Lesson 2
Selecting and Teaching Academic Vocabulary

Welcome to Accelerating Language Acquisition for Secondary English Language Learners, Lesson 2: Selecting and Teaching Academic Vocabulary.

Throughout the lesson, we will guide you to particular pages in your workbook. You may access the workbook below the content window.

Section 1: Connect

In the previous lesson, we introduced the idea that academic language is like a tree, made up of vocabulary, represented by the leaves, and discourse, represented by the trunk and branches.

In this lesson, we will focus on academic vocabulary, which is composed of content area terms and other words students need to know to be fluent in academic English.

More specifically, we will explore how to select and teach the academic vocabulary of content area lessons, whether science, mathematics, social studies, or English language arts and reading.

We will present three ways teachers can help students learn this vocabulary:

- Through content activities that introduce and explain the terms along with the concepts;
- By providing opportunities for students to experience the meanings of words through actions, visuals, or demonstrations; and
- Through direct instruction, with contextualized support for English language learners (or ELLs)

In meeting these content objectives, you will have the opportunity to practice categorizing words into tiers and analyzing academic vocabulary to make instructional decisions.

In Lesson 1, you learned how important it is that ELLs develop academic language in order to succeed in school and beyond.

To emphasize the importance of selecting and teaching academic vocabulary, and how ELLs benefit from direct instruction within the content area classroom, take a moment to meet Ruwan. He emigrated from Sri Lanka at age 9 and is a native speaker of Sinhala. He is now a student at The University of Texas at Austin. He remembers what it was like to be an English language learner in secondary school, and understands the importance of different kinds of vocabulary.

RUWAN: The bold words in my textbooks, I remember in biology in particular, were very difficult for me. But everyone was learning them, and the teacher spent a lot of time teaching them. For me, it was those other words—words that were used within the definitions of
those bold words or in many of my textbooks and assignments. Other students seemed to know those words, but they were extra hard for me. It was hard to complete activities and assignments because I didn’t know those words. I could understand the subjects really well, but when talking or writing about them, my teachers would tell me I use too much conversational vocabulary. I needed more direct teaching of academic vocabulary, more than just the bold words.

Section 2: Get Information

As illustrated in the video, students encounter different types of vocabulary when learning academic content. However, it is not always easy to determine which vocabulary to explicitly teach.

Take a moment to read the quotation from research by Beck, McKeown, and Kucan.

Those levels of frequency and utility can be divided into three tiers of vocabulary.

Tier I includes basic words, commonly heard in daily conversation. Tier I words are considered nonacademic and high frequency. Though basic, Tier I words may need to be taught to ELLs at beginning and intermediate proficiency levels. These basic words are often easy to illustrate.

At the other end of the spectrum are Tier III words. These content-specific words are highly specialized, because they relate to a specific discipline, and are therefore not frequently used in everyday conversation. These words are often the bold words in textbooks. Because many Tier III words are derived from Latin and Greek, they often have irregular forms.

In the middle are Tier II words. These words are not necessarily content specific, but are also not basic words. Tier II includes high-function, high-utility academic words that are found across disciplines, although their meanings can differ from subject to subject. These words are key to students’ understanding of lesson content.

For your convenience, we’ve provided a copy of this three-tier table in your workbook.

Let’s explore the idea of the three tiers more deeply. For this exercise, we’ll return to Ms. Clark, the seventh-grade science teacher you met in Lesson 1. She’s planning to teach her students the functions of organelles in a cell and is looking over the academic vocabulary used in the materials. In planning for vocabulary instruction, Ms. Clark will take a broad look at all of the lesson materials. However, for this demonstration, we will use just a brief section to help us learn more about tiered words.

MS. CLARK: The nucleus protects the cell’s DNA. It stores the cell’s DNA blueprint and it separates the cell’s DNA from the activity of the cytoplasm. It allows molecules to go in and out, but only selectively.

Ms. Clark first considers the Tier I, or basic, words. In this brief passage, here are the Tier I words.

These are high-frequency words found in everyday conversation.
Ms. Clark now looks for the Tier III, or content specific, words.

We can see that these words are related to the science topic of cells and are unlikely to be common in other classes or social conversations. It is also important to point out that nucleus, a word of Latin origin, has an irregular plural, nuclei.

Ms. Clark now looks for the Tier II, or academic, words.

These words are not necessarily content specific, but are also not basic words. Ms. Clark knows that of all the tiers, Tier II words have the most utility across subject areas but are not often highlighted or explained in content area materials.

Here are a few more features of these high-function, high-utility Tier II words.

We have mentioned that they are important across academic disciplines, in a variety of domains.

Because they are not highly specialized, Tier II words can be taught in a variety of ways. Learning them well can lead students to make connections to other words and concepts.

Students often understand the general concepts these words express but may be more familiar with Tier I synonyms or even Tier I forms of the words.

Most challengingly, the meanings of Tier II words may change across contexts or content areas, which makes them all the more important to teach directly.

Let’s look at an example.

ELLs, especially, need to be taught how these high-frequency academic words are used in an academic context. Take a minute to consider the remaining Tier II words in Ms. Clark’s list and why they might be particularly difficult for ELLs. Hover your cursor over each Tier II word to learn more. Click Ready when you’re done.

Remember, the vocabulary analyzed here was from a very short section of text, for the purposes of our discussion. Planning vocabulary instruction involves reviewing and analyzing an entire text. Later in this lesson, you will learn how Ms. Clark uses the three-tier analysis to select words for instruction.

Now that we have built our understanding of the three tiers, let’s practice categorizing vocabulary. Here is a collection of words from different subject areas. Drag and drop each word or term into the tier that fits it best.

Now let’s look at some possible answers and see how they compare to the decisions you made.

Let’s start with Tier III words.

These are often the easiest words to categorize because they are highly specialized to one academic discipline. How did your choices compare?
Now Tier I.

You probably recognized most of these words as high-frequency words used in conversation. Did you come up with the same list?

Finally, the Tier II words.

These are high-utility academic words that are found across content areas. Can you see how these words listed might be used in your content area and maybe a few others?

Classifying vocabulary into the three tiers is not a clear-cut science. Here are a few words that you might have categorized differently.

_Describe_ and _compare_ can be familiar words, used frequently by students in both conversational contexts (Tier I) and academic tasks (Tier II).

Many of your students could be familiar enough with the word _differ_ for you to include it in Tier I. Either way, because _differ_ is not often encountered in conversation, it may require explicit instruction, especially for ELLs. Students will probably be more familiar with the word _different_, which could be an inroad to teaching _differ_ explicitly.

The word _key_ has multiple meanings: Students may understand its Tier I use as “an object to open a house or car door,” but they may not be familiar with the more academic meaning of _key_ as “a chart or figure that explains new symbols, concepts, or terms” or its definition as an adjective meaning “important” or “vital.”

Remember, even some Tier I words can be challenging for ELLs. After analyzing vocabulary by tiers, think about which words may be challenging for your ELLs at different proficiency levels.

**Section 3: Apply, Part 1**

Ms. Clark and Ms. Davis, the seventh-grade science teachers you met in Lesson 1, are preparing to teach a lesson. They have identified academic vocabulary from the lesson materials and categorized them into tiers, as you did in the previous activity. Let’s join their conversation to see how they use this information to decide which words to teach and how.

Keep in mind that the steps they take to select and teach academic vocabulary can be used by all content area teachers, whether science, mathematics, social studies, or English language arts.

**MS. DAVIS:** Here is my list of Tier I, II, and III words. Looks like a lot. How can we teach all these words at once?

**MS. CLARK:** Well, remember, the list and tiers help us to be aware of the language students need to use, but we don’t have to give that long vocabulary list to the students.

**MS. DAVIS:** OK, so where do we go from here?
MS. CLARK: First, let’s see which words students will learn during the activities.

MS. DAVIS: What do you mean?

MS. CLARK: Well, the activities are designed to teach what those organelles are, including their names. When you learn what mitochondria are, you learn the concept and the name.

MS. DAVIS: Oh, I see. They will use the video and their books to see pictures of the organelles and learn about their functions.

MS. CLARK: Right. So, we don’t need to preteach the names of the organelles. They will learn the vocabulary for organelles along with the content.

MS. DAVIS: So, it seems that most of the Tier III words will be learned through the science activities. Is that always the case with Tier III words?

MS. CLARK: Well, not always. Here we introduce a concept and a term together, like mitochondria. But there can be other Tier III words that are not explained in the materials.

MS. DAVIS: Like what?

MS. CLARK: Like the word *organelle* itself. It is not really explained in the video, so we will need to define it in the lesson delivery or teach them up front.

MS. DAVIS: I see.

When selecting the words to explicitly teach, Ms. Clark first asks herself: “Which words will students learn along with the content of the lesson activities?”

She discovers that the textbook and activity materials will introduce and explain many of the Tier III words she found, so there is no need to preteach these words.

Let’s join the conference session again, as the teachers consider which words students will need to learn in order to comprehend the content activities.

MS. DAVIS: So, we have decided that the names for organelles will be taught throughout the activity. But that still leaves a lot of words to teach, doesn’t it?

MS. CLARK: Yes. Let’s prioritize. We should focus on the words that students need in order to understand and participate in the activity, such as the words needed to understand the information in the video and their textbook. They will need to use words to create a statement of the functions of each organelle.

MS. DAVIS: I see. So, when they read their books, they must be able to pull out the function of the organelles.

MS. CLARK: Yes. They need to know what the organelles do—what actions they perform. Look at the
Tier II list. Many of those are verbs that get to the heart of the functions.

MS. DAVIS: That makes sense. If we teach them the verbs that tell what the organelles do, they will be able to understand the function when they read about it.

MS. CLARK: Right. The text will still be difficult for some, but they can use those key verbs to make sense of the functions. And it will give them the right academic language to use in stating the function for themselves on their charts.

MS. DAVIS: So, does that mean we can narrow down our list of words to teach?

MS. CLARK: Yes. Let’s focus on these key verbs. We can help with the others as needed, but we don’t want to overwhelm students with a long list.

MS. DAVIS: OK, so, how can we teach these words?

MS. CLARK: Well, I’m sure that there are a lot of ways to do it. I have some activities that I’ve done before that I can adapt to this. Want me to show them to you?

MS. DAVIS: Yes. Please.

MS. CLARK: OK, why don’t you come by my third-period class tomorrow. I will use our list and adapt those other activities I had in mind to teach the function verbs.

MS. DAVIS: Great. I will come observe. See you tomorrow.

When selecting the words to explicitly teach, Ms. Clark next asks herself: Which words will students need to know in order to participate in and learn from the content activities?

She searches the activities themselves, including instructions, as well as the content text and other materials. Many of these words turn out to be Tier II words.

Because students will encounter many academic words in their lesson, the teachers focus on the most important words: those that will help students understand and meet the content and language objectives.

Beginning ELLs will likely need additional vocabulary support. The teachers could provide this support in several ways.

Checking individual students’ understanding of key Tier I words will allow the teachers to clarify those word meanings as needed.

The teachers might provide a bilingual glossary or dictionary or use visuals or objects to help demonstrate the meaning of these unknown Tier I words. This might be done one-on-one if needed to make beginning ELLs more comfortable.

The guide questions for selecting Tier II and III words, as well as these tips for teaching Tier I words to
ELLs, can be found in your workbook, on the page titled “Guide Questions for Selecting and Teaching Academic Vocabulary.”

**Section 4: Apply, Part 2**

Now that we have selected the words to teach, it’s time for instruction.

We have already touched on one way academic vocabulary is taught: through the introduction and labeling of concepts in the content text and activities during the lesson. You may already use this method, which is often integrated into content instructional materials.

Now we will focus on two ways to teach the selected vocabulary before the lesson. The first is experiential: providing experience with academic words through actions, visuals, or demonstrations. The second is direct: directly teaching academic words along with contextualized support.

Turn to the workbook page titled “Classroom Observation: Ms. Clark Teaches Vocabulary.”

You are about to watch Ms. Clark using a game to teach selected Tier II words. As you observe, jot down your responses to these questions:

- How does Ms. Clark make the vocabulary accessible to ELLs?
- How do the vocabulary activities help prepare her students to meet the content objective?

**MS. CLARK:** Alright students, we are going to learn about plant and animal cells by playing a game to act out what happens inside the cell. The game is called the Organelle Game. What word does *organelle* look like?

**ETTA:** Organ?

**MS. CLARK:** Yes. That’s right. Organelles are like the organs of a cell. We have organs inside our bodies that do different jobs, or functions, for us—to digest food, to pump blood around, and other important processes. And the organelles perform different jobs, or functions, for the cell.

In the Organelle Game, we will act out the parts of the cell and model all the functions that the organelles perform inside a tiny cell. That sound good?

Let’s get started. You each have a function card. Now, I will show you how we will act out the function of the organelle.

For example, I have a card, and the function is to provide support for the cell. That means that I will stand on the outside of the circle and form a barrier to provide support for the cell. Now, I can’t do that alone, so Ralph has a card with this same function on it.

Together, with everyone else who has that function, we will provide support for the
Each student will have a function, or a job, to do. Students with the same color card, like Ralph and I, have to work together.

OK, take a minute to locate the other students who have the same color card. Make sure you all know how to perform the action on the card. I can help to show you what those actions could look like. OK, ready?

All right, here we go. When I call a function, you will come into the cell. Altogether, you need to say the function out loud and then act it out. Then we will add the next organelle and the next until everyone is in place. Got it?

STUDENTS: Yes.

MS. CLARK: Great. Let’s start with our new favorite word, provide. The first function we will see is “provide support for the cell.” Come on down and take your places.

STUDENTS: We provide support for the cell.

MS. CLARK: Great. Next is “store genetic material.”

STUDENTS: We store the genetic material of the cell.

MS. CLARK: Great. Can you tell us more about what it means to store something?

ETTA: We are keeping it here where we are, to make it safe.

MS. CLARK: Yes. Good. Next let’s see...

MS. CLARK: Congratulations. You have formed a very well functioning plant cell. Thank you all for your performances.

Before you sit down, look around. Each different group represents an organelle. Next, you will learn the names of these organelles and which ones are also in the animal cell.

I would like one person from each function group to put your function card on the word wall, under the title “functions.” We will use these words as we talk and write about the organelles.

Next, Ms. Clark explains her thinking behind the organelle game.

MS. CLARK: When I think about vocabulary instruction, especially for ELLs, I want to see if I can help students learn in a way that isn’t so dependent on language. Often, a visual will do, many of which can be found with a quick search on the Internet. But these words—generate, break down, manufacture—these are all action words. So, I adapted that game to teach the function words.

Sometimes I worry about taking too much time for vocabulary instruction before we get
into the science. But this activity really was a jumpstart of the science content.

Later on, when we talk about the functions and compare the types of cells, I can use this as an anchor activity. I can say, “Remember the Organelle Game? Who was generating energy? Who was breaking down proteins?” and help them connect those actions, the functions, with the names of the organelles.

Ms. Clark did several things to help make the vocabulary accessible to her ELLs. She modeled the words for the groups when needed and she had the students act out the words for one another, so they could see what the words meant. The word cards in the game helped ELLs to connect the written word with the action that they or their classmates acted out.

This was a jumpstart to the lesson because the words came from descriptions of the organelle functions that students will encounter in their next activity. This game can serve as an “anchoring activity” because Ms. Clark can use it to reinforce the functions of the organelles, connecting the actions the students performed with the organelles they will learn later.

Now, let’s go back to the beginning of the lesson, before the game started, when Ms. Clark directly taught one of the Tier II words.

As you watch the video, consider the same questions as last time. Write responses in your workbook.

MS. CLARK: In the Organelle Game, we will act out the parts of the cell and model all the functions that the organelles perform inside a tiny cell. That sound good?

OK, before we start the game, let’s talk about the word provide. We will see this a lot in this class, and you probably see it in many of your other classes, too. But it is very hard to act out, so let’s do one of our vocabulary cards to learn more about this word. The word provide means “to make something available” or “to supply something that is wanted or needed.”

Jorge, please read the sentence on the card that shows how provide relates to the cell.

JORGE: “The cell wall provides support for the plant, like a skeleton.”

MS. CLARK: Thanks, Jorge. I like how you emphasized the word provide. We will see how the cell wall surrounds the cell to provide support.

Now, let’s look at this picture. Turn to the person next to you and tell them what you see taking place in the picture.

MS. CLARK: OK, let’s make a list. What do you see going on in this picture?

STUDENT: Giving medicine.

STUDENT: Checking the woman’s blood pressure.
STUDENT: Taking her temperature.

MS. CLARK: You are all correct. All of these examples can be described by the word care. This is what the nurse is doing: She is providing care for the woman. Remember what the definition of provide is?

STUDENT: To supply something that is wanted or needed.

MS. CLARK: Right. So, the nurse here is providing something that is needed. She is providing the care for this woman, who is sick, right? She is providing what she needs, which is care. Cynthia, will you read the sentence for this picture?

CYNTHIA: “Now that my sister is a nurse, she provides care for many people.”

MS. CLARK: Very good. So, in the example, we see that the cell wall provides something that the cell needs or wants. And what is that?

STUDENTS: Support.

MS. CLARK: Yes. And the nurse provides something that the woman in the hospital needs or wants, which is...

STUDENT: Medicine.

STUDENT: Care.

MS. CLARK: That’s right. Both those things are part of what we mean when we say she provides care. And care includes medicine and these other things we listed. Thinking about the definition of the word provide and the examples we already saw, I want you to think about what you expect the school to provide for you. What is it that you, as students, want or need the school to provide? In your groups, come up with at least three things that the school should provide for you.

Now, Ms. Clark will describe how she decided to directly teach the word provide.

MS. CLARK: When I looked at our list of function words, all verbs, I noticed the word provide. Since it isn’t as concrete as the other words, I couldn’t think of a good way to act it out.

So, I needed to take a little more time to give students the chance to get to learn that word. I can’t take the time like that with every academic word, but this one was important to understand the content, and it comes up in my class all the time. So, it was worth the investment.

When I have words I want to teach directly like this, I use the vocabulary cards. It is a good way to show students how they will see the word used, with a sentence and a picture from the text. The vocabulary card also connects the word to their own experiences, maybe even outside of school.
Also, having students discuss the word in groups helps them take ownership of the vocabulary and actually use it themselves as they learn. With words like *provide*, these visuals help them connect with the situation, the context of the sentence. The vocabulary card format works for all kinds of words, but I use it mostly for Tier II and Tier III.

Ms. Clark used the vocabulary card to help make the vocabulary accessible to her ELLs in several ways. She provided a translation for the majority of her ELLs, whose native language is Spanish. A native language translation can be very helpful if you are able to provide it. But the vocabulary card also includes other features that help explain the word to ELLs of all language backgrounds. The images for the content connection and the student connection sentences provided non-linguistic support for understanding these sentences. And ELLs benefit from speaking about the discussion question in pairs or small groups, where they may feel less anxiety about their developing English skills.

Ms. Clark has chosen to teach one of the key verbs—a Tier II word that will be important in this lesson and in other classes. The vocabulary card shows students how this abstract word is used in the context of the lesson, through the content connection sentence and visual. This card helps all her students, especially ELLs, comprehend and use this word in meeting the lesson objectives.

Here is the vocabulary card that Ms. Clark created for the lesson.

Now it's your turn to create a vocabulary card for direct teaching of a Tier II word. The word is *conduct*. Like *provide*, *conduct* would be difficult to demonstrate or act out, but it is a high-function word students need to understand in order to describe the functions of organelles.

Take a few minutes to create a vocabulary card for the word *conduct*.

We have already provided the Spanish translation, a student-friendly definition, and the content sentence. Your task is to provide a student-friendly sentence, an idea for visual support, and peer discussion questions.

Click Ready when you’re done.

There are many ways to teach this word.

Compare your card to the one that Ms. Davis and Ms. Clark developed. Hover your cursor over the card and click on each component to see how it helps ELLs and other students learn the word.

Click Ready when you’re done.

You can find a list of these vocabulary card elements on the workbook page titled “Elements of a Vocabulary Card.”

In the workbook, you’ll also find a blank template of a vocabulary card as well as a copy of the model card Ms. Clark used earlier. In the Resources for this Epsilen course, we’ve also provided a Microsoft Word vocabulary card template for your convenience.
For additional information about academic vocabulary and instructional techniques for teaching it, access the Academic Vocabulary Guide in the Resources for this Epsilen course.

The guide provides academic vocabulary lists drawn from the Texas Essential Knowledge and Skills (or TEKS) for Mathematics and English Language Arts and Reading in grades 5 through 7. The introductory section includes useful information and additional vocabulary instruction strategies that apply to all subjects and grade levels.

**Section 5: Process**

Here’s an activity to help process the information in this lesson.

Drag and drop each characteristic of the three tiers of vocabulary words into the appropriate column.

Here are the correct answers. Click Ready to proceed.

For our last activity in this lesson, you will practice planning vocabulary instruction within a content lesson.

You will need information about the lesson in order to make good instructional decisions about vocabulary. So consider the following scenario: Mr. Gonzalez is planning instruction for a lesson following the grade 8 Science TEKS (11)(A). You will help him decide which vocabulary words to teach, and how.

In this part of the lesson, students will learn about what happened to the ecosystem of an island forest that was overpopulated by deer. The deer were at a high risk of starvation because there was not enough vegetation to support them. To achieve a natural balance, Forest Management decided to introduce wolves as natural predators.

For this lesson, students will complete a population chart, graph the population trends, and summarize what happened to those populations over time. Finally, they will debate whether predation was a more natural process than starvation.

The image on your screen will scroll down as we introduce each part of the material.

First, students will calculate the change in deer population and record it on the table.

They will learn that population change is the number of deer born minus the number of deer that died that year.

After the students complete this table, they will graph the deer and wolf populations to see how they changed during this time.

After graphing the numbers, students will answer these questions:

- Describe what happened to the deer and wolf populations between 1971 and 1980.
• What do you think would have happened to the deer on the island had the wolves NOT been introduced?

• What is your opinion of introducing the wolves into the deer population? Was it a more natural solution than starvation?

To prepare for the lesson, Mr. Gonzalez came up with a vocabulary word bank and categorized the words into the three tiers. In thinking about the ELLs in his classes, he realized that he needed to check his beginning students to clarify the meaning of the Tier I words. In this case, he might use visuals to show the meaning of these Tier I words to his beginning ELLs.

Your task is to help him decide how to teach the Tier II and Tier III words to all of his students.

Using the materials above, select which words students will learn through the lesson content and which words he will need to preteach. Drag and drop each Tier II and Tier III word into the appropriate column.

Use the Guide Questions, listed here, to help you in this process. A more detailed reminder of the Guide Questions can be found in the workbook.

Here are Mr. Gonzalez’s choices, which may vary from yours. Hover the cursor over each of the vocabulary words to see the reasoning behind Mr. Gonzalez’s decision. Click Ready when you’re done.

Did you notice? Mr. Gonzalez determined that he needed to teach directly several Tier III words. Remember, it is not always the case that students learn Tier III words through lesson activities.

Now, look at each word in the list Mr. Gonzalez will preteach explicitly.

Decide how would you approach teaching each word: experientially through a class experience, demonstration, or visual or through direct instruction with contextualized support, such as a vocabulary card.

Drag and drop each word into the appropriate column. Click Ready when you’re done.

Compare your decisions to Mr. Gonzalez’s. Hover your cursor over each column to see his rationale. Click Ready when you’re done.

In this lesson, we explored how to select and teach the academic vocabulary of content area lessons.

We presented three ways that teachers can help students learn this vocabulary:

• Through content activities that introduce the terms along with the concepts;

• By providing opportunities for students to experience the meanings of words through actions, visuals, or demonstrations; and
Through direct instruction with contextualized support, using vocabulary cards

In meeting these content objectives, you practiced categorizing words into tiers and analyzing academic vocabulary to make instructional decisions.

When science, mathematics, social studies, and language arts teachers include academic vocabulary instruction in their lesson planning, they provide important support for all students, especially English language learners, to better understand the content and achieve success.

Coming up in the next lesson, you will learn how to take students beyond vocabulary instruction to academic discourse: speaking and writing in content-specific academic language.