All Unit Question Discussion, Reading Discussion, and Unit Question Reflection questions are already on the Discussion Board site. However, if you want to assign Challenge Questions (refer to the included list of Challenge Questions), or if you want to pose questions of your own, follow these steps:

1. Choose New Thread.

Deleting a Post

As the instructor, only you have the ability to delete threads and individual replies, including entire Discussions. However, before you click Delete, be certain that you want to perform this action as it cannot be undone.

If you want to delete a single student post in a discussion or an individual response to someone else's post, go to that post, and choose the delete icon.

Suggestions for Using the Discussion Board Assignments

1. Good academic practice includes planning and carrying out online writing assignments offline first. By drafting and saving a post using a word-processing program, students can review and make changes to their writing before uploading the post. This practice also encourages another important academic skill, which is to keep a saved copy of one's writing.
2. Because your students cannot delete any posts from the Discussion Board themselves, they will need to contact you to delete a post for them if they made a mistake or posted to the wrong Discussion. Advise your students to follow whatever process you deem appropriate; for example, you can have students send you an email with a request to delete a post.
3. Review your students' posts regularly and in a timely fashion so that you can address issues as they develop or delete inappropriate posts.

Rubric: Response to Discussion Board Prompt

Name: _____

Date: _____

20 = Completely successful (at least 90% of the time).

15 = Mostly successful (at least 70% of the time).

10 = Partially successful (at least 50% of the time).

0 = Not successful.

Writing a Discussion Board Post	20 points	15 points	10 points	0 points
The post includes a clear introduction, body, and conclusion.				
The post answers the question(s) clearly and completely.				
The post has relevant and specific explanations and examples.				
The supporting explanations and examples are sufficient.				
The post shows careful thinking about the topic.				
The post uses a variety of sentence structures correctly.				
The post includes correct grammar structures from the unit. *				
The post includes appropriate vocabulary from the unit.*				
The post includes formal and polite language.				
The overall length of the post is appropriate.				
<i>Optional:</i> The post includes references to one or more sources as support.				

* These criteria are for Unit Reflection and Challenge Question Posts

Total points: _____ out of _____

Comments:

Rubric: Response to Classmate's Post

Name: _____

Date: _____

20 = Completely successful (at least 90% of the time).

15 = Mostly successful (at least 70% of the time).

10 = Partially successful (at least 50% of the time).

0 = Not successful.

Writing a Discussion Board Response	20 points	15 points	10 points	0 points
The response includes a clear introduction, body, and conclusion.				
The response uses clear and specific ideas from the classmate's post.				
The response shows careful thinking about the classmate's ideas.				
The response includes one or more of the following: agreement/ disagreement/ example from personal experience.				
The supporting explanations and examples are sufficient.				
The response uses a variety of sentence structures correctly.				
The response includes correct grammar structures from the unit.*				
The response includes appropriate vocabulary from the unit.*				
<i>Optional:</i> The response includes references to one or more sources as support.				

* These criteria are for Unit Reflection and Challenge Question Posts

Total points: _____ out of _____

Comments:

Challenge Questions

You may choose to assign these Challenge Questions for students to respond to at the end of a unit. You will need to post the Challenge Question for each unit yourself as a new thread or threads.

Unit 1: Sociology

Unit Question: *What makes someone admirable?*

1. Who is a very famous person whom you do *not* consider as a role model? Why?
2. In this unit, you read an article about a journalist who wrote about “everyday heroes.” Who is an everyday hero in your community? If you don’t know one, what kind of person do you think is an everyday hero? What characteristics make this person admirable?

Unit 2: Behavioral Science

Unit Question: *How do marketers get our attention?*

1. How do you feel if marketers try too hard to get your attention? When do marketers cross the line between providing potential customers with information about products and services and bothering or disturbing people? Can you think of an example of marketing that goes too far?
2. Do marketers need to use different strategies to capture the attention of different age groups? Why or why not? What do you think is the best way for marketers to get the attention of these age groups: 15 – 29, 30 – 44, 45 – 59, 60 and older?

Unit 3: Developmental Psychology

Unit Question: *What important lessons do we learn as young people?*

1. Do people continue to learn important lessons as they get older? What is an example of something adults might learn? Who could teach them this lesson?
2. In your culture, in what activities do young people participate outside of school? Do these activities teach these young people lessons? Discuss.

Unit 4: Science and Technology

Unit Question: *How can science improve lives?*

1. New technologies are invented all the time, but many never become available to the general public. When should companies decide to use a new technology? When should companies decide not to use a new technology? What criteria should they use to make these judgements?
2. Should technology that greatly improves or saves people’s lives be free, or should people have to pay for it? Explain.

Unit 5: Nutritional Science

Unit Question: *Should science influence what we eat?*

1. What is considered eating well for your family? Do you think your family’s traditional eating habits follow the recommendations of nutritional scientists? Why or why not?
2. Think of a dish or food item that is very popular in your country but that might not be as popular, or might even be avoided, in another country. What aspects of this dish might be less attractive to other people, and why?

Unit 6: Education

Unit Question: *Does school prepare you for work?*

1. Many young people engage in short, work-related activities outside the classroom, for which they may or may not receive pay. What are the benefits of engaging in such activities?
2. What useful career advice have you received from family or friends? Tell what people have said, and explain why that advice was helpful.

Unit 7: Geology

Unit Question: *Is discovery always a good thing?*

1. In Reading 1, you learned about the discovery of a previously unknown coral reef. How might this discovery impact the coral reef? Was the discovery a good thing? Why or why not?
2. You have read about Bristol Bay in Alaska. Think of a natural resource that comes from your country and consider the process through which this resource is obtained from the

environment. In your opinion, does damage caused from extracting this resource outweigh the benefits of using it? Why or why not?

Unit 8: Engineering

Unit Question: *Can failure lead to success?*

1. What makes some people resilient (able to feel better quickly) enough to overcome failure and become successful? Explain.
2. Is there a point when people should just give up and accept failure? Why or why not?

Unit Specific Notes

Unit 2: Behavioral Science

Challenge Question 2

2. *Do marketers need to use different strategies to capture the attention of different age groups? Why or why not? What do you think is the best way for marketers to get the attention of these age groups: 15 – 29, 30 – 44, 45 – 59, 60 and older?*

Help students brainstorm some typical characteristics of each of the age groups. For example, the first age group might consist of students and people just starting their careers who grew up using the Internet. The last age group might consist of people who are retired and still prefer receiving information through books, magazines, and newspapers.

Unit 3: Developmental Psychology

Challenge Question 2

2. *In your culture, in what activities do young people participate outside of school? Do these activities teach these young people lessons? Discuss.*

Help students generate some examples about activities in which young people engage outside of school and that are not part of the school curriculum

Unit 4: Science and Technology

Challenge Question 1

1. *New technologies are invented all the time, but many never become available to the general public. When should companies decide to use a*

new technology? When should companies decide not to use a new technology? What criteria should they use to make these judgements?

Have students review Reading 1 and elicit the criteria companies might have used to decide whether or not to make these products. Possible criteria include, the cost of making a product, the severity of the problem it solves, the number of people who need it, the availability of materials to make the product, etc.

Challenge Question 2

2. *Should technology that greatly improves or saves people's lives be free, or should people have to pay for it? Explain.*

Direct students to create a t-chart. On one side, they put the heading "free" and on the other side they put the heading "pay." Students can work with a partner to brainstorm the reasons new technology should be free and the reasons new technology should be sold. Students can then use the t-chart to answer the question.

Unit 5: Nutritional Science

Challenge Question 1

1. *What is considered eating well for your family? Do you think your family's traditional eating habits follow the recommendations of nutritional scientists? Why or why not?*

Reading 1 includes three tips for eating well and staying healthy. Direct students to review these tips.

Challenge Question 2

2. *Think of a dish or food item that is very popular in your country but that might not be as popular, or might even be avoided, in another country. What aspects of this dish might be less attractive to other people, and why?*

Help students generate a list of foods that might be very culture-specific. For example, some dishes can include types of meat or other ingredients that are uncommon in other places.

Unit 6: Education

Challenge Question 1

1. *Many young people engage in short, work-related activities outside the classroom, for which they may or may not receive pay. What are the benefits of engaging in such activities?*

Guide students in brainstorming on typical internship opportunities or other related experiences.

Unit 8: Engineering

Challenge Question 2

2. *Is there a point when people should just give up and accept failure? Why or why not?*

To help students think about an answer to this question, describe the “sunk cost fallacy” to students. The sunk cost fallacy refers to a situation in which people keep doing something just because they have already invested the time, effort, and resources. For this reason, they don’t want to give up on their idea or project.



Posting to the Discussion Board: Student Instructions

When you post to the Discussion Board, make sure that you choose the correct unit number and the correct thread.

Logging In to the Discussion Board

1. Log in to iQ Online.
2. Choose your level.
3. Choose More (...) and then choose Discussions. Then choose Level 4 threads. (Or choose My class threads for posts by your teacher or other students.)

OR

Enter Practice and go to the Unit Question Discussion (the first activity) or the Unit Question Reflection (the last activity). Access the Discussions from the link included in these activities.

Replying to a Post

1. Choose the unit and discussion question that your teacher assigned.
2. Read the question or questions carefully. If responding to another student's post, read their response carefully.
3. Choose Add Comment.
4. Type your answer to the question or questions. Follow your teacher's instructions on how to write a good reply. If responding to another student, be sure to include their name so it is clear who you are responding to.
5. Read through your reply carefully; check the organization of your ideas, and check your spelling and grammar.
6. Choose Send.

Creating a New Discussion Topic

1. Choose New Thread.
2. In the subject line, enter the name of the thread. Be sure to choose a name that indicates clearly what the subject of the thread is (by including the unit number, for example).
3. Write your comments.
4. Choose Send.

Warning: You cannot delete your writing after you click Post. Only the teacher can delete a thread or an individual response.

Part One: Responding to a Discussion Question

Directions: Read the questions and the discussion board post. After that, answer the questions about the post. Write a well-developed response, including a brief opening, properly structured body paragraphs, and a brief closing. Follow your teacher's specific instructions.

Example Unit: Climate and Environment

Unit Question Discussion: How does climate change affect natural disasters?

1. Many scientists argue that climate change is causing more severe and more frequent weather-related natural disasters. What are some examples of such natural disasters?
2. What might be some consequences of these examples?

¹ There are many types of natural disasters that happen all over the world, but some that are likely connected to climate change include droughts, hurricanes, and floods.

² One example of a natural disaster worsened by climate change is drought. I learned from our unit reading, "Up Close with Global Climate Change," that California has had a serious drought problem; it has not rained very much in some parts of the state for over three years. Also, there has apparently been decreased snowfall in the mountains. As a result, Californians have to be careful with their water use, and farmers and ranchers are losing their crops and even their animals are suffering.

³ Another problem caused by climate change is hurricanes. It seems that in the past few years, there have been many more hurricanes in the Atlantic Ocean and typhoons in the Pacific Ocean than in the past; moreover, those hurricanes and typhoons seem to be more severe, causing more problems for a larger number of people. In addition to the destruction of homes and businesses, people may not have power for long periods of time, and the government has to spend great amounts of money to clean up and repair all the damage, especially in cities along coastlines.

⁴ A third common disaster resulting from climate change is floods. Floods are often caused by heavy rainfall or by hurricanes. For example, my classmate from Indonesia told me that his country has had major flooding in the recent past. He said that those floods not only bring high water levels but also mudslides, which often completely destroy small villages. He mentioned that one of the biggest problems is with public transportation. Trains and busses cannot run, and because people in big cities depend on public transportation for all their needs, those shutdowns cause chaos and economic losses.

⁵ Even though drought, hurricanes, and floods can occur for other reasons, one obvious cause is change in our global climate. People do not pay attention to rising costs in energy, but perhaps they can become more aware of this growing problem if their house is destroyed by an enormous hurricane that is caused by rising temperatures in the oceans.

1. How many major parts does this post include, and what is the purpose of each part?
(Compare the post to the basic structure of an essay.).
 - a. What is the purpose of paragraph 1?
 - b. What is the purpose of paragraphs 2 through 4?
 - c. What is the purpose of paragraph 5?
Has the writer answered the questions that are in the prompt?
2. In paragraphs 2 through 4, number each example of a natural disaster caused by climate change. How many examples did you find?
3. Go back and underline the details that explain these examples in these paragraphs; then, double-underline the consequences of each natural disaster.
4. Read through paragraphs 2 and 4 again and search for an example in which the writer refers to a source reading in his/her support. Circle the title of the source.
5. Reread the first paragraph, and circle the words that tell you what the body paragraphs will focus on; then, go to the final paragraph and see if you find the same points.
6. What is the purpose of the last sentence?

Name: _____

Date: _____

7. Review the rubric. Use the rubric to give a score for the post above.

- 20** = The Discussion Board writing element was completely successful (at least 90% of the time).
- 15** = The Discussion Board writing element was mostly successful (at least 70% of the time).
- 10** = The Discussion Board writing element was partially successful (at least 50% of the time).
- 0** = The Discussion Board writing element was not successful.

Writing a Discussion Board Post	20 points	15 points	10 points	0 points
The post includes a clear introduction, body, and conclusion.				
The post answers the question(s) clearly and completely.				
The post has relevant and specific explanations and examples.				
The supporting explanations and examples are sufficient.				
The post shows careful thinking about the topic.				
The post uses a variety of sentence structures correctly.				
The post includes correct grammar structures from the unit.				
The post includes appropriate vocabulary from the unit.				
The post includes formal and polite language.				
The overall length of the post is appropriate.				
<i>Optional:</i> The post includes references to one or more sources as support.				

Total points: _____ out of _____

Follow-up:

With a partner or in small groups, brainstorm on one of the topics below. What ideas will you include in your post?

1. What consequences of climate change have you noticed in your country?
2. Explain why you think these consequences result from climate change?

Part Two: Responding to a Classmate's Post

Directions: Now read the sample response to the above discussion board post. After that, answer the questions about the response.

Sample Response from a Classmate

¹ Andres, you mention some interesting ideas in your post. You describe three common examples of natural disasters that you believe are becoming more frequent and that you feel may be caused by climate change.

² Your example of increased floods is especially meaningful to me because this is a type of disaster that my country, China, faces nearly every year. The southern region of China experiences floods for different reasons, but many scientists believe that climate change is a major factor in the frequency of the floods. I can certainly say that during my lifetime, there have been more floods than during my parents' lifetimes.

³ You also refer to droughts as a result of lack of rainfall and snowfall, and you give the example of California. I think that lack of clean water can also be impacted by global climate change. For instance, I have learned that small island nations are struggling not with droughts, but with rising sea levels. That change in sea level causes salt water to invade fresh water supplies, and this makes water supplies unusable for humans, animals, and crops. The outcome is similar to that of a drought: there is no water.

⁴ Although I can relate to most of your points in your post, there is one example that I question. You state that an increase in the number of hurricanes is related to climate change. However, I have read that many experts are not convinced of a direct connection. They observe that, unlike with other effects of climate change, hurricane patterns have varied a great deal over history; in some years, there are a lot of hurricanes or typhoons, but in other years, there are only a few.

⁵ It is clear that climate change is playing a major role in many areas of our lives, not just in weather, but it is also clear that we need much more research on these events. I think that it is most important for us to understand our role in changing the climate and take serious steps toward changing our behavior.

1. How many major parts does this response include, and what is the purpose of each part? (Compare the response to the basic structure of an essay).
 - a. What is the purpose of paragraph 1?
 - b. What is the purpose of paragraphs 2 through 4?
 - c. What is the purpose of paragraph 5?
2. Look at the sentences in paragraph 1.
 - a. What is the purpose of those sentences?
 - b. Why does the writer start in this way?

Name: _____

Date: _____

3. Look through the response and identify one or more specific ideas that come from the original writer's post. Underline those ideas, and label them A, B, C, etc. How many ideas did you find?
4. How does the writer respond to the classmate's post? Review the following techniques. Then, reread paragraphs 2 through 4, and do the following: write the number of the paragraph next to the technique that the writer used in the response; if you do not find an example of a technique, write "X".
 - a. _____ He or she agrees with an idea in the classmate's post.
 - b. _____ He or she disagrees with an idea in the classmate's post.
 - c. _____ He or she uses an example from personal experience that connects to an idea in the classmate's post.
 - d. _____ He or she applies an idea from the classmate's post to another context.
5. Find three examples of formal and polite language that the writer uses in the response.
 - a. _____
 - b. _____
 - c. _____

6. Review the rubric. Use the rubric to give a score for the response above.

- 20** = The Discussion Board writing element was completely successful (at least 90% of the time).
- 15** = The Discussion Board writing element was mostly successful (at least 70% of the time).
- 10** = The Discussion Board writing element was partially successful (at least 50% of the time).
- 0** = The Discussion Board writing element was not successful.

Writing a Discussion Board Response	20 points	15 points	10 points	0 points
The response includes a clear introduction, body, and conclusion.				
The response uses clear and specific ideas from the classmate's post.				
The response shows careful thinking about the classmate's ideas.				
The response includes one or more of the following: agreement/ disagreement/ example from personal experience.				
The supporting explanations and examples are sufficient.				
The response uses a variety of sentence structures correctly.				
The response includes correct grammar structures from the unit.				
The response includes appropriate vocabulary from the unit.				
The response includes formal and polite language.				
<i>Optional:</i> The response includes references to one or more sources as support.				

Total points: _____ out of _____

Follow-up:

With a partner, or in small groups, brainstorm on another response to the original post. What ideas will you include in your response?

Teaching Notes

Unit-by-Unit teaching notes offer Expansion Activities, Multilevel Options and Background Notes to help you teach with *Q: Skills for Success Third Edition*. Also includes Unit Assignment Rubrics.

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Background Note

UNIT OPENER pages 2–3

The photo shows a firefighter standing near a building that has exploded. Smoke and flames have engulfed the building. The firefighter is wearing protective clothing and carrying an axe.

Expansion Activity 1

UNIT QUESTION page 3

1. Introduce the Unit Question: *What makes someone admirable?* Explain that each unit in Q2e focuses on a Unit Question that students will consider throughout the unit and discuss in their Unit Assignment. Ask related information questions or questions about personal experiences to help students prepare for answering the more abstract Unit Question. For example, ask: *What qualities do admirable people have? What kinds of people are admirable?*
2. Put students in small groups and give each group a piece of poster paper and a marker.
3. Read the Unit Question aloud. Give students a minute to silently consider their answers to the question. Tell students to pass the paper and marker around the group. Direct each group member to write a different answer to the question. Encourage them to help one another.
4. Ask each group to choose a reporter to read the group's answers to the class. Point out similarities and differences among the answers. If answers from different groups are similar, make a group list that incorporates the answers. Post the list to refer back to later in the unit.

Background Note

READING 1 page 5

The definition of a *role model* is someone whom you admire and whose example you try to follow. Many young people look for role models as they are growing up as an example of the type of person they want to be someday or the lifestyle they want to have.

Some people find role models in important figures in their lives such as teachers or family members, whereas others look to famous people such as athletes or TV personalities.

It might be the case that the role model has achieved something extraordinary because he or she possesses qualities that are viewed positively by others, such as great courage, kindness, or cool thinking in the face of danger. Because these qualities inspire others to follow their example and change their own way of living, the person becomes a role model for those who hear about or are affected by their achievements.

Expansion Activity 2

? WRITE WHAT YOU THINK page 10

A. DISCUSS

1. Expand on the Write What You Think questions by having students make a poster of an imaginary role model and his or her qualities.
2. Working in small groups, students should brainstorm the role model's qualities and how he or she inspires people.
3. Each group should design a poster that describes their role model. It should include a picture and a description of the role model's qualities. It should also include some quotations from people about how the person inspires them.
4. Have groups present their posters to the class.

Background Note

READING 2 page 12

Katrina Fried is a writer and editor based in the San Francisco Bay Area in California. Along with *Everyday Heroes: 50 Americans Changing the World One Nonprofit at a Time*, she has also authored the books *American Farmer: The Heart of Our Country* and *American Teacher: Heroes in the Classroom*. Each of her books examines the lives of individuals who have made significant positive contributions to their communities.

Expansion Activity 3

WORK WITH THE VIDEO page 18

1. Ask the class about different challenges homeless people can face and write them on the board. Examples might include not having enough to eat, poor nutrition and medical care, difficulty finding a job, having few or no job skills, inability to wash dirty clothes, poor hygiene, dental problems, extreme cold or hot temperatures with no shelter, etc.
2. Put the students into small groups. Assign each group one of the problems on the board or have them choose.
3. Ask each group to brainstorm a free program that could solve or lessen the problem. Tell the group to give their program a name and explain how and why it would work.
4. Ask for a volunteer from each group to explain their program. Ask follow-up questions as needed.
5. Tell the class they will vote on which program to support, but they can only choose one. Give groups time to discuss their opinions. Circulate and help students look for reasons why one program would be more worthwhile than others.
6. Take a class vote and declare a winner. Follow up by asking if this program would be a good solution for the community where the students live and why.

Multilevel Option 1



WRITE WHAT YOU THINK page 19

1. Ask students to read the questions and reflect on their answers.
2. Seat students in small groups and assign roles: a group leader to make sure everyone contributes, a note-taker to record the group's ideas, a reporter to share the group's ideas with the class, and a timekeeper to watch the clock.
3. Give students five minutes to discuss the questions. Call time if conversations are winding down. Allow them an extra minute or two if necessary.
4. Call on each group's reporter to share ideas with the class.
5. Have each student choose one of the questions and write for 5–10 minutes in response.
6. Call on volunteers to share their responses.

MULTILEVEL OPTION

Pair lower-level students and have them choose the same question to respond to. As higher-level students finish, they can share their responses with a partner. Alternatively, higher-level students can be paired with lower-level students so that they can share their ideas and help lower-level students with vocabulary or expressions.

Vocabulary Skill Note

USING THE DICTIONARY page 19

1. Ask a volunteer to read the information about a dictionary entry.
2. Check comprehension: *What information does a dictionary entry include? How many syllables does embody have? What are some synonyms for embody? Is this information useful when learning a new word?*

Skill Note

Knowing a word is much more complex than just knowing its definition. More advanced students realize the importance of learning multiple things about a word, such as its pronunciation, other words it's used with (collocations), its part of speech, its level of formality, etc. Many words have various meanings depending on the context, which is why multiple definitions are useful. Encourage students to pay attention to these details as they look up vocabulary words in the dictionary.

Multilevel Option 2

C. EXTEND page 21

1. Have students work with a partner to complete the activity. Remind them to use the questions in Activity B as an example.
2. Have volunteers share any information they learned about the words they looked up.

MULTILEVEL OPTION

For Activity C, you can pre-select the words and assign them to students depending on their level, choosing easier words for lower-level students and more difficult words for higher-level students.

Grammar Note

RESTRICTIVE RELATIVE CLAUSES page 26

1. Ask volunteers to read the information about restrictive relative clauses and the examples.
2. Explain that the relative clauses are "restrictive" because they give essential information about nouns or help identify them.
3. Check comprehension by asking questions: *What do restrictive relative clauses do? Which relative pronouns do we use for people? Which relative pronouns do we use for things? When can you omit the relative pronoun?*

Skill Note

If students have difficulty recognizing restrictive relative clauses, remind them that they describe or identify nouns. A relative clause is restrictive when it is necessary to identify the noun; it does not only give additional information about it. For example, the restrictive relative clause in the sentence *A role model helps people who cannot help themselves* tells which kind of people role models help. To help students recognize restrictive relative clauses, teach them how to identify the noun or noun phrase. Then have them look at the relative clause to decide if it describes or identifies the noun.

Multilevel Option 3

B. COMPOSE page 27

1. Review the example in item 1 with the class.
2. Have students combine each pair of sentences as instructed. Elicit sentences from volunteers and write them on the board.

MULTILEVEL OPTION

Place students in mixed-ability pairs. Higher-level students can help lower-level students complete the activity and explain their understanding.

Unit Assignment Rubrics

Unit 1 Sociology

Unit Assignment Rubric

Student name: _____

Date: _____

Unit Assignment: *Write an analysis essay about the qualities that make someone admirable.*

20 points = Writing element was completely successful (at least 90% of the time).

15 points = Writing element was mostly successful (at least 70% of the time).

10 points = Writing element was partially successful (at least 50% of the time).

0 points = Writing element was not successful.

Write an Analysis Essay	20 points	15 points	10 points	0 points
The essay includes an introduction with a hook and a conclusion.				
The essay provides details and examples in the body.				
Restrictive relative clauses are used appropriately.				
Appropriate transition words are used correctly.				
The essay includes correct punctuation, spelling, and grammar.				

Total points: _____

Comments:

Background Note

UNIT OPENER pages 32–33

The large photo shows a young man walking past advertisements for Coca-Cola, Fanta, and Sprite. The man is looking at his phone and listening to headphones. He is wearing athletic pants and shoes and a blue jacket.

Expansion Activity 1

UNIT QUESTION page 33

1. Introduce the Unit Question: *How do marketers get our attention?* Ask related information questions or questions about personal experiences to help students prepare for answering the more abstract Unit Question. For example, ask: *Where do you see a lot of ads? Do you see certain ads more than others? Which ones? Do they make you want to buy their products? Why or why not?*
2. Put students into small groups and give each group a piece of poster paper and a marker.
3. Read the Unit Question aloud. Give students a minute to silently consider their answers to the question. Tell students to pass the paper and marker around the group. Direct each group member to write a different answer to the question. Encourage them to help one another.
4. Ask each group to choose a reporter to read the answers to the class. Point out similarities and differences among the answers. If answers from different groups are similar, make a group list that incorporates the answers. Post the list to refer back to later in the unit.

Background Note

READING 1 page 35

Generations are generally divided into 15- to 20-year ranges. Generations are largely defined by the major historical, social, and political events that were the most memorable or impactful during their young adulthood and helped “shape” their young adulthood. Recent generations have included:

- the Silent Generation, 1925–1945
- the Baby Boomers, 1946–1963
- Generation X, 1964–1978
- Millennials (Generation Y), 1979–1995
- Generation Z, 1996–2010

Major U.S. events that have taken place during Generation Z include the 9/11 terrorist attacks on the World Trade Center, the Great Recession, and the first African American U.S. president (Barack Obama). Generation Zers are generally thought of as those whose lives are intricately intertwined with technology and the Internet. They prefer to collaborate with others online, enjoy being content curators (i.e., writing blogs, making podcasts and YouTube videos, etc.), and are

believed to be better at “media multitasking” than other generations. Gen Z members are often referred to as “digital natives,” as they grew up with the Internet and the interconnectivity of devices from birth. They generally prefer communicating online through images and short videos, which explains their preference for social media apps like Instagram, Snapchat, and TikTok. They tend to view these apps as more “honest and authentic” than Facebook, which was more popular with Generations X and Y.

Multilevel Option 1

WRITE WHAT YOU THINK page 39

1. Ask students to read the questions and reflect on their answers.
2. Seat students in small groups and assign roles: a group leader to make sure everyone contributes, a note-taker to record the group’s ideas, a reporter to share the group’s ideas with the class, and a timekeeper to watch the clock.
3. Give students five minutes to discuss the questions. Call time if conversations are winding down. Allow them an extra minute or two if necessary.
4. Call on each group’s reporter to share ideas with the class.
5. Have each student choose one of the questions and write for five to ten minutes in response.
6. Call on volunteers to share their responses.

MULTILEVEL OPTION

Have lower-level students work together and choose the same question to respond to. Ask higher-level students to respond to more than one question.

Expansion Activity 2

B. IDENTIFY page 41

1. Have students read the paragraph and complete the task individually. Then have them compare their highlighting and annotations with a partner.
2. You may want to project the paragraph to show the highlighting and annotations. Discuss any variations students may have in their own marks.

21ST CENTURY SKILLS EXPANSION

Being able to identify key information or ideas in a text will help students be more efficient employees and save them from having to read a text multiple times. At work, students may need to highlight key points in an email they are sending or in an email they have received. They may also need to annotate their notes from a meeting or presentation. Similarly, they may want to highlight important information in an employment manual or policy document. Encourage students to highlight and annotate a wide range of texts, such as news stories, academic articles, and emails.

Multilevel Option 2

READING 2: This Is Why You're Addicted to Your Phone!

C. VOCABULARY page 42

1. Read each of the words aloud.
2. Invite students to repeat the words after you. Point out the stressed syllable of each word.
3. Have students look up definitions of words they don't know. Answer any questions about meanings.
4. Direct students to discuss with a partner how the words might relate to the unit.
5. Encourage volunteers to share their answers.

MULTILEVEL OPTION

Group lower-level students and provide example sentences to help them understand the words. For example: **Broadly speaking**, people use social media to connect with others. My phone only has 1% battery left, so it's **essentially** dead. Advertisers employ different **tactics** to attract people's attention.

Pair higher-level students and have them write sentences for each word. Call on students to write their sentences on the board. Correct the sentences, focusing on the use of the vocabulary rather than other grammatical issues.

Background Note

READING 2 page 43

Internet addiction is the broad term used around the world to describe those who have an unhealthy attachment to the Internet. Similar to other addictions, such as to drugs, alcohol, and gambling, symptoms of Internet addiction may include:

- using the Internet in increasing amounts to achieve satisfaction
- repeated, unsuccessful efforts to control or stop Internet use
- feelings of moodiness, depression, and anxiety
- using the Internet as an escape or avoidance from the real world
- jeopardizing or risking the loss of relationships with others, including family members, friends, and co-workers because of high Internet use
- lying to family members and others about the amount of time spent on the Internet
- physical symptoms, including headaches, backaches, weight gain or loss, and insomnia

Psychologists generally refer to this condition as Internet addiction disorder (IAD), though there is still no accepted, standardized diagnosis. Studies estimate that about 8.2% of the world population has IAD, but informal estimates put the number as high as 38%. Adolescents and teens show the highest rates of IAD worldwide. China and South Korea, countries with the highest levels of IAD, have both invested billions into national treatment programs that offer counseling and hospitalization to those with IAD. Medical experts

generally agree that more research needs to be done to identify what exactly qualifies as IAD and what the best treatment options should be.

Expansion Activity 3

WORK WITH THE VIDEO page 48

1. On one side of the room, put up a poster that says *Ethical*. On the opposite side of the room, put up a poster that says *Unethical*.
2. Review the definitions of *ethical* and *unethical* with students to ensure that they understand their meanings. The *Oxford English Dictionary* defines them as *ethical (adj.)* morally correct or acceptable and *unethical (adj.)* not morally acceptable. If necessary, give examples of ethical and unethical behavior, such as being honest versus lying.
3. On the board, write the question: *Is it ethical or unethical to collect data on people to personalize advertising?*
4. Ask students to stand up and walk to the side of the room that best represents their opinion (ethical or unethical). If they are not sure, tell them they are in the *undecided* group and should stand in the middle.
5. Give all three groups (*ethical*, *unethical*, and *undecided*) five minutes to discuss their opinions.
6. Have the *ethical* and *unethical* groups take turns talking to the *undecided* to get them to agree with their point of view. When any of the *undecided* students is fully convinced by one side or the other, he or she should walk over to that side.
7. The group that gets the most *undecided* students to come over to their side wins.

Vocabulary Skill Note

COLLOCATIONS WITH NOUNS page 49

1. Ask a volunteer to read the first paragraph. Go over the examples of adjective, verb, and preposition + noun collocations.
2. Check comprehension: *What are collocations? Can you think of any other examples of collocations with nouns?* Elicit additional examples and categorize them on the board.

Skill Note

The *Oxford Collocations Dictionary for Students of English* includes a wealth of information about words and their collocations. Because there are no rules to teach students to help them remember collocations, it's important that they learn to recognize patterns. As you work through each unit, guide students' exploration of collocations by assigning nouns from the vocabulary. Students should look up each noun and list its common collocations, making note of which ones are adjectives, verbs, and prepositions.

Some collocations with nouns from this unit include:

conclusion: *definitive conclusion*

review: *online reviews, peer review*

brand: *personal brand, mass-market brands*

Multilevel Option 3

B. CREATE page 50

1. Choose one of the collocations from Reading 1 and write a sentence with it on the board as an example, e.g., *Brain scans offer insight into what parts of the brain are working the most.*
2. Ask students if they understand all the vocabulary words and offer explanations as necessary.
3. Have students work individually to complete the activity.
4. Ask for volunteers to write one of their sentences on the board and review them as a class. Make any necessary corrections.

MULTILEVEL OPTION

Place students in mixed-ability pairs. Higher-level students can help lower-level students in writing their sentences and understanding the meaning of each collocation.

Grammar Note

DEFINITE AND INDEFINITE ARTICLES page 57

1. Read the information about articles together.
2. Check comprehension: *When do we use indefinite articles? If the noun is unknown or unimportant to the reader, which kind of article should you use? When do we use definite articles? If the noun relates to something else you have introduced, which kind of article should you use?*

Skill Note

Many students have first languages that do not use articles (Russian, Japanese, etc.), so learning to use articles correctly can be a great challenge. In order to have success with nouns, students must understand the difference between count and noncount nouns. Generally, count nouns are things that can be counted, such as desks, chairs, walls, and books. Noncount nouns are usually certain categories of nouns, such as materials (wood, cotton, plastic) and foods (rice, meat, milk, water). Other categories include: sports, languages, fields of study, and natural events. You may want to review count and noncount nouns before discussing articles.

Unit Assignment Rubrics

Unit 2 Behavioral Science

Unit Assignment Rubric

Student name: _____

Date: _____

Unit Assignment: Write a descriptive essay about an advertisement for a product, business, or service.

20 points = Essay element was completely successful (at least 90% of the time).

15 points = Essay element was mostly successful (at least 70% of the time).

10 points = Essay element was partially successful (at least 50% of the time).

0 points = Essay element was not successful.

Write a Descriptive Essay	20 points	15 points	10 points	0 points
The essay uses descriptive language to create a clear mental picture of the product, business, or service.				
Articles are used correctly.				
Collocations from the unit are used correctly.				
The essay includes vocabulary from the unit.				
The essay includes correct punctuation, spelling, and grammar.				

Total points: _____

Comments:

Background Note

UNIT OPENER pages 62–63

The photo shows a group of students wearing graduation caps and bowing to their parent at a coming-of-age ceremony at New City Gaosheng School in Heifei, capital of east China's Anhui province. The coming-of-age ceremony marked the start of the young people's adulthood.

Expansion Activity 1

UNIT QUESTION page 63

1. Introduce the Unit Question: *What important lessons do we learn as young people?* Ask related information questions or questions about personal experiences to help students prepare for answering the more abstract Unit Question. For example, ask: *As you were growing up, what did your parents teach you about responsibility? About manners? About the importance of family? About hard work?*
2. Read the Unit Question aloud. Tell the students: *Let's start off our discussion by listing lessons we learned from our parents as we transitioned from childhood to adulthood.*
3. Seat students in small groups and direct them to pass around a sheet of paper as quickly as they can, with each group member adding one item to the list. Tell them they have two minutes to make the lists, and they should write as much as possible.
4. Call time and ask a reporter from each group to read their list aloud.
5. Use items from the list as a springboard for discussion. For example, say: *Several of you talked about the importance of getting an education. Why did your parents want you to get a good education? What lessons did they teach you about getting an education? Will you teach your children the same lessons?*

Multilevel Option 1

READING 1: The Difference Between Fitting In and Belonging, and Why It Matters

C. VOCABULARY page 64

1. Read the words in the box aloud. Emphasize the syllable that receives primary stress in each word.
2. Invite students to repeat the words after you.
3. Have students work with a partner to locate each word in the reading. Invite them to use clues in the text to help define the words they don't know.
4. Encourage volunteers to share what they learned.

MULTILEVEL OPTION

Group lower-level students and provide example sentences to help them understand the words. For example: *Students sometimes feel a lot of **anxiety** before they take an important test. Language **barriers** make it hard for people to communicate. She showed a lot of **courage** when she finished the race after taking a bad fall. Teenagers sometimes change their appearance to **fit in** with their peers at school.*

Pair higher-level students and have them write a sentence for each word. Have volunteers write their sentences on the board. Correct the sentences, focusing on the use of the vocabulary rather than other grammatical issues.

Multilevel Option 2

? WRITE WHAT YOU THINK page 70

1. Ask students to read the questions and reflect on their answers.
2. Seat students in small groups and assign roles: a group leader to make sure everyone contributes, a note-taker to record the group's ideas, a reporter to share the group's ideas with the class, and a timekeeper to watch the clock.
3. Give students five minutes to discuss the questions. Call time if conversations are winding down. Allow them an extra minute or two if necessary.
4. Call on each group's reporter to share ideas with the class.
5. Have each student choose one of the questions and write for five to ten minutes in response.
6. Call on volunteers to share their responses.

MULTILEVEL OPTION

Put students in mixed-ability groups to discuss the questions. This way, higher-level students will provide vocabulary or key ideas for their lower-level partners. For the response writing, pair lower-level students and have them choose the same question to respond to.

As higher-level students finish, have them share their response with a partner.

Expansion Activity 2

A. INTERPRET page 71

1. Direct students to check the inferences. Have them underline the information in the paragraph that helped them choose each inference.
2. Have partners compare answers.
3. Then elicit answers from volunteers.

21ST CENTURY SKILLS EXPANSION

Employers in many fields seek workers who can use information to make independent decisions and take action. The ability to make inferences will help students to be more independent in the workplace. At work, students may need to make inferences from emails or discussions with supervisors or colleagues about what action needs to be taken next. Have students brainstorm ways that this skill would be useful in the workplace. You may also want to discuss situations in which students should probably check their inference with a supervisor before taking action.

Background Note

READING 2 page 73

Many people use blog posts as a form of journaling. Many bloggers begin writing posts after a major life event, such as the birth or death of a family member or moving to a new country. Blogging is a way for people both to share their experiences and insights with others and to process challenges they have faced in life. Many use it as a way to connect with others and create an online community with those who have gone through similar experiences. It is estimated that there are more than 500 million blogs on the web, a number that continues to grow each day. Common websites people use to start blogs include Blogger, Tumblr, Wordpress, and Medium. In addition to journaling, people also write blogs to market or promote a product or service. Others use blogging as a form of income, earning money through advertising.

Expansion Activity 3

WORK WITH THE VIDEO page 78

1. Ask students to think about a time they quit something when they were children or young adults, such as a sport, an after-school activity, a musical instrument, or a job. Give students a minute or two to think of an example.
2. Put students in pairs. Ask pairs to tell each other about their examples/stories and ask each other questions for more information. Questions students might answer might include: *How old were you? How long had you been doing it? What did you like about it? What didn't you like about it? What made you quit? Did anyone discourage you from quitting? How do you feel about it today? Do you regret quitting?* Give students five to seven minutes to tell their stories. If necessary, write the questions on the board.
3. Ask students to get out a piece of paper. Tell students they are going to write a letter to their "past self" (from childhood) from their "present self" (today). Their assignment is to imagine that their past self is at the moment right before he or she quits the activity. Tell them to write a letter to their past self, giving advice on the best decision (to quit or not to quit) based on what they know now (as adults), as well as what they learned from the video.

Vocabulary Skill Note

PREFIXES AND SUFFIXES page 79

1. Ask a volunteer to read the information about prefixes. Ask: *What is a prefix? What are some examples of prefixes?* Elicit other words that begin with the prefixes.
2. Have another volunteer read the information about suffixes. Ask: *What is a suffix? What are some examples of suffixes?* Elicit other words that end with the suffixes.
3. Ask: *How can knowing about prefixes and suffixes help you improve your English?*

Skill Note

Students may know more prefixes and suffixes than they realize. When you come across words with prefixes or suffixes in a reading or listening, show students how to separate the words. For example, the word *invisible* has the prefix *in-* plus the word *visible*. If students know that *in-* means "not," they can guess the meaning of *invisible* as "not visible."

Encourage students to use this technique with new words. They should be able to recognize common prefixes and suffixes and guess the meanings of words based on the prefixes and suffixes.

Grammar Note

PAST PERFECT AND PAST PERFECT CONTINUOUS pages 86–87

1. Call on volunteers to read the information about the past perfect and the examples.
2. Have students identify which action in each sentence happened first.
3. Ask students: *What does the past perfect show? What are some examples of the past perfect?*

Skill Note

The past perfect is often used to give background information about what was happening before something else occurred. Since *had* is used for all subjects, students should not find it too difficult to form the past perfect. However, it is important to help them recognize when to use it.

Some additional time clauses used with the past perfect are *before* and *after*. For example, *I had eaten breakfast before I went to school*. However, if it is clear that one action occurred before the other, we often use the simple past for both: *I ate breakfast before I went to school*.

Multilevel Option 3

B. RESTATE page 88

1. Ask students to work individually to write the sentences. Then have them compare their sentences with a partner.
2. Call on volunteers to read their sentences aloud. If the sentence is incorrect, write it on the board and ask the students how to correct it.

MULTILEVEL OPTION

Have lower-level students work in pairs to complete the activity, and assist the pairs as necessary.

When higher-level students have finished the activity, ask them to rewrite the sentences and flip the dependent clause and independent clause, making any necessary changes. For example, item 2 would change to: *Until I visited Canada, I had not left my home country.* Ask students which sentences sound better with the time clause at the beginning of the sentence and which sound better with it at the end of the sentence. If time is limited, assign just one sentence per student to rewrite, and have them write them on the board to discuss as a class.

Unit Assignment Rubrics

Unit 3 Developmental Psychology

Unit Assignment Rubric

Student name: _____

Date: _____

Unit Assignment: Write a narrative essay about someone or something that influenced you when you were younger.

20 points = Essay element was completely successful (at least 90% of the time).

15 points = Essay element was mostly successful (at least 70% of the time).

10 points = Essay element was partially successful (at least 50% of the time).

0 points = Essay element was not successful.

Write a Narrative Essay	20 points	15 points	10 points	0 points
The introduction tells why the story is important.				
Events are told in chronological order.				
Time phrases and time clauses are used correctly.				
The past perfect and past perfect continuous are used appropriately.				
The essay includes correct punctuation, spelling, and grammar.				

Total points: _____

Comments:

Background Note

UNIT OPENER pages 92–93

The large photo shows a young female student from the University YES Academy in the United States attending Robotics Day at the University of Michigan. She is trying out the i-Limb, a prosthetic hand device that looks and moves like a human hand.

Expansion Activity 1

UNIT QUESTION page 93

1. Introduce the Unit Question: *How can science improve lives?* Ask related information questions or questions about personal experiences to help students prepare for answering the more abstract Unit Question. For example, ask: *What are some different kinds of scientists you can name? What do they study? Do they help people, animals, or the environment?*
2. Read the Unit Question aloud. Give students a minute to silently consider their answers to the question.
3. Put three pieces of poster paper on three different walls of the classroom. Title them: *How scientists help people*, *How scientists help animals*, and *How scientists help the environment*.
4. Divide the class into three groups. Assign one to each poster and give each one a different-colored marker. Tell students: *List as many ways as you can that scientists help people, animals, or the environment.* Give them five minutes to brainstorm and write their ideas on the poster paper.
5. Call time, and have groups move to the next poster. Then repeat the process for the third poster so each group has had a chance to answer each question.
6. Bring the class back together and write the Unit Question on the board: *How can science improve lives?* Ask the class to discuss the Unit Question and write their ideas on the board. Have them refer to the ideas on the three posters to help them.

Background Note

READING 1 page 95

According to the United Nations, energy consumption will have risen by 40% globally between 2011 and 2031. Most of this increase will come from developing countries, where more than a billion people still lack access to electricity because they live in rural areas and are not connected to a larger urban or national grid, a situation known as “energy poverty.” The International Energy Agency reports that around 40% of the world’s population still relies on traditional biomass to meet household cooking needs, mainly in the form of wood. Burning wood as a fuel source is problematic not only because the smoke is a pollutant but also because demand for wood has resulted in massive deforestation, contributing to global warming. Even as companies are

developing more energy-efficient power sources that use wood, coal, and kerosene, experts suggest that the environment and people living in developing countries would be better served with access to renewable energy sources, such as solar and wind energy.

Multilevel Option 1

READING 2: This Device Pulls Water Out of Desert Air

C. VOCABULARY page 102

1. Read each of the words in the box aloud.
2. Invite students to repeat the words after you.
3. Have students work with a partner to locate each word in the reading. Invite them to use clues in the text to help define the words they don’t know.
4. Encourage volunteers to share what they learned.

MULTILEVEL OPTION

Pair lower-level students and assist them with the task. Provide example sentences to help them understand the words.

Have higher-level students write a sentence for each vocabulary word. Ask students to write their sentences on the board. Correct the sentences as a class, focusing on the use of the words and expressions rather than other grammatical issues.

Background Note

READING 2 page 103

Water scarcity can refer to either lack of availability due to physical shortage, such as in deserts and other arid areas, or lack of access to water due to poor infrastructure in cities, towns, and rural areas. The UN estimates that more than two billion people live in “high water stress” areas, and UNESCO predicts that the world’s growing population combined with droughts caused by current climate change conditions could displace anywhere from 24 to 700 million people from their homes by the year 2030. In addition to MOFs, other technologies aimed at curbing water scarcity include building hand-pumped water wells, harvesting rainwater, and collecting water from natural underground aquifers (rivers), many of which lie under deserts. A more recent and promising technology is desalination, a process that converts sea water into fresh water for human consumption and is already being used productively in desert countries such as Saudi Arabia, Oman, and the United Arab Emirates.

Expansion Activity 2

WORK WITH THE VIDEO page 108

1. Divide the students into three groups and assign each group one of the three inventions from the video (reflective lenses, thickening clouds, releasing sulfur).

- Tell each group they will be the “experts” of that invention and will do an interview role-play on how it works, how likely it is to happen, and what the advantages and disadvantages are. To help students, write the interview questions on the board: *What is the invention? How does it work? Is it likely to work? What are the advantages? What are the disadvantages?*
- Have each group compare their notes about the invention from Activity B. Give each member of the group an index card for them to write short notes about each question. If possible, encourage the group to research more about their invention online to add more information from the video.
- Pair each student up with a different “expert.” Have the pairs interview each other about their invention. Allow students to use their notecards to refer to. Tell students they have three minutes each to interview their expert. Call time after three minutes to let them know when to switch roles. Have students repeat this process two more times, each time with a different expert. During the second interview, give students only two minutes each. During the third, tell them they only have one minute each.
- At the end of the three interviews, have a class discussion on what happened when students repeated the same information in less time. Ask: *How did it feel to speak in less time? Did you explain it better or worse?* Students should notice that they were better able to summarize the information each time they were interviewed due to processing it several times.

Multilevel Option 2



WRITE WHAT YOU THINK page 109

- Ask students to read the questions and reflect on their answers.
- Seat students in small groups and assign roles: a group leader to make sure everyone contributes, a note-taker to record the group’s ideas, a reporter to share the group’s ideas with the class, and a timekeeper to watch the clock.
- Give students five to ten minutes to discuss the questions. Call time if conversations are winding down. Allow them an extra minute or two if necessary.
- Call on each group’s reporter to share ideas with the class.
- Have each student choose one of the questions and write a paragraph of five to seven sentences in response.
- Call on volunteers to share their responses with the class.

MULTILEVEL OPTION

Allow lower-level students to work with partners in response to the question they choose. Ask higher-level students to respond with a two-paragraph answer to expand on their ideas (such as a long “example” paragraph) or choose more than one question to answer.

Vocabulary Skill Note

USING THE DICTIONARY TO DISTINGUISH BETWEEN HOMONYMS page 109

Ask volunteers to read the information about homonyms. Then check comprehension. Ask: *What is a homonym? What homonyms do you know?*

Skill Note

Strict homonyms are words that are spelled the same but have different meanings (*bow*—a thing used to shoot arrows; *bow*—what you tie in your shoelaces). However, the term *homonym* also includes homophones, which are words that sound the same but are spelled differently (e.g., *through*, *threw*). If you add the word *bow* (to move your body or head downward) to the examples above, you have a *heteronym*, or a word with a different meaning that is spelled the same but pronounced differently.

Expansion Activity 3

A. IDENTIFY page 110

- Instruct students to choose three different uses/ definitions of the word *range* and write an example sentence with each one.
- As students are finishing, ask for volunteers to write one of their sentences on the board. Try to get at least five sentences.
- Have students work in pairs to match the sentences to the correct definition.
- Going one sentence at a time, ask pairs which definition they chose for each sentence, and write the number(s) next to the sentence. Then ask the author of the sentence to reveal which definition he or she was trying to illustrate.
- If the sentence doesn’t exactly match the definition, ask the class to brainstorm how to change the sentence to make it match more accurately.

Grammar Note

SUBORDINATORS AND TRANSITIONS TO COMPARE AND CONTRAST page 116

- Read the information about subordinators that show contrast. Ask: *What are some examples of subordinators that show contrast?* Point out that sentences with *although*, *though*, and *while* convey the meaning of “Yes, but...”
- Elicit additional sentences using *whereas*, *while*, *although*, or *though*.
- Read the information about transitions showing comparison and contrast. Check comprehension: *What are some examples of transitions that show comparison? Contrast?*
- Pair students and challenge them to think of another sentence using one of the transition words.

Skill Note

The subordinators *although* and *though* can be used interchangeably at the beginning of a sentence. However, only *though* can be used at the end of a sentence (when used as an adverb). *Though* is also used in the adverbial phrases *even though* and *as though*.

The transitions *in spite of this* and *despite this* must be used when both clauses of a sentence refer to the same person or idea.

Multilevel Option 3

C. APPLY page 118

1. Direct students to complete the sentences with their own ideas.
2. Ask volunteers to write their completed sentences on the board. Identify any errors in the sentence and ask students for ways they might fix them.

MULTILEVEL OPTION

Place students in mixed-ability pairs. Higher-level students can help lower-level students in coming up with ideas and completing the sentences.

Unit Assignment Rubrics

Unit 4 Science and Technology

Unit Assignment Rubric

Student name: _____

Date: _____

Unit Assignment: Write a five-paragraph essay comparing and contrasting two innovative technologies that can improve lives.

20 points = Essay element was completely successful (at least 90% of the time).

15 points = Essay element was mostly successful (at least 70% of the time).

10 points = Essay element was partially successful (at least 50% of the time).

0 points = Essay element was not successful.

Write a Compare and Contrast Essay	20 points	15 points	10 points	0 points
The essay explains the relationship between the two subjects or gives reasons why the relationship is important.				
The essay is organized using one of the compare and contrast essay types.				
The essay includes an introduction, three body paragraphs, and a conclusion.				
The essay includes subordinators and transitions to compare and contrast.				
The essay includes correct punctuation, spelling, and grammar.				

Total points: _____

Comments:

Background Note

UNIT OPENER pages 122–123

The large photo shows a collection of germinated seeds in small plastic containers at a laboratory at the GEVES headquarters in Beaucouze, France. Mushrooms are being grown on the germinated seeds.

Expansion Activity 1

UNIT QUESTION page 123

1. Introduce the Unit Question: *Should science influence what we eat?* Ask related information questions or questions about personal experiences to help students prepare for answering the more abstract Unit Question. For example, ask: *How do scientists know what is healthy? Have you heard that margarine is healthier than butter (or vice versa)? When you hear information like this, do you change what you eat? Why or why not?*
2. Read the Unit Question aloud. Give students a minute to silently consider their answers to the question. Ask students who would answer *yes* to stand on one side of the room and students who would answer *no* to stand on the other side.
3. Direct students to tell the person next to them their reasons for choosing the answer they did.
4. Call on volunteers from each side to share their opinions with the class.
5. After students have shared their opinions, provide an opportunity for anyone who would like to change sides to do so.
6. Ask students to sit down, copy the Unit Question, and make a note of their answers and their reasons. They will refer back to these notes at the end of the unit.

Multilevel Option 1

READING 1: Eating Well: Less Science, More Common Sense

C. VOCABULARY page 124

1. Read each of the words from the box aloud.
2. Invite students to repeat the words after you.
3. Have students look up definitions of words they don't know. Answer any questions about meanings.
4. Direct students to discuss with a partner how the words might relate to the unit.
5. Encourage volunteers to share their answers.

MULTILEVEL OPTION

Provide example sentences to help them better understand the words. For example: *I would like to try to **eliminate** soft drinks from my diet. If your low-fat diet isn't working, you should try a different **approach**, like eating a low-carbohydrate diet. One **benefit** of not having a car is that I get a lot of exercise by walking everywhere.*

Have higher-level students write a sentence for each word. Ask students to write their sentences on the board. Correct the sentences with the class, focusing on the use of the words rather than other grammatical issues.

Background Note

READING 1 page 125

Michael Pollan is a professor, author, and food activist. Pollan has written many books on the subject of food and health and argues that the modern agricultural industry has lost touch with the food chain as nature intended.

Pollan's critics argue that his stance is not based in science, a claim that Pollan agrees with. He blames science for society's modern health issues. Pollan's critics also assert that his criticism of the food industry does not take cost into account.

Multilevel Option 2

WRITE WHAT YOU THINK page 129

1. Ask students to read the questions and reflect on their answers.
2. Seat students in small groups and assign roles: a group leader to make sure everyone contributes, a note-taker to record the group's ideas, a reporter to share the group's ideas with the class, and a timekeeper to watch the clock.
3. Give students five minutes to discuss the questions. Call time if conversations are winding down. Allow them an extra minute or two if necessary.
4. Call on each group's reporter to share ideas with the class.
5. Have each student choose one of the questions and write a response to it for five to ten minutes.
6. Call on volunteers to share their responses.

MULTILEVEL OPTION

For question 2, allow lower-level students to list foods they've eaten rather than write in complete sentences.

Background Note

READING 2 page 134

Personalized nutrition programs focus on preventive measures, such as changes in diet and fitness, as opposed to the treatment of disease. They are often targeted at those suffering from diabetes, heart disease, and high-blood pressure. Some, such as nutrigenomics, base nutritional advice on a person's specific genome (DNA) makeup and its potential reaction to different kinds of foods, while others match diets to a person's specific traits, such as blood pressure, glucose levels, and weight.

According to the British Medical Journal (2018), the trend of personalized nutrition programs has been growing due to a number of factors: (1) a better understanding of how diet affects health from nutritional studies, (2) new technology enabling easier measurement of individual health markers, and (3) new analytical tools that make the interpretation of data user-friendly to the general public.

The personalized nutrition industry is generally unregulated and not backed by hard, empirically-based research, and few studies have researched the benefits of personalized nutrition programs, prompting medical experts to doubt their effectiveness. A 2016 study by Food4Me, for example, found that personalized nutrition plans were effective because they motivated users to eat healthier and exercise more, but the results were the same whether or not subjects followed a nutrigenomics-based plan.

Expansion Activity 2

WORK WITH THE VIDEO page 139

1. Review the five main food groups with the class. Write the five groups on the board: *Vegetables, Fruit, Meat, Grains, and Dairy*. Ask students for examples for each group, and write them under the correct heading. Ask students the benefits are eating foods from each food group.
2. Seat students in small groups. Tell each group they will work together to decide the "top five foods" to include in "the perfect diet." They will need to include one food from each of the five food groups. Allow them to choose one of the foods listed on the board or their own.
3. Give students five to ten minutes to brainstorm their top five foods. Ask them to think about the different minerals and vitamins each food provides. If possible, allow them to research for more information about their foods online.
4. Give each group a piece of poster paper and marker. Have them create a poster that identifies their top five foods. Tell them they must list the food group it is in and its nutritional information (e.g., calories, fat, vitamins, minerals, etc.). Encourage teams to draw pictures on their posters to illustrate the foods.
5. Have groups put their posters on the wall and present them to the class.
6. Ask students to choose which group's foods would best fit their preferences and lifestyle. Then have them write a short paragraph explaining why.

Vocabulary Skill Note

CAUSE AND EFFECT COLLOCATIONS page 140

1. Call on volunteers to read the information aloud.
2. Check comprehension: *What's a collocation? What are some collocations you can use when the cause/effect is the subject of the sentence?*

Skill Note

When students learn a new word, they should try to become aware of the word's register, part of speech, multiple meanings, and collocations. Have students make checking for collocations a part of their process for learning new vocabulary. When introducing new words, draw students' attention to other words that collocate with the new vocabulary. For example, point out that the word *contribute* in this unit collocates with the preposition *to*, as in *Scientific research contributes to our understanding of healthy foods*. The *Oxford Collocations Dictionary* has over 250,000 collocations and 75,000 examples for students of English.

Multilevel Option 3

C. COMPOSE page 142

1. Quickly review cause-effect collocations when the cause is the subject of the sentence and when the effect is the subject. Ask for examples from students and write them on the board.
2. Have students work individually to complete the activity.
3. Call on volunteers to write their sentences on the board. Identify any errors in the sentences and ask students for ways they might fix them.

MULTILEVEL OPTION

Have lower-level students work in groups of three to complete the activity. Have each member of the group write one of the three "Cause as subject" sentences and one of the three "Effect as subject" sentences. Have higher-level students complete the activity on their own, share their sentences with two other students in a group of three, and ask them to correct any errors they see.

Expansion Activity 3

WRITING SKILL page 143

1. Tell students that they will write a new kind of essay: the cause and effect essay. Read the information together.
2. Check comprehension: *What does a cause and effect essay do? What are two ways to organize the essay? What are the three parts of a cause and effect essay?*

21ST CENTURY SKILLS EXPANSION

Explain to students that understanding cause and effect relationships is a skill that can also help them in the workplace. For example, they may need to think about the potential results of an important business decision or explain the possible causes of a current problem. As a class, discuss workplace situations in which students might need to identify a cause or effect.

Grammar Note

AGENTS WITH THE PASSIVE VOICE page 147

1. Have students read the information about the passive voice. Discuss the grammar point as a class. Highlight the difference in the verbs in the active and passive sentences.
2. Check comprehension: *What is an agent? How is the passive formed?* Elicit additional examples of passive sentences.

Skill Note

It is important that students understand not only how to form the passive but also its purpose. The passive voice is used to emphasize the person or thing affected by the action. For example, in the sentence *The study was conducted by Dr. Barnes*, the study is given more importance than the person (agent), Dr. Barnes, who conducted it. It is likely that the next sentence will discuss information in the study rather than information about Dr. Barnes.

Unit Assignment Rubrics

Unit 5 Nutritional Science

Unit Assignment Rubric

Student name: _____

Date: _____

Unit Assignment: Write a five-paragraph cause and effect essay about the positive or negative effects of science on the food we eat.

20 points = Essay element was completely successful (at least 90% of the time).

15 points = Essay element was mostly successful (at least 70% of the time).

10 points = Essay element was partially successful (at least 50% of the time).

0 points = Essay element was not successful.

Write a Cause and Effect Essay	20 points	15 points	10 points	0 points
The essay clearly describes the effects of science on the food we eat.				
Each effect is supported by facts, examples, or descriptions.				
The essay includes an introduction, three body paragraphs, and a conclusion.				
Passive verbs are used correctly.				
Cause and effect collocations are used correctly.				

Total points: _____

Comments:

Background Note

UNIT OPENER pages 152–153

The large photo shows three college-aged students interacting with their professor in a computer electronics class. They are examining various computer parts that have been laid out on a metal table.

Expansion Activity 1

UNIT QUESTION page 153

1. Introduce the Unit Question: *Does school prepare you for work?* Ask related information questions or questions about personal experiences to help students prepare for answering the more abstract Unit Question. For example, ask: *What kind of skills or knowledge do you need for your job now? Did you learn any of these in school?*
2. Read the Unit Question aloud. Give students a minute to silently consider their answers to the question. Then ask students who would answer *yes* to stand on one side of the room and students who would answer *no* to stand on the other side.
3. Direct students to tell the person next to them their reasons for choosing the answer they did.
4. Call on volunteers from each side to share their opinions with the class.
5. After students have shared their opinions, provide an opportunity for anyone who would like to change sides to do so.
6. Ask students to sit down, copy the Unit Question, and make a note of their answers and reasons. They will refer back to these notes at the end of the unit.

Multilevel Option 1

READING 1: From Student to Employee: A Difficult Transition

C. VOCABULARY page 154

1. Read each of the words from the box aloud.
2. Invite students to repeat the words after you.
3. Have students work with a partner to locate each word in the reading. Invite them to use clues in the text to help define the words they don't know.
4. Encourage volunteers to share what they learned.

MULTILEVEL OPTION

Pair lower-level students and assist them with the task. Provide example sentences to help them understand the words. For example: *The noise from the workers was **constant**. It never stopped. If you come from a hot country, it can be difficult to **adjust** to cold winters. The school project was **collaborative**, so the students worked in teams.*

Instruct higher-level students to write sentences using the vocabulary words. Ask volunteers to write their sentences on the board. As you go over the vocabulary words in the box, use the higher-level students' sentences as examples of context.

Background Note

READING 1 page 155

The website BetterHighSchools.org supports the argument made by the author of Reading 1 that school does not sufficiently prepare students for their future employment. Much research indicates that schools' goals need to be more closely aligned with the goals of students' future employers. This means that the curriculum taught in high schools should include the knowledge and skills that will likely be needed in students' first jobs.

Many researchers also suggest that high schools need to collaborate with employers. This may include school-workplace partnerships that allow students to gain work experience before graduating and entering the "real world."

Multilevel Option 2

WRITE WHAT YOU THINK page 160

1. Ask students to read the questions and reflect on their answers.
2. Seat students in small groups and assign roles: a group leader to make sure everyone contributes, a note-taker to record the group's ideas, a reporter to share the group's ideas with the class, and a timekeeper to watch the clock.
3. Give students five minutes to discuss the questions. Call time if conversations are winding down. Allow them an extra minute or two if necessary.
4. Call on each group's reporter to share ideas with the class.
5. Have each student choose one of the questions and write a response to it for five to ten minutes.
6. Call on volunteers to share their responses.

MULTILEVEL OPTION

Pair lower-level students and have them choose the same question to respond to. As higher-level students finish writing, have them share their responses with a partner.

Background Note

READING 2 page 163

Entrepreneurs are creative, independent individuals who take advantage of new opportunities. Often, they take financial risks to start a new company or project.

Vera Wang is a successful entrepreneur. Inspired by her frustrating search for the perfect wedding gown, Wang started her own bridal gown shop. Her dresses are known for their simple designs and rich fabrics. Today, her company is a multi-million dollar success.

Ray Kroc, founder of McDonald's, is another example of a successful entrepreneur. He once said, "The two most important requirements for major success are: first,

being in the right place at the right time, and second, doing something about it." Kroc expanded a small California restaurant into a successful worldwide chain.

Expansion Activity 2

WORK WITH THE VIDEO page 168

1. Tell students they will be writing a cover letter for a job they are interested in. First, have students work in pairs to talk about a job they would like to have in the future. It could be a part-time or full-time job and one in the near or distant future.
2. As a class, discuss the kinds of information people include in a cover letter, including:
 - a. a greeting
 - b. a short biographical statement/summary identifying important educational and career accomplishments and any honors or volunteer work
 - c. an explanation of how their skills and experience match the skills of the job
 - d. a conclusion that finishes with a call to action, such as a request for an interview
3. Tell students to write their cover letter. Encourage students to write a separate paragraph for each of the four sections above (a-d).
4. After students have finished writing, have them exchange cover letters with a partner and ask one another for feedback. If necessary, have students rewrite their cover letter based on the feedback they receive. If possible, have students type up their cover letters. Have students submit their cover letters to you for feedback.

Vocabulary Skill Note

WORD FORMS page 169

1. Call on students to read the information about word forms. Check comprehension: *What are word forms? How will this skill help you with writing and speaking?*
2. Provide another word, such as *environment*, and show students how to use the dictionary to find the word forms (*environmentalist, environmental, environmentally*).

Skill Note

Help students identify word forms by teaching common suffixes that indicate a word's part of speech. For example, words that end with *-er, -tion, or -sion* are nouns. Words that end with *-ence* or *-ance* also tend to be nouns. Some suffixes that indicate that a word is an adjective are *-ent, -ant, and -ful*. Some suffixes commonly found in verbs are *-ate* and *-ize*. By teaching students to recognize these common suffixes, they will more easily be able to identify different word forms of a new word.

Grammar Note

REPORTED SPEECH WITH THE PRESENT TENSE AND SHIFTING TENSES page 171

1. Ask volunteers to read each section about reported speech. Highlight the examples and provide additional ones to reinforce the skill.

2. Check comprehension: *Why is the present tense used with reported speech in academic writing? What types of clauses are used in reported speech?*

Skill Note

In academic writing, opinions and research are reported in the present tense. Unlike conversation, where *say* and *tell* are used almost exclusively, academic writing uses a wider range of verbs. Some additional reporting verbs that are used in academic writing are *mentions, notes, claims, concludes, recommends, and stresses*.

Multilevel Option 3

D. APPLY page 174

1. Have students read the instructions to themselves.
2. Confirm students' understanding of the instructions by asking questions such as: *What will you need to add to the sentence? What will you do with the verbs in bold? What other changes might you need to make?*
3. Ask for a volunteer to read item 1 and ask similar comprehension questions: *What is the reporting verb? How did the verbs in bold change? What happened to the pronouns? Why?*
4. Do item 2 as a class. Ask for a volunteer to read the original sentence. Then ask for volunteers to suggest how to write the sentence with reported speech. Write the new sentence on the board and point out the reporting verb, the verb shifts, and the pronoun changes.
5. Have students complete the rest of the activity individually.
6. Call on volunteers to read their answers to the remaining items. If you hear any errors, write them on the board, and ask the class for suggestions on how to correct them.

MULTILEVEL OPTION

Place students in mixed-ability pairs as they complete the activity. Higher-level students can help lower-level students identify the changes that need to be made to the sentences and how to write them correctly.

Expansion Activity 3

B. WRITING MODEL page 177

1. Direct students to read the summaries, complete the checklist, and answer the questions.
2. Discuss the answers as a class.

21ST CENTURY SKILLS EXPANSION

It is important for students to be able to identify the most important ideas in a text and present them in a clear, organized way. In the workplace, students may be required to summarize information by presenting key points from a meeting, conference, or presentation or by briefing a supervisor on the progress of a day's work. Ask students to brainstorm other ways that they may use summarizing in their jobs.

Unit Assignment Rubrics

Unit 6 Education

Unit Assignment Rubric

Student name: _____

Date: _____

Unit Assignment: *Write a summary of a reading text.*

20 points = Summary element was completely successful (at least 90% of the time).

15 points = Summary element was mostly successful (at least 70% of the time).

10 points = Summary element was partially successful (at least 50% of the time).

0 points = Summary element was not successful.

Write a Summary	20 points	15 points	10 points	0 points
The summary includes the title of the article and the author's name and purpose.				
The summary identifies the thesis statement and includes all the main ideas of the article.				
The summary is written mostly in the student's own words.				
Reported speech is used correctly.				
Punctuation, spelling, and grammar are correct.				

Total points: _____

Comments:

Background Note

UNIT OPENER pages 182–183

The large photo shows a scuba diver in a coral reef off the coast of Borneo. There is a large green sea turtle in the foreground. The scuba diver is holding a large, underwater camera and is taking photos of the sea turtle.

Expansion Activity 1

UNIT QUESTION page 183

1. Introduce the Unit Question: *Is discovery always a good thing?* Ask information questions or questions about personal experiences to help students prepare for answering the more abstract Unit Question. For example, ask: *What are some places that people explore? What are they looking for?*
2. Read the Unit Question aloud. Give students a minute to silently consider their answers to the question. Say: *Let's consider discoveries. What are the advantages of discoveries? What are the disadvantages?*
3. Write *Discoveries* at the top of two sheets of poster paper with the sub-categories *Advantages* and *Disadvantages*.
4. Elicit students' answers and write them in the correct categories. Post the lists to refer back to later in the unit.

Multilevel Option 1

READING 1: Ocean Discoveries

C. VOCABULARY page 184

1. Read each of the words in the box aloud.
2. Invite students to repeat the words after you.
3. Have students look up definitions of words they don't know. Answer any questions about meanings.
4. Direct students to discuss with a partner how the words might relate to the unit.
5. Encourage volunteers to share their answers.

MULTILEVEL OPTION

Pair lower-level students and provide them with sample sentences using the vocabulary words. For example: *When people go to court, they need to provide **evidence** to prove why they are innocent. My grandmother is very **resilient**—she overcomes whatever challenges life brings her. The Internet has had a **significant** impact on the way people today get information.*

Have higher-level students write a sentence for each vocabulary word. Ask volunteers to write their sentences on the board. Correct the sentences, focusing on the meaning and use of the words rather than other grammatical issues.

Background Note

READING 1 page 185

Human-operated deep-sea vessels used to explore the oceans have advanced significantly since 1934, when the first one, called the Bathysphere, was introduced. The Bathysphere carried one person and descended 3,028 feet below the surface. In contrast, the current model of the Alvin can carry two scientists and a pilot and descend to 21,300 feet (6,500 meters) below sea level. To date, the Alvin has made more than 4,400 dives and data from its explorations have appeared in almost 2,000 scientific research papers. The Alvin is launched from a large submarine owned and operated by the U.S. Navy. In addition to finding undiscovered sea life, the Alvin has also been used to explore and take photos of the wreckage of the *Titanic*.

Despite advancements in both manned and unmanned submersibles, the ocean floor largely remains undiscovered; only 2% has been explored by humans and only 10% to 15% has been “thoroughly mapped” using sonar technology aboard ships and submersibles and drones. In comparison, scientists have mapped 100% of the Moon's surface and as much as 90% of Mars's, proving just how dangerous and difficult it is to explore the deep sea.

Multilevel Option 2



WRITE WHAT YOU THINK page 191

1. Ask students to read the questions and reflect on their answers.
2. Seat students in small groups and assign roles: a group leader to make sure everyone contributes, a note-taker to record the group's ideas, a reporter to share the group's ideas with the class, and a timekeeper to watch the clock.
3. Give students five minutes to discuss the questions. Call time if conversations are winding down. Allow them an extra minute or two if necessary.
4. Call on each group's reporter to share ideas with the class.
5. Have each student choose one of the questions and write a response to it for five to ten minutes.
6. Call on volunteers to share their responses.

MULTILEVEL OPTION

Have lower-level students work in pairs to write a response to the same question while higher-level students work individually. Call on pairs or individuals to share their responses with the class.

Background Note

READING 2 page 194

Bristol Bay is the largest commercial sockeye salmon-producing region in the world. All five Eastern Pacific species of salmon spawn in the bay's freshwater tributaries. The Kvijack River has the largest red salmon run in the world. It drains from Lake Iliamna, which is downstream of the copper ore deposit. Along with herring and other fisheries, salmon accounts for nearly 75% of local jobs.

Sport fishing is another important local industry. Many lodges in the area cater to sport fishermen. On top of that, harvesting of salmon and freshwater fish in the Bristol Bay area is a critical part of life for rural residents, most of whom live downstream of the Pebble Mine site. The people in this area rely heavily on wild resources for food; it is also part of their cultural heritage.

The controversy over the proposed mine centers largely on the potential risk to the watershed, fisheries, and other wildlife.

Multilevel Option 3

E. EXPLAIN page 198

1. Have students complete the activity individually.
2. Ask students to identify the paragraph number where they found the answer to each question and write it next to the answer.
3. Call on volunteers to share their answers.

MULTILEVEL OPTION

Allow lower-level students to answer the question in short phrases. Ask higher-level students to answer the questions in complete sentences and paraphrase the information from the reading.

Expansion Activity 2

WORK WITH THE VIDEO page 199

1. Tell students they will be doing a debate about wind farms. Write the debate statement on the board: *Wind farms would be good for our community.*
2. Split the class into three groups. Group 1 will be the supporting team. The supporting team will brainstorm two reasons (arguments) why wind farms would be a good solution for their local community/area. Group 2 will be the opposing team. The opposing team will brainstorm two reasons (counterarguments) why wind farms would *not* be a good solution for their local community/area. Group 3 will be the judges. They will brainstorm reasons for both sides so they are prepared for the debate. Encourage all three groups to draw from the notes and ideas they generated in Activity B as they brainstorm arguments and counterarguments for windfarms in their own community. Review the procedure for the debate with students (see next step).

3. Start the debate. Use the following procedure:
 1. Each team presents its first argument. The supporting team goes first. The opposing team goes second.
 2. Each team presents its second argument. The supporting team goes first. The opposing team goes second.
 3. Each team defends its argument and explains why it's stronger than the other team's. The supporting team goes first. The opposing team goes second.
 4. Each team gives a short summary of its arguments. The supporting team goes first. The opposing team goes second.
 5. Judges vote on which team won the debate.
4. Follow up the debate by giving students feedback about what you heard them say. Highlight important vocabulary they used. Point out the most powerful arguments they made. Correct any common grammar or pronunciation errors you heard.

Expansion Activity 3

? WRITE WHAT YOU THINK page 200

1. Ask students to read the questions and reflect on their answers.
2. Seat students in small groups and assign roles: a group leader to make sure everyone contributes, a note-taker to record the group's ideas, a reporter to share the group's ideas with the class, and a timekeeper to watch the clock.
3. Give students about five minutes to discuss the questions. Stop the conversations earlier if students are finishing sooner. Allow them an extra minute or two if necessary.
4. Ask students to choose one of the questions and write a short paragraph in response. Ask for a few volunteers to read their paragraphs aloud.

21ST CENTURY SKILLS EXPANSION

Critical thinking skills are important for academic success as well as for future professional success. In the workplace, employers are looking for employees who can evaluate and synthesize different points of view and evidence to solve common problems, avoid personal bias, and find common ground with others who have differing opinions. These skills will help students learn to think deeply about all the information available to them to make intelligent judgments and decisions and to work more collaboratively and effectively with others. You can encourage students to acknowledge others' points of view and add to them by giving them functional language chunks, such as, *I see your point. I also think that...? Hmm, that's interesting. Have you also considered...? Good point, but there's also the issue of...* It is helpful to teach students these functional phrases before having group discussions of the texts they have read.

Vocabulary Skill Note

WORD ROOTS page 201

1. Call on volunteers to read the information aloud.
2. Check comprehension: *What language do many words come from? What is a word root? Why is it useful to know the basic meaning of word roots?*

Skill Note

Word roots are clues to the meaning of words. Knowing word roots can help students figure out the meaning of new words. In addition to the ones on page 200, here are some other common word roots:

The root *-act-* means “to do” or “to move” and forms words such as *action*, *react*, and *activity*.

The root *-cred-* means “to believe” and forms words like *incredible*, *credit*, and *credential*.

The root *-log-* means “word” or “speech” and forms words such as *dialogue*, *apology*, and *logic*.

Grammar Note

ADVERB PHRASES OF REASON page 207

1. Read the information and examples about adverb clauses and phrases of reason.
2. Check comprehension: *What do adverb clauses of reason do? What is an example of a subordinator? How do you reduce an adverb clause with a simple verb? How do you reduce an adverb clause with a perfect verb?*

Skill Note

Adverb clauses of reason often occur before the main clause, as in the example *Because they heard the animal was rare, poachers began to visit the habitat*. Both clauses in this sentence have the same subject: *poachers*.

When the subjects of both clauses are the same, there is no need to repeat the subject. Students can vary their sentences by changing adverb clauses to adverb phrases. For example: *Hearing that the animal was rare, poachers began to visit its habitat*.

Expansion Activity 4

B. APPLY page 208

1. Ask students to get out a piece of paper. Have students then write three to five sentences that begin with a *because* clause. Encourage them to write sentences about the information from Reading 1 and Reading 2. You could also allow lower-level students to write about more personal topics or experiences to make the activity a little easier.
2. Have students switch papers with a partner. Ask the partner to change the *because* clauses to adverb phrases and rewrite them. Refer them to the rules on page 207 for help. Circulate and help as needed.
3. As students finish, ask a few volunteers to write sentences with the reduced clauses on the board.
4. Bring the class together. First, ask what the reduced clause is and underline it. Then ask: *What was the original adverb clause?* Write the original clause above the phrase so students can compare the two. Then ask the author of the original sentence if it matches his or her sentence. If it doesn't, discuss what needs to be changed. Repeat this process until you have covered all the sentences on the board.

Unit Assignment Rubrics

Unit 7 Geology

Unit Assignment Rubric

Student name: _____

Date: _____

Unit Assignment: *Write an opinion essay about a specific discovery or type of exploration.*

20 points = Essay element was completely successful (at least 90% of the time).

15 points = Essay element was mostly successful (at least 70% of the time).

10 points = Essay element was partially successful (at least 50% of the time).

0 points = Essay element was not successful.

Write an Opinion Essay	20 points	15 points	10 points	0 points
The essay clearly expresses the student's opinion about the topic.				
The essay includes an introduction, multiple reasons, and a conclusion.				
Each reason is supported by facts, examples, or logical arguments.				
Adverb phrases of reason are used correctly (if included).				
The essay includes correct punctuation, spelling, and grammar.				

Total points: _____

Comments:

Background Note

UNIT OPENER pages 212–213

The large photo shows a group of construction workers building the Tsing Ma suspension bridge in Hong Kong. The bridge connects Hong Kong to the island of Lantau. Construction began in 1992 and was completed in 1997.

Expansion Activity 1

UNIT QUESTION page 213

1. Introduce the Unit Question: *Can failure lead to success?* Ask related information questions or questions about personal experiences to help students prepare for answering the more abstract Unit Question. For example, ask: *Do you consider yourself successful? What is the biggest success in your life so far? Was it easy or difficult to achieve? Did you ever want to give up? Why?*
2. Put students in small groups and give each group a piece of poster paper and a marker.
3. Read the Unit Question aloud. Give students a minute to silently consider their answers to the question. Tell students to pass the paper and the marker around the group. Direct each group member to write a different answer to the question. Encourage them to help one another.
4. Ask each group to choose a reporter to read the answers to the class. Point out similarities and differences among the answers. If answers from different groups are similar, make a group list that incorporates the answers. Post the list for students to refer back to later in the unit.

Multilevel Option 1

READING 1: The Tacoma Narrows Bridge Collapse and the Lessons Learned

C. VOCABULARY page 214

1. Read each of the words from the box aloud.
2. Invite students to repeat the words after you.
3. Have students look up definitions of words they don't know. Answer any questions about meanings.
4. Direct students to discuss with a partner how the words might relate to the unit.
5. Encourage volunteers to share their answers.

MULTILEVEL OPTION

Assist lower-level students with the task. Provide sample sentences using the vocabulary words. For example, *When you put **fragile** objects in the mail, you must wrap them well to protect them. The **ratio** of girls to boys in this class is 2 to 1; in other words, there are twice as many girls as boys. People over 65 are more **susceptible** to getting infections.*

Have higher-level students write a sentence for each vocabulary word. Ask volunteers to write their sentences on the board. Correct the sentences with the class, focusing on the use of the words rather than other grammatical issues.

Background Note

READING 1 page 215

The Tacoma Narrows Bridge goes over the Tacoma Narrows straight of the Puget Sound in western Washington state, connecting the city of Tacoma to the Kitsap Peninsula. When the population of the Kitsap Peninsula grew, a twin bridge was built next to the 1950s bridge to accommodate the increase in automobile traffic. One bridge is eastbound and the other is westbound. Today, the 1950s bridge handles more than 90,000 vehicles per day, though it was originally designed to carry only 60,000.

Suspension bridges have several important advantages that have made them a popular choice in countries around the world. They can cover longer spans than other bridges, are cheaper to manufacture because they require less material, and are more earthquake-proof due to their flexibility. One disadvantage, besides being susceptible to movement in high winds, is that they are not able to handle the weight of heavy rail traffic compared to other bridges.

Multilevel Option 2

? WRITE WHAT YOU THINK page 222

1. Ask students to read the questions and reflect on their answers.
2. Seat students in small groups and assign roles: a group leader to make sure everyone contributes, a note-taker to record the group's ideas, a reporter to share the group's ideas with the class, and a timekeeper to watch the clock.
3. Give students five minutes to discuss the questions. Call time if conversations are winding down. Allow them an extra minute or two if necessary.
4. Call on each group's reporter to share ideas with the class.
5. Have each student choose one of the questions and write a response to it for five to ten minutes.
6. Call on volunteers to share their responses.

MULTILEVEL OPTION

Put students in mixed-ability pairs for the discussion. Higher-level students' answers can serve as a model for lower-level students. Then have the pairs choose the same question and write their response together, with the higher-level student doing the writing. Remind them that they both should include ideas in the response.

Background Note

READING 2 page 225

The projects of the Developing Technologies charity have varied greatly over the years to meet the specific demands of the communities it has tried to help. In addition to digging fresh water wells for rural communities (Sierra Leone), the charity has also overseen projects to help people access more healthcare services and emergency transport services (Zambia), extract essential oils from plants for medical purposes (Kenya), recycle plastic waste (Nigeria and Ghana), and use biomass fuels more efficiently (Nepal). In addition to individual private donors, the organization also receives donations from a number of charitable trusts and companies based in the United Kingdom.

Expansion Activity 2

WORK WITH THE VIDEO page 230

1. Tell students they will create a timeline of the Chernobyl reactor explosion. Review what a timeline looks like and write an example on the board (e.g., an arrowed line intersected by small lines indicating specific events). Tell students you will play the video again and explain that there are seven events mentioned in the video. Instruct them to intersect their timeline seven times with perpendicular lines and label each one with the events that occur. Model the timeline on the board.
2. Play the video again. Have students listen and create their timelines based on the information they hear. The main events include (1) a test of the reactors began, (2) workers ignored safety protocols, (3) the reactors became unstable, (4) workers tried to manually shut down the reactor, (5) there was a power surge; the reactor exploded, (6) radioactive material and debris teared through the plant, and (7) two workers died.
3. If necessary, play the video again for students to complete their timelines.
4. Have students compare their timelines with a partner.
5. If possible, have students go online and do a search for "Chernobyl disaster" to add information about the aftermath of the explosions, including the deaths of firemen and site workers who were exposed to excessive radiation levels, and an increase in cancer risks in the surrounding population due to the radiation emitted from the plant. Have them add any new information to their timelines.

6. Ask volunteers to come up to the board to complete the example timeline you made. Ask questions to help students: *What happened after the workers ignored the safety protocols? What happened after the power surge? What happened in the end?*, etc.
7. Ask students to write two paragraphs: (1) a summary of the Chernobyl disaster based on the timeline they created and (2) their opinion about whether we should continue to use nuclear energy.

Vocabulary Skill Note

COLLOCATIONS WITH PREPOSITIONS page 231

1. Ask for volunteers to read the information and examples for collocations with prepositions.
2. Check comprehension: *What are some common collocation patterns? What's an example of an adjective and a preposition that collocate together?*
3. List the different collocation patterns on the board and elicit additional examples.

Skill Note

Online corpora are priceless tools in helping students to learn about a word's collocations. When students learn a new word, they can simply enter it into an online corpus, such as the Corpus of Contemporary American English (<http://www.corpus.byu.edu/coca/>). There they will find thousands of authentic examples of how the word is used. They can see what nouns, adjectives, or verbs a preposition collocates with (or vice versa).

Expansion Activity 3

A. WRITING MODEL page 233

1. Ask for volunteers to read the essay aloud. Assign one paragraph to each student.
2. At the end of each paragraph, pause and ask questions that help students identify the major parts and important elements of the essay:
 - Introduction: *What is the thesis statement? What is the writer's opinion about the topic? Is it favorable or unfavorable?*
 - Body paragraph 2: *What is the topic sentence? What example(s) does the author give? Do the examples support his opinion well? What words show the author's tone?*
 - Body paragraph 3: *What is the topic sentence? What example(s) does the author give? Do the examples support his opinion well? What words show the author's tone?*
 - Body paragraph 4: *Why does the writer begin with, "There are those who..."? What does this expression introduce? Why is it important to give a counterargument? Do you think the writer refutes the counterargument effectively? Why or why not?*
 - Conclusion: *Which sentence(s) summarize the writer's main idea? What kind of final thoughts does the writer give—a suggestion, an observation, a warning, a prediction?*

Grammar Note

ADVERB CLAUSES OF CONCESSION page 237

1. Ask volunteers to read the information about adverb clauses of concession.
2. Check comprehension: *What is a concession? What message does a concession send? What are some subordinators that show concession?*

Skill Note

Explain to students that using adverb clauses of concession will help them present counterarguments and refutations in their writing. Remind them that the clause that contains the adverb of concession is the counterargument that is being refuted. Using a concession clause at the beginning of a sentence puts the primary focus on that clause and draws readers' attention to the concession.

Point out that the subordinators *although* and *though* have the same meaning while *even though* is a little stronger and more emphatic. At the beginning of a sentence, *although* and *though* can be used interchangeably, but only *though* can be used at the end of a sentence. For example, *Recess reduces class time. It is important for children, though.*

Multilevel Option 3

A. APPLY page 238

1. Ask for a volunteer to read the directions aloud.
2. Ask for other volunteers to read the sample answers for item 1. For each sentence, ask: *What is the concession clause? What is the main clause? What is the author's argument?*
3. Have students complete the activity on their own and then compare answers with a partner.
4. Ask for volunteers to write their sentences on the board and go over them as a class. Make any necessary corrections.

MULTILEVEL OPTION

Have lower-level students work in pairs to complete the activity, and assist the pairs as necessary. Have higher-level students complete the activity individually and then write their own sentences with a concession clause. Ask for volunteers to write one on the board to discuss as a class.

Expansion Activity 4

B. COMPOSE page 238

1. Direct students to think about their sentences and then they compare sentences with a partner. They could think about their responses to all items first, or compare answers as they think about each one. Encourage students to write their ideas down if they wish.
2. Elicit sentences from volunteers. You may want students to write their sentences on the board.

21ST CENTURY SKILLS EXPANSION

Employers want employees who can communicate their ideas and opinions effectively. Learning to include a concession in your writing or verbal discussions shows that you are aware of both sides of an issue. The inclusion of another point of view lends weight to your own viewpoint because you not only have to support your ideas, but you also have to express why they are better. This skill can be useful in a wide range of workplace situations, such as in persuading a customer to choose a particular product or expressing your opinion about a work policy.

Unit Assignment Rubrics

Unit 8 Engineering

Unit Assignment Rubric

Student name: _____

Date: _____

Unit Assignment: *Write a persuasive essay about whether failure can lead to success.*

20 points = Essay element was completely successful (at least 90% of the time).

15 points = Essay element was mostly successful (at least 70% of the time).

10 points = Essay element was partially successful (at least 50% of the time).

0 points = Essay element was not successful.

Write a Persuasive Essay	20 points	15 points	10 points	0 points
The essay builds a convincing argument with facts, evidence, and examples.				
Counterarguments and refutations are included.				
Adverb clauses of concession are used correctly.				
Collocations with prepositions are used correctly.				
The essay includes correct punctuation, spelling, and grammar.				

Total points: _____

Comments:

Student Book Answer Key

Unit-by-Unit detailed Student Book Answer Key.

Unit 1 Answer Key	89
Unit 2 Answer Key	92
Unit 3 Answer Key	95
Unit 4 Answer Key	99
Unit 5 Answer Key	103
Unit 6 Answer Key	106
Unit 7 Answer Key	110
Unit 8 Answer Key	114

The Q Classroom

Activity A, p. 3

Answers may vary. Possible answers:

1. We like to know what other people have done.
2. I admire my mother. She is kind and wise.
3. This person is admirable because he is risking his life to help save someone or to help save a structure.

Activity B, p. 3

1. Marcus: Firefighters go into burning buildings to save people, and soldiers risk their lives to defend their country.
Yuna: the man who helped people during a bad storm
Answers will vary. Possible answer: I think someone who fights for justice on behalf of disadvantaged or voiceless individuals is admirable.
2. Felix: people who stand up for others; fight against injustice; give up their time, their money, their personal happiness to help others
Sophy: self-sacrifice; doing something that others are afraid to do; example: surgeon who saved her father
Answers will vary. Possible answer: I think generosity and humility are very important qualities.

READING SKILL

Activity A, p. 4

Answers will vary. Possible answers: What a role model is / Who role models are / What role models do

Activity B, p. 4

- the qualities of role models
- which people may be role models
- how role models can inspire us
- how role models learn from mistakes

WORK WITH THE READING

Activity B, pp. 7–8

- a. acknowledged for
- b. resolve
- c. inherently
- d. aspire to
- e. constrained
- f. version
- g. achievement
- h. confront
- i. embody
- j. inclined
- k. adversity
- l. pursue

Activity C, p. 8

1. Answers will vary. Possible answer: Role models are important to everyone.
2. the first paragraph and the last paragraph

Activity D, p. 8

- a. 4
- b. 5
- c. 1
- d. 3
- e. 2

Activity E, p. 9

1. Answers will vary. Possible answers: parents, other family members, teachers, community leaders
2. He or she can help us aspire to the same profession.

3. He or she can help us repair any damage that was done. The person can also listen to, advise, and support us.
4. Role models might help when we are dealing with stress, illness, or other misfortunes.

Activity F, p. 9

1. T (paragraph 2)
2. F A parent is usually our first role model. (paragraph 3)
3. T (paragraph 5)
4. T (paragraph 5)
5. T (paragraph 6)
6. F A role model sometimes makes mistakes. (paragraph 7)
7. F We need role models in many different situations. (Answers may vary, for example, paragraph 6)
8. F Role models are all around us. (paragraph 10)

Activity G, p. 10

Answers will vary. Possible answers:

Other family members: how to manage our daily lives; how to show qualities we admire
A young child: how to continue in our struggles
Lawyers/Doctors: inspire others to pursue the same professions; how to become good leaders and members of society
Teachers/Community leaders: how to deal with problems

WRITE WHAT YOU THINK

Activity A, p. 10

Answers will vary. Possible answers:

1. Yes, they do, because they are good at sports, and they inspire other people to play sports.
2. I am a role model for my younger brother.
3. I would like people to say that I am a good person. I can be kind to other people and help them when I am able.

READING 2

PREVIEW THE READING

Activity A, p. 11

1. b
Answers will vary. Possible answer: the photos, the headings
2. Answers will vary. Possible answers:
Out with charity, in with partnership; you're never too young; you're never too old; entrepreneurs are born, not made; you can't rely on the kindness of strangers; go big or go home; true heroes never consider themselves heroes.
Answers found in the headings.
3. These people are examples of everyday heroes.

WORK WITH THE READING

Activity B, p. 15

1. b
2. a
3. a
4. c
5. a
6. b
7. a
8. b
9. a
10. c
11. b
12. a

Activity C, p. 16

1. T
2. F The social entrepreneurs in the book all have different goals.

3. F The nonprofits in the book are focused on improving the lives of other people.
4. F Some nonprofits are self-sustaining.
5. T
6. F Many of the heroes are trying to help a lot of people.

Activity D, p. 16

Roger Egger: DC Central Kitchen; local
Rebecca Onie: connects low-income families with the basic resources they need to be healthy; local
Adam Braun: Pencils of Promise, international
Roy Prosterman: secures land rights for poor families in developing countries
Chuck Slaughter: Living Goods
Jill VIAlet: national
Eugene Cho: improves education, delivers clean water, and ends poverty; international

Activity E, p. 17

Education and training: Roger Egger, Adam Braun, Eugene Cho
Health and safety: Rebecca Onie, Chuck Slaughter, Jill VIAlet, Eugene Cho
Legal help: Roy Prosterman

Activity F, p. 17

Answers will vary. Possible answers:

1. These people are special not because of some extraordinary talent but because they are everyday people.
2. Social entrepreneurs are naturally independent, willing to take risks, and willing to assume responsibilities.
3. Yes, he or she could because there is more than one way to be a hero. Heroes don't have to be entrepreneurs. / No, he or she can't because in order to be recognized as a hero, a person has to do something different from what others are doing.

WORK WITH THE VIDEO

Activity A, p. 18

Answers will vary. Possible answers:

Yes, I volunteer in my community. I participate in a clean-up project every spring, and I read to children in the after-school reading program at our library.

Activity B, p. 18

Josh Coombes—a hairdresser who gives free haircuts to the homeless people on the streets of his community in London; started a program called "Do Something for Nothing" in 2015; wants others to help, too, so he posts before and after pictures of the people he helps
Jade—a vet (veterinarian) who saw Josh's posts; helps homeless people take care of their dogs
Both—part of their work volunteering is speaking with people and learning about their lives; they make new friends; connecting with people makes them happy

Activity C, p. 18

Answers will vary.

WRITE WHAT YOU THINK

p. 19

Answers will vary. Possible answers:

1. Yes, I volunteered to help organize the books at my local library.
2. I think police officers are seen as admirable because they help to keep us safe and enforce the laws. Also, teachers are viewed as admirable for their work with children.

3. I think that the former British prime minister Theresa May is a role model. She worked hard and helped a lot of people.

VOCABULARY SKILL

Activity A, p. 19

- pronunciation
- part of speech
- spelling of irregular word forms
- example sentence
- synonyms

Activity B, pp. 20–21

1. 5
2. face up to
3. be confronted with
4. inherent – adjective; inherently – adverb
5. intrinsic
6. passive
7. 3
8. to/by/from
9. 2
10. sense of achievement

WRITING SKILL

Activity A, pp. 23–24

1. Are fame and fortune in your future? Do you dream of becoming a billionaire or a famous actor?
2. We all want to succeed, and identifying what qualities make someone successful can help us to achieve that goal.
3. Successful people share three common qualities that allow them to stand out.
4. They also work longer hours.
5. First, also, Second, For example, Finally
6. c

Activity B, p. 24

Answers will vary.

CRITICAL THINKING STRATEGY

Activity C, p. 25

- a. 2
- b. 4
- c. 1
- d. 3
- e. 8
- f. 6
- g. 7
- h. 5

Activity D, p. 25

1. Answers will vary.
2. b
3. summarizing the main idea and/or the main points

GRAMMAR

Activity A, p. 27

1. person who makes his or her community a better place
2. things that they do
3. book that changed his life forever
4. merchant who insisted that his son have an education
5. children who have no access to television
6. group which is trying to clean up the city
7. trash Maryam's group collects

Activity B, p. 27

1. We all aspire to do something that other people will respect.
2. Role models may inspire us to help people who/that cannot help themselves.
3. Role models have qualities that/which we would like to have.
4. To me, a person who/that inspires others to do good deeds is a role model.
5. Reading novels gives students something that/which they cannot get in textbooks.
6. Caring for the environment is something that/which we can all do.
7. Someone who/that donates money to charity is a generous person.

Activity C, p. 27

Sentences 1, 3, 5, and 6

1 – that

3 – that/which

5 – that/which

6 – that/which

The Q Classroom

Activity A, p. 33

Answers may vary. Possible answers:

1. I usually get information on the Internet. I also ask my friends for their opinions.
2. He is not paying attention to the ads. (Answers to the second question will vary.)

Activity B, p. 33

1. Sophy—She wants things to be good looking as well as functional.
2. Marcus—Words or design on the packaging advertising the product inside is important. Felix—He thinks presentation is important (the way things look), for example, fruit and vegetables. By piling them up in nice arrangements and spraying them with water, they look delicious.

READING 1

PREVIEW THE READING

Activity A, p. 34

1. Generation Z is the youngest generation. *Anti-millennials* means that they are different from millennials.
2. Growing up during the Great Recession means Gen Z has less money to spend or is more concerned about the future.

WORK WITH THE READING

Activity B, p. 37

1. a
2. b
3. b
4. b
5. a
6. a
7. b
8. a
9. a
10. a
11. a
12. b

Activity C, p. 38

Answers will vary. Possible answers:

1. Generation Z is a different generation from those that came before, and companies need to market differently to sell to them.
2. The audience is marketers, companies, and others interested in understanding Generation Z.
3. The references provide specific examples of how companies are marketing differently to get the attention of Gen Z.
4. Generation Z has always had access to information, so these young people value getting real and truthful information and in a clear and understandable way with nothing hidden.
5. Gen Z finds influencers on social media, such as Instagram and YouTube. They trust them to make conscious decisions about the brands they work with.

Activity D, p. 38

1. T (paragraph 1)
2. F is different than millennials (paragraph 1)
3. F grew up in a context different from that of millennials (paragraph 1)
4. F has always had the Internet (paragraph 2)
5. T (paragraph 2)
6. T (paragraph 3)
7. F is less trusting of brands (paragraph 3)

8. F spends less money than millennials (paragraph 5)
9. T (paragraph 7)
10. T (paragraph 10)

Activity E, p. 39

1. b
2. d
3. a
4. c
5. e

Activity F, p. 39

Answers will vary. Possible answers:

Generation Z	Millennials
Born between 1996 and 2011	Most studied generation
Total 60 million in U.S.	Internet pioneers
Don't remember a time without technology	Invented Facebook, shopped from their smartphones
Are less trusting of brands	Smoothly transitioned from satellite TV to Hulu and Netflix
Grew up in an era when information always available	
Are less brand conscious	
Value authenticity and transparency	
Trust influencers they follow on social media	

WRITE WHAT YOU THINK

Activity A, p. 39

1. Answers will vary.
2. Answers will vary. Possible answer: Honesty and a good reputation make a company trustworthy. I get information online and from peers and influencers.
3. Answers will vary. Possible answer: Marketers should get my attention by presenting truthful and accurate information about their products. They should provide reviews by people I trust. They should respond promptly if I have questions or problems with the product.

READING SKILL

Activity A, p. 40

Answers will vary but should include:

1. the main idea of the paragraph
2. details
3. one gives reason; one asks a question

Activity B, p. 41

Answers will vary. Possible answers: For decades, brands communicated through advertisements. Corporations with the biggest budgets could make the biggest impact through billboard, magazine, TV, and radio ads. But with the Internet, people can learn about what brands really stand for, beyond the photoshopped visions they project. Online reviews, for example, have made shoddy products easy to spot. Gen Zers know this better than anyone. They immediately learn when a company has lied to them.

Consumers can use technology to find out about brands and what they stand for

Ex. of tech.

READING 2

PREVIEW THE READING

Activity A, p. 42

Answers will vary. Possible answers:

1. Google, Facebook, Snapchat, YouTube, Twitter, Instagram, Google Maps, Uber
2. They are websites people use on their cell phones.

WORK WITH THE READING

Activity B, p. 45

1. counter
2. metric
3. align
4. tactics
5. functional
6. Broadly speaking
7. impulsive
8. escalate
9. essentially
10. manipulate
11. crave
12. activation

Activity C, p. 46

1. b
2. b
3. a
4. c
5. b

Activity D, p. 46

Answers will vary. Possible answers:

1. Values may include control over time, not being manipulated, and control of choices.
2. They might not want to be so manipulative. They may not like the pressure or competition in these companies. / They may no longer agree with the company's values or goals.
3. Tech workers are trained to keep us on their apps or websites for as long as possible.
4. People make money by how long they can keep our attention. If we are paying attention to what the tech workers want us to pay attention to, we aren't paying attention to what we want to pay attention to.

Activity E, p. 47

1. so his phone doesn't bother him ...
2. so he can feel the difference between an automated and a human's text ...
3. He made the first screen of his phone almost empty ...
4. so he has to go to them intentionally ...
5. He put a sticky note on his laptop ...

Activity F, p. 47

Answers will vary.

CRITICAL THINKING STRATEGY

Activity G, p. 47

Answers will vary.

WORK WITH THE VIDEO

Activity A, p. 48

Answers will vary. Possible answer: No, because I don't want companies to know my personal habits. / Yes, because since I'm going to see advertising anyway, it might as well be targeted to my interests.

Activity B, p. 48

Answers will vary. Possible answers:

	Data mining	How used in advertising
Notes from the video	Fastest growing data set: created when we call, text, search, travel, and buy Grows by 2 1/2 billion gigabytes a day	Data hunter Mike Baker saw opportunity to bring data revolution to world of advertising Possible to beam advert directly to people
	Data hunter, Mike Baker Volume and dynamic nature is changing how we live our lives Collect over millions of people = guess what they may be interested in next	Baker wondered: If we collect enough data about past behavior, could it be predictive in way that would be useful to business?
	Mine data to predict what people want to buy But difficult to search vast amount of data to find tiny signals of consumer interest No systems (mathematical constructs) to capture information, make sense of it, and then create actions across millions of people simultaneously Wanted to mine data instantaneously Needed a collaborator: a decision-making model that could pick up on patterns Processing hundreds of thousands of advertisements per second determine quickly whether it's good for client	Find hints of what people want to buy even before they realize themselves Collaborator: a decision-making model = adaptive built super-fast data decision-making machine Machine scans billions of pieces of data for clues to what we might buy then sends patternized ads from clients Models learn what and where you might buy Data analysts predicting what you want to buy are creating world of personalized advertising If you choose not to personalize won't get advertising it will still happen but will be less relevant and more annoying

Activity C, p. 48

Answers will vary. Possible answer: Advantages include getting information about products and services you're interested in being delivered directly to you. Disadvantages include companies knowing personal information about you and possibly exploiting that.

WRITE WHAT YOU THINK

p. 49

Answers will vary. Possible answers:

1. Yes, because it shows that they are honest. / No, because it doesn't guarantee that it's true or complete.

2. If it's a product I'm interested in, I may look at the ad.
3. Both will get my attention, and both annoy me. So it's not an effective strategy.

VOCABULARY SKILL

Activity A, pp. 49–50

1. draw
2. Online
3. In
4. in
5. targets
6. of
7. multinational
8. in
9. human
10. on
11. capture
12. lifestyle

Activity B, p. 50

Answers will vary.

WRITING SKILL

Activity A, pp. 52–53

1. Thesis statement: One of my favorite restaurants is Ben's Diner on Fourth Street because it's perfect for a casual, delicious meal.
Concluding sentence: So, whether you're looking for somewhere new to get some great food or just passing through, I suggest you head over to Ben's. You'll feel right at home and enjoy some good cooking, too.
2.
 - a. sight: red neon sign, gleaming tables, sparkling clean floors, bright green lettuce leaves, deep red tomatoes, purple olives
 - b. sound: pleasant noise of conversation, soothing clatter of dishes, sizzling skillet
 - c. taste: burger is peppery inside, sharp cheddar cheese, tangy purple olives
 - d. smell: rich smell of their homemade chicken soup, spicy aroma from the chicken fajitas
 - e. touch: soft red leather booths, smooth marble counter, soft toasted bun, burger is crunchy on the outside, moist on the inside

Activity B, p. 53

Answers will vary. Possible answers:

1. The old man lived quietly in a small farmhouse far from the busy city.
2. The small room was filled with pink roses, yellow and white daisies, and sweet-smelling purple lilacs.
3. The moist chicken and creamy potatoes were delicious.
4. We went on a long hike through the pine forest.
5. His aunt quietly entered the room on her tiptoes.
6. I couldn't believe that I didn't get to watch the final World Cup match on my friend's new flat-screen TV.

Activity C, pp. 54–55

1. the Adventurer, an SUV
2. the best, most reliable SUV
3. someone who likes to have outdoor adventures
4. It's powerful, quiet, and environmentally friendly. It has a lot of room and is comfortable.
5. It restates the main idea and gives a suggestion.

6. Answers will vary. Possible answer: Yes. I imagine an SUV like my friend Candace has, but bigger and more comfortable. The writer gave enough detail so that I could imagine what it looks like.

Activity D, p. 56

Answers will vary.

GRAMMAR SKILL

Activity A, p. 58

1. a
2. The
3. a
4. a
5. a
6. Ø
7. the —
8. the
9. Ø
10. the
11. a
12. the
13. Ø
14. the
15. the
16. Ø
17. Ø
18. the or Ø
19. the
20. an

The Q Classroom

Activity A, p. 63

Answers will vary. Possible answers:

1. My friends were classmates. I wasn't one of the popular kids, but I had good friends. I did gymnastics, but I mostly hung out with my friends.
2. From my parents, I learned that an education was important and to keep trying and not give up.
3. The parents feel proud. The children feel grateful.

Activity B, p. 63

1. Felix: have to work for what I want; contribute to the family
Sophy: care for others and to share—room, clothes, and toys
Yuna: values and culture

Answers will vary. Possible answer: One lesson I learned was how to share with my siblings.

2. right and wrong; adopt same habits as parents whether we mean to or not

Answers will vary. Possible answer: I agree with Sophy that I can have different habits from those of my parents.

READING 1

PREVIEW THE READING

Activity A, p. 64

Answers will vary. Possible answer: Fitting in is trying to participate in popular activities. Belonging seems to be doing fun things with friends.

VOCABULARY SKILL REVIEW

p. 67

feel + noun collocations: feel anxiety, feel empathy, feel shame

verb + noun collocations: overcome a barrier, show courage, build a foundation, find self-fulfillment

WORK WITH THE READING

Activity B, p. 67

1. empathy
2. fit in
3. anxiety
4. self-fulfillment
5. courage
6. negotiate
7. extensive
8. barrier
9. shame
10. Coping
11. foundation

Activity C, p. 68

1. We should aspire to belong rather than fit in.
2. Answers will vary. Possible answer: Fitting in is changing yourself to match others' expectations while belonging is being your authentic self.
3. Connecting is belonging and having meaningful relations (bonds) with others. Caring is developing empathy for others, especially across differences. Coping is building resilience to face the stress of life challenges.

Activity D, p. 68

1. c
2. b
3. a
4. b
5. c
6. a

Activity E, p. 69

1. F She made friends with others who weren't in the popular group. (paragraph 1)
2. T (paragraph 4)
3. F Belonging is participating in activities that we enjoy (paragraph 5)
4. F We change ourselves to fit in. (paragraph 4)
5. F Fitting in is easy because we are going with the norm. (paragraph 4)
6. T (paragraph 5)
7. T (paragraph 5)
8. F We should help young people to learn how to belong. (paragraph 7)

Activity F, p. 69

	Fitting in	Belonging
is	easy; shame-based	hard
is doing	what's cool; activities because we're lonely	what we enjoy; what gives us self-fulfillment; things that excite us
is wearing	the right clothes; brand-name clothes, what others are wearing	clothes that make us feel good; clothes that allow us to be unique
is being	like others so we are accepted	who we are; true to ourselves; authentic
makes us	feel like we're not good enough	uncomfortable because we are different; grow
in my opinion is	Answers will vary.	Answers will vary.

WRITE WHAT YOU THINK

Activity A, p. 70

Answer will vary. Possible answers:

1. I wanted to be a cheerleader in high school, so I wanted to fit in and be chosen. I didn't like the style of clothing that was popular in my school and didn't want to wear it.
2. People who stay true to their own beliefs and values are willing to not be part of a group that doesn't match who they are, so they are willing to be disconnected and stand alone if it is necessary.
3. I am with my long-time female friends when I feel most comfortable because they know me. I can just be "me" and they will accept me.

CRITICAL THINKING STRATEGY

Activity C, p. 70

Answer will vary. Possible answers:

1. I had to participate in sports to be popular.
2. I joined the math club because I liked math even though it was considered not cool.
3. I was the victim of teasing because of the style of clothing I wore, but I refused to change.
4. I joined others in teasing a girl in my middle school, so I wouldn't be the victim of bullying, too.

READING SKILL

Activity A, p. 71

- 1, 2, 3, 5

Activity B, p 72

- b (The writer mentions older siblings.)
- a and b (I have always had to struggle to get out of bed in the morning; When I was a young child, the problem wasn't so bad.)
- a (The writer's father would knock on the door at 6:00.)
- a (The writer would respond, "One or the other, Dad.")

READING 2

PREVIEW THE READING

Activity A, p. 72

- Possible answers: be kind; work hard; family is important; exercise; eat healthy food
- Answer will be yes or no depending on item 1.

WORK WITH THE READING

Activity B, pp. 75–76

- attribute
- petrified
- hesitation
- intervention
- pitch in
- work ethic
- void
- encounter
- tragic
- interaction
- refrain
- wounded

Activity C, p. 76

- 7
- 3
- 5
- 2
- 8
- 4
- 1
- 6

Activity D, p. 77

- 23 years old
- just completing her first year of graduate school
- 16 years
- her wedding, his grandchildren, her adult "firsts" like buying a car and house
- 52
- sunset
- Because it wasn't interesting; sometimes things aren't what they seem, so it's important to know when to walk away
- They remember him as friendly, kind, and generous, and that he was always willing to help others.

Activity E, p. 77

Katie Hurley	Her father
✓ She is successful.	✓ He was friendly.
✓ She misses her father.	✓ He liked the water.
✓ She learned a lot from her father.	✓ He was a good father.
✓ She is brave.	

Activity F, p. 77

Answers will vary. Possible answers:
Ms. Hurley:

Successful: He frequently complimented my writing and my focus and reminded me that my work ethic would help me reach my goals. All of them. As it turns out, he was right. (Paragraph 11)

Misses her father: All of paragraph 2

Learned a lot: Had he taught me everything I needed to know? It would be years before I realized that he had. He left me with everything I needed. (Paragraphs 2 and 3)

Brave: When I stepped off the dock and onto the boat that summer, I stood tall and smiled. (Paragraph 10)

Her father:

Friendly: When people recall their memories of my dad, they often refer to him as friendly, kind, and generous. (Paragraph 6)

Liked the water: I knew his boat was important to him ... And I wanted to love that boat just as much as everyone else. (Paragraph 9)

Was a good father: I believe that my dad did the best that he could with the time he had. (Paragraph 17)

WORK WITH THE VIDEO

Activity A, p. 78

Answers will vary. Possible answer: I quit ballet class because the other participants were a lot better than I was and I felt embarrassed about my skill level.

Activity B, p. 78

	Reasons children quit	Ways to help children commit
Notes from the video	To avoid something outside - scheduling overload - peer pressure - being picked on inside - not having the skill - parent pressure - not good enough (self-esteem) - perfectionist - want to be cool	Make sure solution fits problem Avoid putting pressure on children Be specific about what child is getting out of this not what parent is getting Help them solve the problem Carve out time Rearrange schedule Give them control and say in decision Test the waters before committing Make an agreement Help child find something that better fits their interest Sit in and watch Be an advocate Set a good example

Activity C, p. 78

Answers will vary. Possible answer: They may get bored or just not have enough time for all of their interests. Parents can help by letting the child quit and seeing what that feels like.

WRITE WHAT YOU THINK

p. 79

Answers will vary. Possible answers:

1. *Counting your friends on two hands* suggests that you have real and meaningful connections with enough people, and in different groups.
2. Number 1: *Family consists of the relationships you choose to nurture*. This is consistent with the idea of being true to yourself and spending time with people you want to be with. Number 2: *Kindness counts*. This relates to the idea that belonging requires caring.
3. My mother was important in my life in helping me learn to connect, care, and cope. She modeled these behaviors in our family, with friends, and in her work as a nurse.

VOCABULARY SKILL

Activity A, p. 80

1. mis
2. extra
3. inter
4. re
5. mid
6. anti
7. co
8. in

Activity B, p. 80

1. verb
2. noun
3. adjective
4. verb
5. adjective
6. noun
7. noun
8. adjective
9. noun
10. verb
11. noun
12. adjective

Activity C, p. 80

Answers will vary.

WRITING SKILL

Activity A, p. 82

1. Answers will vary.
2. Answers will vary. Possible answers:
 - a. I broke my arm.
 - b. I was riding my bike with some friends when I hit a curb and fell.
 - c. We were down the street from my house.
 - d. I was ten years old.
 - e. I learned that it's important to help people when they're hurt. My friends got my mother, who took me to the hospital.

Activity B, p. 83

1. a mother and daughter
2. in the kitchen of their home
3. when the daughter was five years old

Activity C, p. 84

- I. Introductory ideas: When I think about my mother, the first thing I think of is her collection of china cups and saucers.
- II. Body paragraph 1: Main event in story: When I was a child, I always wanted to wash my mother's china cups.

A. Important or interesting detail: My mother never wanted to let me.

B. Sometimes I begged until she let me take them down and clean them.

III. Body paragraph 2: Main event in story: My earliest memory of washing the cups was when I was five.

A. I started with my favorites—the old blue and white one and the one from Japan.

B. I filled the sink with soapy water and began to wash the tiny cups.

IV. Body paragraph 3: Main event in story: As I was washing the cups, I broke my favorite cup.

A. Important or interesting detail: My mother only smiled and said we would glue it back together.

B. My mother glued the handle on the cup before we put it back on the shelf.

V. Conclusion (What I learned): I will always remember that she cared more about encouraging me than about her valuable cups.

Activity D, pp. 84–85

I had only washed a few when the beautiful blue and white cup slipped from my small hands and fell back into the sink. The handle broke off. My mother's special cup was ruined, and I was sure she would be angry. I cried and waited for quite a while before I could find the courage to tell her. My mother, *who was probably upset, only smiled and said we would glue it back together. I happily finished washing the precious cups. When I had cleaned and dried them all, we carefully placed them back on the shelves. Then my mother glued the handle back on the broken cup before we set it back in its place, too.

1. The handle broke off.
2. 1
3. 4
4. My mother

Activity E, p. 85

Answers will vary.

Activity F, p. 85

Answers will vary.

Activity G, pp. 85–86

The instructor—*a tall, athletic man—looked at us seriously. "You are going to learn about survival," he said. "This may be the most challenging and rewarding weekend of your life." I looked at my father. I wasn't sure that I wanted to continue, but he was still very excited. "You will learn how to do such things as find food, find shelter, and keep warm. I won't tell you that it is going to be easy. In fact, it won't be. However, at the end of the weekend, I hope you'll think that it was worth the effort. We set out with only our water bottles and knives. We hiked through the desert for miles in the hot sun. I was afraid that we would run out of water, but our guide said that we would be fine as long as we didn't waste any. Along the way, we looked for food. We found an edible plant *that people can boil and eat, but no one wanted to. We were hungry and tired when the instructor had us stop near some flowering cactus. We ate the flowers, *which tasted OK, and we rested in the shade of some large rocks.

I don't remember much about the rest of the first day, but I do remember that the air got cold quickly when the sun set and I was happy to sit close to my father, near the fire that we had helped build. I looked up at the stars and smiled. They were so

beautiful, out away from the city. I looked up at my father and saw his face more peaceful than I could remember ever seeing it before.

It was a tough weekend, but I am glad we went. I learned about the desert and how to survive in it, but more importantly, I learned about myself and my father. We had shared a difficult time in the desert, and we grew closer because of it. Long afterward, whenever we saw the stars, one or the other would say, "Remember that night in the desert?" and we would both smile.

GRAMMAR SKILL

Activity A, pp. 87–88

1. My mother (2) had a collection of very small china cups and saucers. She (1) had collected them throughout her life.
2. I (1) had only washed a few when the beautiful blue and white cup (2) slipped from my small hands.
3. I (1) had forgotten to call my brother, so he (2) was angry with me.
4. She (1) had thought seriously about studying medicine, but in the end, she (2) decided to study business.
5. Until he (2) got an internship at a big ad agency, he (1) hadn't been interested in working in advertising.
6. I (2) didn't answer the man because I (1) hadn't heard him clearly.
7. We (1) had been working on the project for hours when we finally (2) finished it.

Activity B, p. 88

1. She had been studying English when she moved to the United States.
2. I had not left my home country until I visited Canada.
3. He had already finished reading the book when he watched the movie.
4. After they had recalled important events from their past, the students wrote stories about their memories of childhood.
5. I had had lunch by the time she arrived at the restaurant.
6. I had offered to pay for lunch when I realized that I didn't have any money.

The Q Classroom

Activity A, p. 93

Answers will vary. Possible answers:

1. Yes, we lost our power in a winter storm. We had to eat sandwiches for dinner, couldn't watch TV, had trouble reading by candlelight, and were cold since our heat was not working.
2. I would miss my cell phone because I use it for many things.
3. Answers will vary.

Activity B, p. 93

Answers will vary. Possible answers:

1. Sophy focuses on medicine and health and says the discovery of antibiotics has saved many lives. She adds that science showed us the importance of simple actions like washing our hands to avoid getting sick.
2. Felix says that he agrees with Yuna that science can create problems but adds that science also helps us to solve those problems. He uses the example of scientists who have developed methods to clean and reuse water in factories to avoid polluting the environment.

READING 1

PREVIEW THE READING

Activity A, p. 94

1. The VOTO is a charger, Window Socket is an electrical plug, the Berkeley Darfur stove is a type of simple stove, the GravityLight is a light (easy because of name), and the SOCKET seems to show a soccer ball with a light.
2. Answers will vary. Possible answer: The most interesting to me is the SOCKET because of how it can generate energy through a soccer ball.

WORK WITH THE READING

Activity B, pp. 97–98

1. a
2. b
3. c
4. b
5. b
6. c
7. a
8. a
9. c
10. a
11. c
12. b

Activity C, p. 98

1. to introduce five energy-producing technologies that can help developing nations
2. They provide new energy sources that can increase the supply of safe, cheap energy on a user-by-user basis, do not need the years it takes to extend the power grid to remote places, and make it easier for countries to produce more energy without spending a lot more money.
3. the millions of people who are without electricity in developing countries
4. the Window Socket
5. VOTO
6. The potential energy stored in the lifting motion of a bag of rocks is gradually converted to electricity which powers the light for about 30 minutes.

Activity D, p. 99

What the electricity is used for	
Recharging devices	Producing light
VOTO Window Socket	GravityLight Soccket

What the device replaces		
Non-portable chargers	Less efficient stoves	Kerosene lamps
VOTO Window Socket	Berkeley-Darfur Stove	GravityLight SOCKET

Activity E, p. 99

1. F Millions of people are without electricity. (paragraph 1)
2. T (paragraph 1)
3. T (paragraph 3)
4. T (paragraph 4)
5. T (paragraph 5)
6. F The GravityLight costs about \$10, which is covered in about three months of not buying kerosene. (paragraph 8)
7. F It doesn't cost anything to use. (paragraph 8)
8. F It powers an electric light with an internal motion-powered device designed to generate and store electricity. (paragraph 9)

Activity F, p. 99

Answers will vary.

WRITE WHAT YOU THINK

Activity A, p. 100

Answers will vary. Possible answers:

1. The most practical technology is the GravityLight because it is cheap and doesn't require anything that isn't available anywhere. The least practical seems to be the SOCKET. It seems like it's not practical to rely on people playing enough soccer to generate electricity.
2. Maybe the Window Socket is easiest since you just put it on a window or in the sun and it provides solar power. It looks like common sockets, so it's easy to use.
3. Having light in the evening when it's dark can add to the time available to people for many activities, including reading and learning, which are both necessary for improving opportunities for better jobs, etc.

READING SKILL

Activity A, p. 101

Device	Materials	Manner	Source of energy
VOTO	Charcoal-/ wood-burning stove or fire + VOTO device	Converts heat from fire into electricity	Charcoal-/ wood-fueled fires / heat
Window Socket	Window Socket	Solar panels store energy to use with any device (simple charger)	Sun
Berkeley-Darfur Stove	Berkeley-Darfur Stove	Safe, energy-efficient burning of wood	Fire/Heat

GravityLight	Bag of rocks or dirt the GravityLight	Lifting motion provides energy	Motion
SOCKET	A soccer ball with the internal motion device installed	Internal motion-powered device to generate and store electricity	Motion

Activity B, p 101
Answers will vary.

READING 2
PREVIEW THE READING

Activity A, p. 102
Answers will vary. Possible answer: A device like this would be useful when water is not available. Water-stressed areas are places where people don't have enough water like deserts. Maybe people need at least 10 gallons of water each per day.

WORK WITH THE READING

Activity B, pp. 105–106

- implication
- framework
- premise
- absorb
- shortage
- porous
- extract
- drought
- caution
- yield
- potentially
- organic

Activity C, pp. 106–107

- d (paragraph 3)
- b (paragraph 6)
- b (paragraph 6)
- c (paragraph 6)
- a (paragraph 13)

Activity D, p. 107

- doesn't actively consume energy; only uses energy from the sun
- do more tests
- water in the air at night
- taking water from the air
- the temperature at which there is 100% humidity in the air
- a system in which people have their own water harvesters

Activity E, p. 107

- They can collect water from the air without using any energy except heat from the sun.
- The water harvesters are designed to be used in areas that don't have much water, such as deserts. The scientists test the harvesters where they will be used.
- They are environmentally friendly and people who don't have electricity can use them.
- He wants to see if larger harvesters would work or if many harvesters can be made at the same time.
- It takes too much energy to cool the desert air to below freezing.

- Answers will vary. Possible answer: People might not have to go to a river or public water supply for water, so they will save time to do other things. People may have enough water to have a garden or keep an animal for food.

WORK WITH THE VIDEO

Activity A, p. 108
Answers will vary.

Activity B, C, p. 108

	Putting tiny reflective lenses into space	Making clouds thicker and more reflective	Releasing sulfur into the stratosphere
Notes from the video	Put trillions of tiny reflective lenses into space to reduce amount of sunlight reaching and warming Earth's surface By reflecting light away from Earth, lenses redirect 2% of sun's rays reducing global warming	Enhance planet's natural cooling system by making clouds thicker and more reflective Spraying sea salt particles into upper atmosphere Sea water vapor sprayed out by giant rotary funnels Salt particles would attract water vapor creating thicker clouds, deflect sun's heat thus cooling planet	Natural disasters: 1991 Mt. Pinatubo eruption killed many people and damaged homes, but 2 years later average world temperature was 0.6 degrees C. lower than before eruption—sulfur released by volcano persisted in atmosphere blocking sun's rays acting as natural cooling device Replicating by rocketing 1 million tons of sulfur into atmosphere
My ideas (Answers will vary.)	An expensive solution at cost of \$392 trillion	Requires enormous quantities of sea water	With big risks: large quantities of sulfur in atmosphere mean respiratory diseases, damage to ozone, and acid rain

WRITE WHAT YOU THINK

p. 109

Answers will vary. Possible answers:

- I could use the Window Socket to charge my phone when I ride my bicycle.
- The positive aspect of my cell phone is that I'm able to be in contact with people at any time. The negative aspect is that I spend too much time on it watching silly videos.

3. There is a need for a way for people to communicate with speakers of another language without spending a great deal of time learning the language. I think there will eventually be a hand-held computer that will help us communicate easily and accurately with people in whatever language they speak.

VOCABULARY SKILL

Activity A, p. 110

- a noun, a verb
- to vary, distance over which something can be heard or seen, to move around, all of the musical notes that something can produce

Activity B, p. 111

- noun: the public supply of electricity
- verb: to pass electricity through something so that it is stored there
- verb: to fix something to something else (with suction, for example) to attach
- verb: to keep energy for later use
- adjective: not likely to lead to physical harm or danger
- verb: to become hot or warm
- verb: to change from a gas to a liquid
- noun: the size or extent of something, especially when compared with something else

WRITING SKILL

Activity A, pp. 113–114

- These brothers, the Lilienthals of Germany and the Wrights of the United States, have some similarities but also have some differences.
- point by point
- Answers will vary. Possible answer: Both sets of brothers were important in the development of flight.

Activity B, p. 114

Compare and contrast essay: Point by point		
Key points	The Lilienthal brothers	The Wright brothers
1. business	Otto more famous than his brother Gustav Otto opened business that paid their bills Flying was a hobby	Shared fame equally Opened businesses that paid the bills Made money from aviation work
2. education	Otto educated as an engineer	Didn't attend college
3. inventions/ interest in flight	Had patents Wanted to improve control of the machine Studied birds First sustained controlled flight in heavier-than-air aircraft	Had patents Wanted to improve control of the machine Studied birds First sustained controlled flight in an airplane

Activity C, p. 114

Compare and contrast essay: Similarities and differences		
Similarities	Differences	
	The Lilienthal brothers	The Wright brothers
Opened a business that paid the bills	Otto Lilienthal: More famous than his brother	Shared fame equally
Had patents	Flying was a hobby	Made money from aviation work
Wanted to improve control of the machine	Otto was educated as an engineer	Didn't attend college
Studied birds	First sustained controlled flight in heavier-than-air aircraft	First sustained controlled flight in an airplane

Activity D, p. 114

Answers will vary.

Activity E, pp. 115–116

- Two other important innovations in chemistry, penicillin and ammonia, have contributed to the world as we know it today, though each has done so in different ways.
- similarities and differences
- Answers will vary. Possible answer: to discuss similarities and then differences in the discovery and development of the two chemicals and then to highlight important differences today

Activity F, p. 116

Compare and contrast essay: Similarities and differences		
Similarities	Differences	
	Penicillin	Ammonia
Important chemicals that have improved lives	Medicine First discovered in 1928 by Scottish bacteriologist Alexander Fleming	Fertilizer In 1910, German chemists Fritz Haber and Carl Bosch combined atmospheric nitrogen and hydrogen into ammonia
Discovered in early 20th century	Australian pharmacologist Howard Florey purified penicillin in the 1930s	The Haber-Bosch process probably the most important factor in the population explosion of the past 100 years
Put into production and practical use in the middle of the 20th century	Put into production 1944 by chemical engineer Margaret Hutchinson Rousseau	
Both positives and negatives	Saved lives	Is a toxic chemical
Both used with caution now	Overuse has resulted in resistant strains of bacteria	Is irritating and corrosive

GRAMMAR SKILL

Activity A, p. 117

1. though CT
2. Similarly CP
3. Nonetheless CT
4. While CT
5. Likewise CP

Activity B, p. 118

1. Otto Lilienthal was more famous than his brother, Gustav
2. had patents
3. was an engineer
4. they built airplanes
5. are credited with heavier-than-air flight in an airplane

Activity C, p. 118

Answers will vary. Possible answers:

1. , I wouldn't want to be a scientist
2. , it is not as effective now
3. , we need clean air to breathe
4. , I can't live without my smart phone
5. , it has also proved dangerous at times
6. , other people don't have easy access to electricity

The Q Classroom

Activity A, p. 123

Answers will vary. Possible answers:

1. Yes, I think I have a healthy diet. Sometimes I eat sweets, but I don't eat them every day. Today, I ate cereal for breakfast and a salad for lunch.
2. Eating for pleasure is more important to me because food is one of the most enjoyable things in life.
3. Answers will vary.

Activity B, p. 123

1. Yuna and Sophy

Yuna: If science teaches us that something is unhealthy, we shouldn't eat it.

Sophy: Just because food is traditional doesn't mean it's good for us; people live longer now; science can tell when something is really bad, like toxins in fish.

2. Felix and Marcus

Felix: Scientists always change their minds about what is good for us—for example, they change their minds about how many carbohydrates we should eat; people eat all kinds of diets and stay healthy; common sense and cultural traditions can tell us what's good for us.

Marcus: You don't need a scientist to tell you it's bad to eat fast food all the time; my grandmother could have told you that.

Answers will vary. Possible answer: I think science should influence what we eat because it can teach us what's unhealthy.

READING 1

PREVIEW THE READING

Activity A, p. 124

Answers will vary. Possible answers:

1. No, the author does not think science should help us choose the foods we eat. He thinks common sense should.
2. The author suggests that we use common sense, rather than science, when deciding what to eat. Looking at the first picture, I think the author believes food labels can be confusing.

WORK WITH THE READING

Activity B, p. 127

1. eliminate
2. expert
3. benefit
4. link
5. access
6. participate
7. finding
8. encourage
9. practical
10. approach
11. physical
12. challenge

VOCABULARY SKILL REVIEW

p. 127

access
approach
benefit
challenge
eliminate
finding
link
physical
practical

Activity C, p. 128

1. N; paragraph 2
2. N; paragraph 3
3. Y; paragraph 4
4. Y; paragraph 6
5. N; paragraph 7
6. Y; paragraphs 8 & 9
7. N; paragraph 10

Activity D, p. 128

1. c
2. a
3. b
4. b
5. c

Activity E, p. 129

1. People are healthier. / They have access to more fresh fruit and vegetables, especially poorer people.
2. The food costs less than it would in a supermarket.
3. People get exercise.
4. Working together in the garden promotes community and sharing.

Activity F, p. 129

Causes	Effect (Benefits)
1. access to more fresh fruits and vegetables	better nutrition
2. food doesn't have to be brought to supermarkets	costs are less
3. working in a garden	helps promote exercise
4. working together	community and sharing
5. participating in the Edible Schoolyard program	learning about growing food, cleaning and preparing food, and healthy eating

WRITE WHAT YOU THINK

Activity A, p. 129

Answers will vary. Possible answers:

1. I don't usually pay attention to the results of scientific studies. Some advice that I do take seriously is to eat lots of green vegetables.
2. Three meals I have eaten lately are: rice with chicken, a ham sandwich, and beet soup with potatoes. This food is not mostly plants, but most of it was fresh. I try to shop at the outdoor market instead of the supermarket, but sometimes I have to do what is most convenient.
3. Another benefit of an urban garden is that it creates an open, green space in the middle of buildings and concrete.

READING SKILL

Activity A, pp. 130–131

- a. 2, 4
- b. 1
- c. 2, 3
- d. 3
- e. 4
- f. 2, 4
- g. 2, 4
- h. 1

Activity B, p 131

Answers will vary. Possible answers:

- a. 2; You may have read that my colleagues do not agree with me on this topic. But let me make this clear: my colleagues have ignored the latest research data.
- b. 3; Not all fats are bad for you. In reality, some are very good for you.
- c. 1; Nutrition advice can sometimes be difficult to understand.
- d. 4; We are all concerned about our weight getting out of control, so let's do something about it.
- e. 3; Research into nutrition has been going on for decades, but, in fact, much is still unknown about foods as simple as the carrot.
- f. 4; You and I both know that candy isn't good for our teeth, so why do we continue to eat it?
- g. 2; Everyone wants to eat healthily. Many food manufacturers, however, are more interested in keeping costs down than in using healthy ingredients.
- h. 1; You won't believe how delicious the cheesecake is: it's an absolute dream.

CRITICAL THINKING STRATEGY

Activity C, p. 132

Answers will vary. Possible answers:

1. a. yes Small farmers' markets usually have fresher food because it comes directly from the place it's grown.
b. no You will usually spend more money, not less money at a farmers' market.
c. no You might share a meal, but you don't have to, so this is not a direct effect.
2. a. no Learning to cook won't necessarily directly improve your physical fitness.
b. yes If you learn to cook, you will eat better because you won't be eating as much prepackaged food.
c. no You will probably spend less money on food because prepackaged food can be more expensive.
3. a. no You might read seed packages but not food packages.
b. yes Planting a garden takes physical effort, so you can get exercise by gardening.
c. yes Planting and growing the plants in a garden will teach you something about plants.

READING 2

PREVIEW THE READING

Activity A, p. 133

1. Habit
2. genetic testing, diet counseling, and food that fits the diet
3. people who want to lose weight (dieters)
4. Most diets fail.

WORK WITH THE READING

Activity B, p. 136

1. b
2. a
3. a
4. b
5. b
6. a
7. a
8. b
9. a

10. b
11. a
12. b

Activity C, p. 137

1. The same food affects people differently.
2. It uses the dieter's DNA to determine what should be eaten.
3. *Nutrigenomics* is analyzing our DNA to figure out what foods will make us healthiest.
4. The blood samples show how the dieters metabolize fats and sugar.
5. It is expensive. There isn't enough evidence to support its effectiveness. It doesn't take into account the gut microbiome.
6. The purpose is to inform people of a possible new type of diet.

Activity D, p. 138

1, 2, 3, 5, 6

Activity E, p. 138

Answers will vary. Possible answers:

1. Calories are easier to measure than DNA is; it is logical to decrease the number of calories since we equate calories with weight.
2. Depending on the circumstances, it can be both. The dieter might give up before the diet has a chance to work, or the industry might have a diet that works in very few cases. The dieter may have chosen a diet that doesn't work for him or her.
3. It shows how the dieter's body tends to digest and metabolize fats and sugars.
4. These factors can also affect how someone's body metabolizes food; an active person probably has a faster metabolism than an inactive person.
5. Habit may consider retesting the dieters after a period of time to see whether they still respond to the "metabolic challenge" in the same way.

WORK WITH THE VIDEO

Activity B, p. 139

	Vitamin deficiency / disease	Symptoms	Additional information
Notes from the video	Vitamin C/ scurvy Vitamin D / rickets Vitamin B3 (niacin)/ pellagra	Bleeding gums and teeth loss Poor bone growth Skin rashes, tremors, depression, and death	Dr. Goldberger – epidemiologist Studied pellagra = problem in southern U.S. Thought to be an infectious disease

Activity C, p. 139

He noticed that workers at an orphanage weren't contracting the disease from the children.
Vitamin C is good for the skin.
Vitamin D is good for the bones.
Vitamin B3 is good for the nervous system.
Answers will vary. Possible answer: Vitamin A helps strengthen your immune system.

WRITE WHAT YOU THINK

p. 140

Answers will vary. Possible answers:

1. Michael Pollan would probably think that both genetic-based diets and adding vitamins to foods are unnecessary because there is too much science involved. If a person eats healthy food, mostly plants, the diet should take care of both weight and deficiency issues.
2. I think the changes science has made are for the best. After all, we know more about healthy eating habits, including how to get enough of the vitamins and minerals that we need.
3. Reading 2 is probably more objective than Reading 1 because it is presenting the diet as an alternative. It tells some faults, but it doesn't strongly advocate for the diet. Reading 1 is advocating for a particular opinion on the topic of science in food decisions. The video may be the most objective because it presents factual information about vitamin deficiencies and the work done in the past to eradicate diseases caused by them.

VOCABULARY SKILL

Activity A, p. 141

Answers will vary. Possible answers:

1. are responsible for
2. lead to
3. contributes to
4. is a factor in
5. brought about
6. resulted in

Activity B, p. 141

Answers will vary. Possible answers:

1. due to
2. was caused by
3. arose from
4. was brought about by
5. developed from
6. stems from

Activity C, p. 142

Answers will vary. Possible sentences:

Cause as subject: Smoking can bring about many health problems. / Eating more fruits and vegetables can lead to a stronger immune system. / Eating a good breakfast can be a factor in how children perform at school.
Effect as subject: People's concern about their diet can stem from a desire to live longer. / People's confusion about what to eat may be due to the fact that scientists' advice changes often. / My dream to be a dietician was brought about by my parents' unhealthy eating choices.

WRITING SKILL

Activity A, p. 144

1. causes of an issue
2. three reasons why (causes) diets fail
3. Weight-loss diets fail due to our state of mind and inability to pay attention.

Activity B, p. 145

Answers will vary. Possible answers:

- I. Thesis statement: We can't lose weight because of the way we think about food.
- II. Cause 1: People don't follow the plan.
A. Support 1: They change diets frequently.
B. Support 2: They become discouraged if the weight doesn't go away fast.
- III. Cause 2: The stress of modern life leads to comfort eating.
A. Support 1: We eat when we feel down. / We use food as an escape.
B. Support 2: We use food as a reward.
- IV. Cause 3: We also need to look closely at the food we eat and read food labels. (Labels can mislead us.)
A. Support 1: Low-fat foods may contain other fattening substances.
B. Support 2: Some low-fat foods may not have much fat taken out.
- V. Concluding advice: Control your mind and you can control your body.

Activity C, p. 145

Answers will vary.

Activity D, pp. 146–147

1. the effects
2. Answers will vary, but may include: facts, examples, explanations, descriptions
3. Answers will vary. Possible answers: We eat citrus fruit to fight off scurvy; Louis Pasteur proved that bacteria came from the air.

GRAMMAR SKILL

Activity A, p. 148

1. by a salesclerk
2.
3. by the delivery person
4.
5.
6. by the doctor
7. by the university
8.
9.
10. by people

Activity B, p. 148

Answers will vary. Possible answers:

1. .
2. In my favorite restaurant, all the food is prepared by the owner.
3. .
4. .
5. Many famous authors are influenced by other writers.
6. I was trying to get to sleep, but I was disturbed by a noise from the street.
7. .
8. After the author's death, his novel was finished by his son.

The Q Classroom

Activity A, p. 153

Answers will vary. Possible answers:

1. Students learn to work independently, think critically, and ask questions. These skills can help them in their careers.
2. I think parents help students the most. They teach them to be responsible and to do what is right.
3. They're preparing to use computers. They're learning to type.

Activity B, p. 153

1. **Sophy:** While you don't have to write essays at most jobs, you do have to communicate well, and writing essays helps you with that. And you may not have to do algebra, but you do have to think, and algebra helps you with that.
2. **Yuna:** School is more individual; studying and writing papers on your own; work is usually part of a group—everybody doing a different thing.
I think school prepares you for some aspects of work, like the technical parts, but not all of it.

READING 1

PREVIEW THE READING

Activity A, p. 154

Answers will vary. Possible answers: The author probably thinks that making the transition from student to employee is a difficult time in a person's life.

WORK WITH THE READING

Activity B, p. 157

1. c
2. c
3. b
4. b
5. c
6. b
7. c
8. a
9. c
10. a
11. a
12. b

Activity C, p. 158

1. c
2. c
3. b
4. a
5. a
6. b

Activity D, pp. 158–159

1. The writer uses an example. The quote is used to help make the story more interesting.
2. In paragraph 3, writer and editor Joseph Lewis discusses why new graduates might have difficulty adjusting to life on the job.
3. The Career Services Network at Michigan State University raises the problem that students learn to repeat what they learned, but employees need to think critically, make decisions, and explain their choices to others.
4. Recent graduates are cited because they have firsthand experience.

CRITICAL THINKING STRATEGY

Activity F, p. 159

- 2, 4, 5, 6

Activity G, p. 160

1. Answers will vary. Possible answers:
 - a. Better prepared students will get better jobs.
 - b. Society benefits when students leave school ready to be contributing members.
2. Answers will vary.

WRITE WHAT YOU THINK

Activity A, p. 160

Answers will vary. Possible answers:

1. Yes. I think the solutions are useful. I think doing an internship while you are in school is a great idea because students learn practical skills for their future jobs.
2. Schools should prepare students to effectively use technology. Many jobs require employees to use company email, navigate the Internet, or make PowerPoint presentations. These skills should be taught in schools.
3. On a scale of 1 to 5, I would give my school a 2 for how well it prepared me for work. I didn't have many opportunities to work in a group, which I have to do at work all the time. Also, I wish I'd had more training with computers before I got my job.

READING SKILL

Activity A, p. 161

1. Thesis statement: many recent graduates say that they struggle with the transition from classroom to the career world and have difficulty adjusting to life on the job.
2. Main idea: Lewis believes that most of our school experiences—from childhood through college—are fairly predictable, while life in the working world is far more ambiguous.

Supporting ideas: In school, for example, the pattern stays more or less the same from year to year. All students have to take... In the workplace, however, constant change is the norm, and one has to adapt quickly. A project you are working on ...

Lewis notes that in school, for example, you advance each year to the next grade ... In the workplace, however, "you have no idea when you might be promoted; it depends on the economy ..."

Activity B, p. 161

- III. Recent graduates are not prepared to think analytically.
 - A. In school, students memorize facts and take tests.
 - B. In the workplace, they must think critically and make decisions.
 - C. Schools should spend less time on testing.
 - D. Schools should spend more time on helping students analyze information, solve problems, and communicate ideas.
- IV. Many recent graduates have difficulty adjusting to teamwork.
 - A. In school, students work independently and get grades based on how they have done.
 - B. In the workplace, we are often dependent on co-workers for our success.
- V. Ways we can better prepare students for the workplace.
 - A. All students should do an internship.
 - B. Include more teamwork as part of class activities.
 - C. There should be more focus on developing writing and public speaking skills.

Activity C, p. 162

School	Workplace
predictable	ambiguous
same pattern	constant change
advance each year	don't know when you'll be promoted
memorize facts and take tests	think critically and make decisions
work independently	interact with others and depend on coworkers
receive grades on individual work	teamwork; deal with problems

READING 2

PREVIEW THE READING

Activity A, p. 162

Answers will vary. Possible answer:

1. He's trying to decide between starting his own business (working for himself) or taking a job in a large corporation.
2. Answers will vary.

WORK WITH THE READING

Activity B, p. 165

1. income
2. incentive
3. contact
4. enable
5. particular
6. reluctant
7. permanent
8. utilize
9. approach
10. institution
11. acquire

Activity C, p. 166

- a. 5
- b. 3
- c. 6
- d. not used
- e. 2
- f. 7
- g. 1
- h. 4

Activity D, p. 166

Order of events on the timeline:

Start interning... put together résumé... get a job... (April 7 blog post)... graduate from college... start a job... take advantage of opportunities in job... reconsider employment options

Answers will vary. Possible answer:

The author is going to have an interesting future. The author started interning while he was in college. During the fall semester, he put together his résumé and started applying for jobs. He got a job in November that started the following summer. On April 7, when he posted this blog, he was thinking about the future. He is going to graduate from college in May and start his job in July. He plans to take advantage of all the opportunities he can in his job, and sometime in the next few years, he will reconsider his employment options to determine whether he still wants to remain in the same job or to change what he is doing. It all should be very interesting.

Activity E, p. 167

1. F. The blogger isn't interested in a career in telecommunications. He's interested in a career in accounting. (paragraph 2)
2. T (paragraph 2)
3. F; He plans to start working full-time in July after he graduates. (paragraph 3)
4. F; He believes accounting firms pay higher salaries than telecommunication firms. (paragraph 4)
5. T (paragraph 5)
6. T (paragraph 6)
7. F; Having job flexibility or choices is the writer's goal. (paragraph 6 or 7)
8. T (paragraph 7)

Activity F, p. 167

Decision	Choice	Reason
What kind of internship did he take?	telecommunications company	to see whether he liked the field and to get experience working in a large corporation
When did he apply for a full-time job?	in the fall of his last year in college	That is when companies were hiring for the summer.
What kind of job did he accept?	an accounting job in a large company	He still wanted to work in a large corporation, and he felt that accountants had better pay and shorter hours.
What will he do when his new job becomes predictable?	He will reconsider his options.	He wants to be learning all the time, so if he is bored, he will probably change jobs.
When will he start his own company?	maybe later, maybe never	He may decide that he wants to start his own business when he has more experience, or he may decide that he enjoys his corporate work.

Activity G, p. 168

Answers will vary. Possible answers:

1. I think the blogger Devin Reams has made good career choices. I admire him for taking a position that would get him experience in his field and help him to continue learning new things.
2. One of my career goals is to become a nurse. To do this, I need to finish nursing school and pass my exams by next year.

WORK WITH THE VIDEO

Activity A, p. 168

Answers will vary. Possible answers: You spend a lot of time at work, so having a job you love is important for your quality of life. If you don't like your job, you will be miserable. Finding the perfect job for you could take lots of time—you might have to do an internship or work for a low salary to get good experience.

Activity B, p. 168

	Roxana's job search
Notes from the video	Graduated in business and art history; started looking for a job in the summer and is still looking; loves and is inspired by art.
	Looking for a position in an art gallery or museum; has an unpaid internship in an art gallery; is learning a lot and likes it; says she didn't learn how to find a job in lectures or assignments in her classes.
	Has sent out her résumé many times; applies for 4 to 5 jobs per day; has worked to improve her résumé and always sends a cover letter which matches what company is looking for; tries to look her best in interviews; has been on a few and is gaining confidence; always prepares for interviews by researching company and position; is hopeful she can find a job because she is qualified and has experience.

Activity C, p. 168

Answers will vary. Possible answers: I think the two most important things she has done to find a job are working as an intern and preparing well for interviews. First, gaining real life experience shows she is qualified and reliable. Second, researching the companies helps her know what they are looking for which better prepares her for interviews. I think another action she might take is to expand her search to areas other than art galleries and museums to improve her business skills.

WRITE WHAT YOU THINK

p. 169

Answers will vary. Possible answers:

- I think it's important to get a job soon after finishing school. The transition is an important one, and assuming that responsibility is essential to a good work life. Waiting may make that transition harder to make.
- An advantage of not choosing a permanent job is that it is realistic for a first job and is a more flexible approach. A disadvantage is that if someone thinks of the job as temporary, it may affect the effort they put into the work; they will be less committed or loyal to the company.
- Young people might want to become entrepreneurs because they have ideas for new and different products and services that they want to develop or they may believe there is not job security and working for themselves provides better opportunities.

VOCABULARY SKILL

Activity A, pp. 169–170

- acquire (v.), acquisition (n.)
- adjust (v.), adjustment (n.), adjustable (adj.)
- ambiguity (n.), ambiguous (adj.), ambiguously (adv.)
- anticipate (v.), anticipation (n.), anticipated (adj.)
- collaborate (v.), collaboration (n.), collaborative (adj.), collaboratively (adv.)
- constant (n.), constant (adj.), constantly (adv.)
- interpret (v.), interpretation (n.) interpretive (adj.)
- particulars (n.), particular (adj.), particularly (adv.)
- permanence (n.), permanent (adj.), permanently (adv.)
- reluctance (n.), reluctant (adj.), reluctantly (adv.)

Activity B, p. 170

- a. adjustment b. adjustable
- a. constantly b. constant
- a. permanently b. permanent
- a. reluctant b. reluctantly
- a. ambiguous b. ambiguously
- a. collaborate b. collaboration
- a. anticipated b. anticipate
- a. particulars b. particularly

Activity C, p. 170

Answers will vary. Possible sentences:

- I want to collaborate with you on this project. / This project was a collaboration between sales and marketing. / Our project was a collaborative effort from two different departments.
- The students feel some reluctance to apply for jobs in a different field. / The worker is reluctant to ask for a raise. / She reluctantly entered her boss's office to discuss the problem.

GRAMMAR SKILL

Activity A, p. 172

1. Reporting clause: Many recent graduates say; noun clause: that they have difficulty adjusting to life on the job
2. Reporting clause: Joseph Lewis notes; noun clause: that in school, you advance each year, but at work, the same isn't true
3. Does not use reported speech
4. Reporting clause: Many people wonder; Noun clause: how we can better prepare young adults for the workplace
5. Reporting clause: One recent report tells educators; Noun clause: that less time should be spent on testing in school
6. Reporting clause: some recent graduates explain; noun clause: what current students can do to prepare
7. Does not use reported speech
8. Reporting clause: Other graduates feel; Noun clause: there should be more focus on developing writing and public speaking skills.

Activity B, p. 173

- a
- c
- b
- c
- b
- c

Activity C, pp. 173–174

- Jim Sweeny tells students (that) there are things they can do to prepare for an interview.
- The news article says (that) many recent graduates aren't ready for the workplace.
- Many students believe (that) learning a foreign language is challenging.
- Tara wonders how she can get a good job.
- Many students want to know what they should do after graduation.
- The school handbook tells students (that) they must take four years of English and three years of math to graduate.

Activity D, p. 174

1. He said that as he got ready to make the transition to full-time employee, he found himself thinking about these questions.
2. He reported (that) he had been interning at a large telecommunications company.
3. He explained (that) he had started perusing the job postings, looking for a full-time position in accounting.
4. He told his readers (that) he had decided to accept a position with a large accounting firm.
5. He added (that) he knew that he would be given many new opportunities in his job with an accounting firm.
6. He asked why he had lofty goals.
7. He wondered how, when, or where he would achieve them.
8. He concluded (that) whatever happened, he was sure that he would do fine.

WRITING SKILL

Activity A, p. 176

1. c
2. Thesis statement: there are some simple ways to prepare for a job interview.
3. Main ideas: make a list of questions you might be asked at the interview; think about sample answers [to the questions] and practice responding to them.
4. b

Activity B, p. 177

Summary 1: Sentences 1–8

Summary 2: Sentences 3, 4, and 7

1. Summary 1 is better. Answers will vary. Possible answer: Summary 1 is better than Summary 2 because it gives more information and all of the information is correct. / Summary 1 is better because it is clear and easy to follow.
2. Use the author's full name, identify all of the main ideas, and omit the personal information that is not in the original.

Activity C, p. 178

In the blog post, "Making My First Post-College Career Decision," a graduating student discussed his transition from student to employee. [The student explained what career path he had chosen and why.] He said he'd interned in a large telecommunications company and gained workplace experience but had learned it wasn't the kind of work he wanted to do. In his senior year, he interviewed for jobs in accounting and chose to accept one in a large accounting firm. ~~Many graduating students don't find a job that easily.~~ He asked why he'd needed to get a job so quickly and answered that he believed he'd accepted the job because he could utilize the skills he had acquired in school and in his internship and get experience in the field. ~~Employees in accounting firms work fewer hours.~~ He added, however, that when he stopped learning in the job, he would need to make another decision. He saw himself becoming an executive or starting his own business. He wondered if he had lofty goals and said he did. ~~It doesn't seem likely he'll succeed.~~ He concluded that he would take advantage of the opportunities his new accounting job provided but that he was young and had time to make decisions about his future. He believed he would do fine and was ready for the transition.

Activity D, p. 178

The summary...	
1. states the original text's title.	<input checked="" type="checkbox"/>
2. states the author's full name (if given).	<input type="checkbox"/>
3. states the author's purpose for writing.	<input checked="" type="checkbox"/>
4. identifies the thesis statement.	<input checked="" type="checkbox"/>
5. identifies all of the text's main ideas.	<input checked="" type="checkbox"/>
6. does not include details, examples, information not in the text, or the writer's opinion.	<input type="checkbox"/>
7. is mostly written in the student's own words.	<input checked="" type="checkbox"/>
8. is clear and easy to follow.	<input checked="" type="checkbox"/>

The Q Classroom

Activity A, p. 183

Answers will vary. Possible answers:

1. Scientists recently discovered a way to clone cows. That's exciting because there are hungry people in the world who could eat meat from these cows.
2. It's important to spend money on exploration, especially in the fields of science or medicine.
3. I think that new species can be discovered by deep-sea exploration. It is important to make new discoveries in order to understand the world around us.

Activity B, p. 183

1. Yuna thinks discoveries like the atom bomb are harmful. Sophy thinks it is what you do with the discovery and gives the example of nuclear energy, which has brought huge benefits, such as affordable energy to a lot of people.
2. Marcus thinks we should focus more on preventing hunger and disease; focus on things that human kind needs most.

READING 1

PREVIEW THE READING

Activity A, p. 184

1. a coral reef and a new continent
2. Answers will vary. Possible answer: The article explains where they are, who discovered them, when they were explored, what they are (details), and why they are important.

WORK WITH THE READING

Activity B, pp. 187–188

- a. disperse
- b. habitat
- c. accommodate
- d. sophisticated
- e. expedition
- f. reveal
- g. evidence
- h. resilient
- i. sufficient
- j. propose
- k. empirical
- l. significant

Activity C, p. 189

1. Improved DNA sequencing, better satellite data, and more sophisticated underwater vehicles.
2. The coral reef was found 257 kilometers from shore near the southeastern part of the U.S. on the sea bottom at a depth of 0.8 kilometers below the ocean surface, in the Atlantic.
3. It is unique because it is far from the shore and deeper than the scientist expected.
4. They are excited because it is a large pristine coral reef and there aren't many left on Earth.
5. The scientists hope to better predict how the fragile organisms might be impacted by human activity.
6. They found several hundred fossil species.
7. The evidence proved that Zealandia was not always as deep as it is today and that the geography and climate were very different in the past.
8. New discoveries and evidence through empirical observation prove that it is a continent, that it meets the definitions and criteria for a continent.
9. There are implications for understanding how plants and animals have dispersed and evolved. The core specimens

can help us understand how our global climate system works. Studying Zealandia can provide a test for computer models that scientists use to predict changes in our climate.

Activity D, pp. 189–190

1. F Less than 5% of the oceans have been explored. (paragraph 1)
2. F The coral reef is in deep, cold water. (paragraph 2)
3. T (paragraph 2)
4. T (paragraph 2)
5. F The coral is more resilient because it is extensive and connected. (paragraph 3)
6. F Zealandia is two-thirds the size of Australia. (paragraph 4)
7. T (paragraph 4)
8. F Zealandia is a single contiguous piece of continental crust. (paragraph 5)
9. T (paragraph 6)
10. F Scientists disagree on the definition of and criteria for a continent. (paragraph 7)

Activity E, p. 190

	Deep sea coral reef	Zealandia
Location	Atlantic Ocean near southeast coast of the U.S.	Pacific Ocean near Australia
Expedition/ Study	<ol style="list-style-type: none"> 1. NOAA expedition 2. Deep-sea expedition 	<ol style="list-style-type: none"> 1. Paper—"Zealandia: Earth's Hidden Continent" 2. Expedition to survey and take core sediment samples at different depths
Vessel	<ol style="list-style-type: none"> 1. NOAA ship <i>Okeanos Explorer</i> 2. <i>Atlantis</i> 	<ol style="list-style-type: none"> 1. N/A 2. Research vessel <i>JOIDES Resolution</i>
Method	NOAA—sea-floor mapping	New discoveries and evidence through empirical observation and description Core sediment samples at different depths
Lead scientist	Erik Cordes	Nick Mortimer Gerald Dickens
Implications/ Significance of discovery	Pristine coral reef Scientists hope to better predict how the fragile organisms might be impacted by humans	Understanding how plants and animals have dispersed and evolved: core specimens can help us understand how our global climate system works: can provide a test for computer models that scientists use to predict changes in our climate
Your ideas Possible answers: Unanswered questions	Will the coral reef remain pristine?	Does studying Zealandia further have the potential to impact climate?

WRITE WHAT YOU THINK

Activity A, p. 191

Answers will vary. Possible answers:

1. I think finding a coral reef might be more important because we need to do more research to understand how human activity might harm our environment.
2. I believe all scientific research to help us better understand Earth is worth the time and money we spend.
3. If I could go on an expedition, I would want to study either the Arctic or Antarctica because these are mostly uninhabited areas of Earth.

READING SKILL

IDENTIFY, p. 191

1. O probably, speculates
2. F said, aren't, found
3. F the fact that, are
4. O might
5. O is thought to
6. F evidence, is
7. O claims, are sufficient
8. F said, were studied, were identified
9. F proved, was not, revealed, were
10. O believe, implications
11. O suggest, can

READING 2

PREVIEW THE READING

Activity A, p. 193

Answers will vary. Possible answers: I think people are nervous about having a mine in a place where people depend on nature so much. Other people want the mine so that they can make money from the minerals there.

WORK WITH THE READING

Activity B, p. 196

1. alliance
2. controversial
3. reserves
4. intervene
5. unduly
6. sustainable
7. ample
8. abundant
9. overwhelmingly
10. dreaded
11. ecological
12. preliminary

Activity C, p. 197

1. c
2. b
3. a
4. b
5. c

Activity D, p. 197

1. Yes. paragraph 1: It is rich with large reserves of natural resources.
2. No. paragraph 1: Bristol Bay is also home to a large population of Alaska Natives, whose cultures and lifestyles revolve around the region's "wildness."
3. Yes. paragraph 5: An unlikely alliance of commercial fishermen, native tribes, and concerned citizens joined together. They decided that their best hope for stopping the Pebble Mine was to get the federal government to step in.
4. No. paragraph 5. (*Unlikely* implies that they are not alike in their interests and goals.)
5. No. paragraph 6: It indicated that the mine would have an overwhelmingly negative impact on the Bristol Bay watershed. / EPA Administrator Gina McCarthy said in a statement, "Extensive scientific study has given us ample reason to believe that the Pebble Mine would likely have significant and negative impacts on the Bristol Bay watershed and its abundant salmon fisheries."
6. No. paragraph 8: According to the Associated Press, Collier said the EPA's actions to date "have gone well outside of its normal practice, have been biased throughout, and have been unduly influenced by environmental advocacy organizations."
7. Yes. paragraph. 7: On February 28, 2014 the agency did what environmentalists hoped and what the Pebble Partnership dreaded it would.
8. No. paragraph 8: If anything, this is the beginning, not the end, of the Pebble Mine controversy.

Activity E, p. 198

1. wetlands, ponds, lakes (wilderness), sockeye salmon, oil, gas, and minerals (molybdenum, copper, and gold)
2. salmon and the wilderness
3. They were discovered in 2000 by Northern Dynasty Minerals, a Canadian company.
4. The process of getting local and federal permits is long and difficult.
5. money and creating jobs for the people of the area
6. harming the environment and not being sustainable
7. an alliance of commercial fishermen, native tribes, and concerned citizens
8. They asked the U.S. Environmental Protection Agency (EPA) to conduct a preliminary investigation.
9. The Pebble Mine would likely have significant and negative impacts on the Bristol Bay watershed and its abundant salmon fisheries.
10. The U.S. government prevented the Army Corps of Engineers from issuing mining permits in Bristol Bay.
11. The company will keep trying to get the EPA to issue the permits to build the Pebble Mine.

WORK WITH THE VIDEO

Activity B, p. 199

	Against wind farms	For wind farms
Notes from the video	Wrecking countryside	Natural choice for renewable energy source since UK is windy
	A lot of noise, impact on local wildlife Huge size dominates and disrupts natural landscape	Legitimate and renewable source of energy UK gov investing = become dominant energy source by 2030
	Offshore wind farms -expensive and time-consuming Wind farms inefficient power source 2,400 needed to replace one nuclear power station 2 million pounds each	Placement = problem Cleaner, renewable energy

Activity C, p. 199

Answers will vary. Possible answer: I think that placement is key. They are not inherently bad. Another argument for them is once you've invested the money in them, they will last a long time.

WRITE WHAT YOU THINK

Activity A, p. 200

Answers will vary. Possible answers:

- I think it's fairly balanced. Both sides are represented, with no obvious bias against one side.
- I disagree that all the major discoveries have been made. How can we really know? Maybe we will look back on this time in 200 years and think of how little we knew.
- I understand why we want to explore the last wild places, but I don't think it's right. We should allow nature to exist peacefully without interfering with it.

CRITICAL THINKING STRATEGY

Activity B, p. 201

Answers will vary. Possible answers:

- The exploration of a coral reef is both similar to and different from that of oil, gas, and mineral deposits. Both types of explorations deal with natural resources that can be exploited for profit. However, Reading 1 indicates that the coral reef that had been discovered is located far from humans while Reading 2 shows that the oil, gas, and mineral deposits in the Bristol Bay region is very close to where people are living.
- At first glance, the disputes over Zealandia and Pebble Mine don't seem to affect us because they are far away. However, in this age of global interconnectedness, they do. It may not matter whether Zealandia is considered a continent or not, but Reading 1 says that scientists hope to study how climates change by studying Zealandia. Climate change certainly affects us all. Reading 2 deals with the dispute in Bristol Bay concerning minerals and pristine land. This is one example of how we have to make hard choices in our lives.

- They're special because they are unique. They have resources that are valuable and not easily replaced. Human activity would destroy and is destroying them.
- If something is worth a lot of money, then the decision will often tilt in favor of going ahead with the development rather than preserving nature. Occasionally preservation wins out, but again, it's usually only if there is money supporting that position, for example, a philanthropist supporting the cause, or power, i.e., the government or the law.

VOCABULARY SKILL

Activity A, p. 202

Basic meaning	Other examples
1. life	antibiotics, biography
2. break	fraction, fragile
3. carry	portable, transport
4. know	conscious, unconscious
5. write	inscribe, manuscript
6. keep	preservation, reserves
7. look	inspect, speculate
8. see	video, vision

Activity B, p. 202

Answers will vary. Possible sentences:

- Because she had an infection, she had to take **antibiotics**.
- I try to be **conscious** of how my actions affect other people.
- Only a very small **fraction** of the ocean has been explored.
- I **speculated** about why the decision was made.
- My wedding date is **inscribed** on my ring.
- The **preservation** of our natural resources is important.

WRITING SKILL

Activity A, pp. 203–204

Thesis statement: We must continue to invest in exploration of the deep sea so that we can take advantage of its benefits.

Main reasons:

Paragraph 1: The deep seas contain resources that could bring improvements in the field of medicine.

Paragraph 2: At a time when existing forms of fuel are limited, the deep ocean could provide new sources of fuel.

Paragraph 3: Finally, using the deep sea for the disposal of nuclear waste is a controversial issue that needs to be explored further.

Activity B, p. 204

- Thesis statement:** We need to invest in exploration of the ocean in order to take advantage of its benefits.
- Reason 1:** The deep seas could bring improvements in medicine.
 - Support 1:** Plant life in the deep ocean may lead to new medicines.
 - Support 2:** Scientists who researched this area won a Nobel Prize.
- Reason 2:** The deep ocean could provide new sources of fuel.
 - Support 1:** There is a lot of oil beneath the ocean bed.
 - Support 2:** Methane in the ocean is a possible source of fuel.
- Reason 3:** The ocean may be a solution to the problem of nuclear waste.
 - Support 1:** Waste could be sealed into the ocean floor.
 - Support 2:** Deep-ocean disposal could be safer than current methods.
- Concluding idea:** Advances in our knowledge justify the expense of deep-sea exploration.

Activity C, p. 205

Answers will vary. Possible answers:

- Opinion:** Finding a park within a city is an important discovery.
Reason 1: Being in a park is good for my health.
Reason 2: A park extends my living space.
Reason 3: Being in a park gives me choices.
- Opinion:** Space exploration is a waste of resources that could be better used on Earth.
Reason 1: Sending unstaffed ships into space costs millions of dollars. That money could be used to build houses or highways on Earth.
Reason 2: Instead of putting time and effort into building spacecraft, the same time and effort could be used to improve structures and materials on Earth.
Reason 3: Instead of sending million-dollar space craft away from Earth, the materials used in building the craft could be used to build hospitals and schools.
- Opinion:** The fish in Bristol Bay are more important than the minerals.
Reason 1: Fish are living creatures. We should respect life and not destroy the fish's environment.
Reason 2: Fish are sustainable, but minerals are not. If we kill the fish to get to the minerals, eventually we will no longer have either resource.
Reason 3: The fish are important to the native people who live near Bristol Bay. They should have a right to maintain their traditional way of life without having it spoiled by the establishment of a large mine.
- Opinion:** People should not eat genetically modified food.
Reason 1: We don't have data on the effects of the food on humans.
Reason 2: There are numerous historical examples of unexpected negative results of introducing new plants or animals to an ecosystem.
Reason 3: If a plant has been modified to kill insect pests, it may also be harmful to humans.

Activity D, pp. 206–207

- Thesis statement:** Finding a public park or garden in the midst of all the concrete can be a truly wonderful discovery.
Reason 1: I feel better when I can spend time outdoors around trees and grass, not to mention birds and butterflies.
Reason 2: A second reason for searching out a park is that it extends my apartment space.
Reason 3: Furthermore, I have choices in a park.
- Reason 1:** The presence of other living things is calming and revitalizing; just getting to a park makes me get up and get moving.
Reason 2: I can use a park for the activities that I cannot do at home, such as exercising and walking; by visiting a public garden, I can enjoy flowers and plants without worrying about overwatering them or not having enough sunlight for them.
Reason 3: I can stay by myself, strike up a conversation with someone, or engage in a game of soccer; I have no obligation to buy something, as I do in a coffee shop or café; I can enjoy what they have to offer at many times of the day or night.

GRAMMAR SKILL

Activity A, pp. 207–208

- Wanting to develop the area,
- Having lived there for centuries,
- Having developed new technologies,
- Being above sea level,
- Having been surveyed extensively,

Activity B, p. 208

- Because they understand the significance of calling Zealandia a continent,
- Because they recognized the importance of the discovery,
- Because they have heard about the discovery of the coral reef,
- Because they hoped to stop the Pebble Mine,
- Because it determined that the mine would have a negative effect,

The Q Classroom

Activity A, p. 213

Answers will vary. Possible answers:

1. When I was a teen, I volunteered in a nursing home and later in a hospital. I learned communication skills. I think it's important to learn by doing. Experiential learning and applying skills is necessary to truly acquire skills.
2. A historical failure that I remember vividly is the *Challenger* space shuttle disaster. I remember reading a lot about the O rings and cold temperatures after the tragedy.
3. They are building a bridge. Commuters, local residents, and anyone who needs to travel in the area benefit.

Activity B, p. 213

1. They give the example of a math test and a soccer game. Answers will vary. Possible answer: Another example is building codes after an earthquake—they often become stricter and make people's homes safer.
2. Answers will vary. Possible answer: No, I don't think desire alone, or even skills, will propel you to success. There are too many outside factors that can block you along the way.

READING 1

PREVIEW THE READING

Activity A, p. 214

1. I think I will learn about where the bridge is, how it was built, and when and why it collapsed.
2. The bridge failed because of an error in design.

WORK WITH THE READING

Activity B, pp. 217–218

- a. stabilize
- b. convenience
- c. attach
- d. flexible
- e. susceptible
- f. prevail
- g. vibrate
- h. ratio
- i. induce
- j. cumulative
- k. twist
- l. fragile

Activity C, pp. 218–219

1. c
2. a
3. b
4. a
5. b
6. c
7. b
8. b

Activity D, p. 219

1. F Suspension bridges appear fragile but are strong. (paragraph 1)
2. F The Tacoma Narrows Bridge was the third largest suspension bridge at the time it was built. (paragraph 2)
3. F Most believe the cause of the bridge failure was aerodynamic instability. (paragraph 6)
4. F When the cable slipped the bridge's motion changed from vertical to twisting. That motion resulted in the bridge collapsing. (paragraph 6)
5. T (paragraph 7)

Activity E, p. 220

1. They are relatively light and flexible.
2. It swayed from side to side and undulated (up and down) in even moderate wind.
3. A dog who wouldn't leave the car died.
4. The two theories were resonance and aerodynamic instability.
5. The twisting motion started when a cable slipped.
6. The lesson they had forgotten was that earlier bridges failed because they were too light and flexible.
7. The Brooklyn Bridge was built heavier and stiffer to be more aerodynamically sound.

CRITICAL THINKING STRATEGY

Activity F, p. 221

Cause/Explanation	Resonance	Torsional flutter	Both
1. Undamped rhythmic force (paragraph 5)	<input checked="" type="checkbox"/>		
2. Wind resonating at the natural frequency of the bridge structure (paragraph 5)	<input checked="" type="checkbox"/>		
3. Steady increase in amplitude (paragraph 5)	<input checked="" type="checkbox"/>		
4. Self-induced vibration (paragraph 6)		<input checked="" type="checkbox"/>	
5. Twisting generating more twisting (paragraph 6)		<input checked="" type="checkbox"/>	
6. Deck too narrow, light, and shallow (paragraph 6)			<input checked="" type="checkbox"/>
7. Winds split around the bridge in a swirling pattern (paragraph 6)		<input checked="" type="checkbox"/>	
8. Bridge too flexible (paragraph 6)			<input checked="" type="checkbox"/>

WRITE WHAT YOU THINK

Activity A, p. 222

Answers will vary. Possible answers:

1. Studying failure, especially in the sciences, is a good way to learn because understanding why something failed often teaches more than simply studying the concept could.
2. I don't think it is always necessary to find a cause, and many times experts don't ever agree, but it is important to keep trying to understand why something failed.
3. I think successful projects can also teach us, but failures may be more memorable, and the lessons may stay with us longer.

READING SKILL

pp. 223–224

1. d: The original engineer argued; But in fact
2. a: people thought; In reality
3. b: Initially, engineers contended; However
4. e: The engineering professor and his students believed; Despite

5. f: The engineers believed; In fact
6. c: Some claimed; On the contrary

READING 2

PREVIEW THE READING

Activity A, p. 224

1, 2, 3, 6, 7

WORK WITH THE READING

Activity B, p. 227

1. charity
2. alleviation
3. substantial
4. locale
5. faculties
6. incur
7. methodology
8. relevance
9. vague
10. respective
11. criteria
12. output

Activity C, p. 228

2

Activity D, p. 228

1. b
2. a
3. c
4. c
5. a

Activity E, p. 229

1. Students often don't know how they can affect society. (paragraph 2)
2. (paragraph 7)
3. Student projects are supervised both at the university and in the field. (paragraph 8)
4. The faculties at the universities supervise the students, and the students often work with Engineers Without Borders and other NGOs in the field. (paragraph 8)
5. The projects must be affordable for the students and must not cost the end-users very much. (paragraph 9)
6. (paragraph 10)
7. Students also learn skills for employment, such as working on teams and communicating with others. (paragraph 11)
8. (paragraph 5-10)

Activity F, p. 229

Answers will vary. Possible answers:

1. One goal of the program is to help other people. If there is no output, the people will not be helped.
2. If it is a charity, it doesn't have to make a profit. It just has to make enough money to cover expenses.
3. Partners on the ground will know what the conditions are like in that particular place, what the needs are, and who in that locale can benefit from the project.

WORK WITH THE VIDEO

Activity B, p. 230

	What happened	Explanation
Notes from the video	<p>April 25, 1986, test of reactors Reactor became unstable, overheating without emergency cooling system Reactor exploded at 1:23 a.m. Explosion sent radioactive material and debris through plant and exposed lethal reactor core</p> <p>2 workers died immediately in explosion Others tried to pump water into reactor to cool radioactive material 28 died of radiation poisoning within weeks Released radioactive cloud high into atmosphere Nearby towns Pripjat and Chernobyl were not evacuated for another 48 hours Many exposed to high levels of radioactivity City of Chernobyl decaying</p>	<p>Required cooling system to be shut down Workers insufficiently trained for test and ignored safety protocols Workers tried to manually shut down the reactor, but it increased rate of reaction and caused power surge Chernobyl's reactors not encased in steel or reinforced concrete</p> <p>People developed cancer and genetic defects in coming months and years International Atomic Energy Agency says Chernobyl will claim 4,000 lives Due to spread of radioactive fallout across Europe, death toll could be much higher Stands as reminder of potential devastating impact of harnessing nuclear power</p>

Activity C, p. 230

Answers will vary. Possible answer: The accident happened because the workers weren't trained well and ignored safety protocols. Scientists probably learned that it is dangerous to run tests without adequate training and procedures for dealing with potential problems. I think there are better energy sources than nuclear because when it fails, the results are catastrophic.

WRITE WHAT YOU THINK

p. 230

Answers will vary. Possible answers:

1. Reading 1: Suspension bridges must not be too light and flexible. If they are, they may fail.
Reading 2: There is a good way to structure student projects to benefit society. OR Students can use projects to learn from before they get a job.
Video: Safety measures should not be cut out of projects. OR Safety needs to be the first consideration.
2. Reading 2 is about students, while the other two are about professionals. / Reading 1 and the video are about disasters; Reading 2 is about being proactive.
3. We can look at what others in the field have done so that we don't make the same mistakes. OR We can study other people's mistakes before we start a project.

Activity A, pp. 231–232

1. provides support to, work in
2. the work of
3. builds relationships with
4. are appropriate for
5. an impact on
6. with regard to
7. potential to

Activity B, p. 232

Answers will vary. Possible answers:

1. Internships **provide experience for** graduating students.
2. They need to **supply money to** the project.
3. There's **potential for** students to contribute to the well-being of others through real-life projects.
4. It's important to think about the **relevance to** the recipients.
5. The students were very **vague about** their goals after graduating.

WRITING SKILL

Activity A, pp. 233–234

Thesis: This demonstrates how requiring students to do real-world projects benefits the students.

Main idea, para. 2: One main reason to require real-world projects is to prepare students for real life.

Main idea, para. 3: Furthermore, the amount of learning may be greater if the students have to deal with real-world problems.

Main idea, para. 4: Having real-world experience equips them [the students] with strategies to lessen the likelihood of making ...mistakes.

Activity B, p. 235

1. a
2. b
3. a
4. b
5. b
6. c
7. a

Activity C, pp. 236–237

Answers will vary. Possible answers:

2. Counterargument: The creativity of innovative students is not an important piece of a student project. Involving students in a project is enough.
3. Refutation: While this may be true, the local technicians will need to maintain and fix the project once the engineers have returned home, and so will need these technical skills.
4. Argument: The cost of a project to the student and to the charity must be considered.
Refutation: While ideally, money would be no object, the costs have to be considered because neither the students nor the charities can be expected to finance expensive projects.
5. Argument: Good student projects should provide for local entrepreneurs to make money with the project.
Counterargument: No one should make money from the project because the project should be totally charitable.
Refutation: While there can be complications, encouraging local businesses to profit from the project allows the community to develop its economy so that it is not as dependent on charity.

GRAMMAR SKILL

Activity A, p. 238

1. a. While it is a tragedy, a bridge failure teaches valuable lessons.
b. Though it teaches valuable lessons, a bridge failure is a tragedy.
2. a. Despite the fact that it teaches a valuable lesson, studying engineering failures should not be the only approach.
b. Even though it should not be the only approach, studying engineering failures teaches valuable lessons.
3. a. Although they need to participate in real-life projects, students need to study past engineering projects.
b. While they need to study past engineering projects, students need to participate in real-life projects.

Activity B, p. 238

Answers will vary. Possible answers:

1. ...it was helpful in physics classes to teach resonance.
2. ...it is important for them to experiment with new ideas and innovations
3. ...they were not sure that it was worth the time and expense
4. ...they are costly and time-consuming.
5. ...I really wanted the opportunity to participate in a project where I could apply the knowledge I'd gained.

