

Science Lesson 5th Grade

Content Objective: (from core) Describe how some characteristics could give a species a survival advantage in a particular environment.

Because this is ELD, you don't necessarily need a content objective. Since you are teaching your science core during ELD time, you may want to explicitly post your content objectives with your language objectives. Because this unit will take at least a week, if not more, especially if you add to it, you may want to break down this broad objective. The more specific the objective, the more impact it may have. (Too, we all lose interest in something that lingers too long.) Some examples may be: Identify a variety of survival techniques. Compare the survival traits of two species. Explain why one species could not defend itself against another.

There is a language objective for each lesson.

I decide when to state and post my language objective based on when the students will be working on it. I personally don't like to state the objective if its about them summarizing the lesson because there is so much lag time between stating it and doing it. If you do not state the objective in the building background part of the lesson, let them know at that time it will be coming.

Lessons may (probably will) last more than one day.

LESSON 1

Into: Getting students prepared for the lesson.

Link Lesson to Prior Experience:

Ask students to identify their favorite animal and then that animal's worst enemy. Tell a partner what your favorite animal would do if it met that enemy.

This can be done in their L1 as the purpose is to access their background knowledge and not to assess their understanding. Therefore it does not even need to be shared out as whole group-you decide how much time you want to give this activity.

Use pictures to illustrate your example.

Key Vocabulary:

(from core) species, trait, survival, environment, structure, behavior, (from book) danger, threaten, defend, protect, escape, enemy, predator, attacker

I notice there are 10 nouns and 4 verbs. I made sure the words are all in their basic form or constant forms (no plurals or all plurals, present tense or all past tense, etc.). I choose vocabulary book ahead of time for explicit instruction. Choices can be based on:

- *Comprehension: what words do they need to know to understand the important parts of the book? (i.e. if the book is set in the country meaning farmland and most of your students only know country as the US or Mexico)*
- *Thematic: what words are central to the theme of the book/unit? (e.g. if the unit is on adaptations— hibernation, environment, structure, etc.)*
- *Grammar: what set of words from the text are conducive to teaching explicit grammar instruction? (i.e. there are multiple adjectives used in the book)*

I make sure any list I create of the words has only proper nouns capitalized.

Review each word with students. Practice the pronunciation of any difficult words using dramatic enunciation to show how mouth is formed, etc.

Language Objective:

Classify science terms. (2.1.1.I)

Give instructions for Do you Know?.

1. First read the word.
2. Next, decide how well you know the word.
3. Rewrite the word in the right row.
4. Compare your word sort with a neighbor.

Stress that the last step is very important and model how it is done with talking, questions, explaining your thinking etc.

Share out with whole group. Have students identify their most unknown words, most known words, make educated guesses about words, etc.

The Knowledge Sort is a good assessment for you to know the degree to which students will need support for vocabulary development. You should allow them to struggle with/use their own language to explain what they do know of the words you choose. Giving them "definitions" is meaningless for internalizing understanding of new words. Here they are metacognating--exploring what they think they know and don't know. The expectation for them to know the meaning of these words is not yet.

Introduce Book:

Have students predict what the book will be about using some of the vocabulary. Have a few students report what their neighbor said IF they used a vocabulary word.

Identify Purpose for Reading:

Post purpose: Listen for each vocabulary word and touch your ear when you hear it.

The purpose of this purpose is to have them notice the vocabulary terms in context of the story. It is not for them to understand the story.

While reading, remind them of the purpose. Have them make predictions and confirm them to a partner. Use the vocabulary in your questions.

Review:

After reading review the vocabulary and connect it to the book. Get them to talk about the meaning of the words in an authentic way. Point out when someone "defines" a word.

LESSON 2:

Building Background:

Ask students to tell a partner an interesting thing they remember from the book yesterday. Then have them recall one animal and its enemy and describe to a partner how it defended itself.

Each time you start back with a lesson you need to access their background knowledge.

Vocabulary:

Practice pronunciation of vocabulary again. Go back to the words they know least and ask if anyone has learned anything more about it.

Through: Students work through the content and language of the lesson.

Identify Purpose for Reading:

Post purpose: Identify the main idea of the text and one detail.

The second time you read the text, the purpose should be main idea and then go more narrow with each reading. You read the story multiple times so the language of the text becomes their language. Setting a purpose for each read, revitalizes their listening skills. Set a purpose for reading is in the LA core K-12.

While reading the book, remind students of the purpose.

Language Objective:

Summarize the categories of survival traits of different species. (Demonstrate understanding of academic content language in short summaries. 3.2.2.A)

When finished, have students tell a neighbor the main idea and one detail. Do interactive writing about the main idea of the book using prompt: "One thing all animals have in common is survival. Some of the ways animals survive their enemies are..."

The purposes of using a prompt are: 1) students are tested on their ability to finish a sentence given to them, 2) a starting prompt may help get the ball rolling for hesitant students and 3) at times when what you want the interactive writing to say is predetermined, it is more honest to just start it the way you want.

Students go back and in partners complete the graphic organizer with information they remember from the reading.

Review:

Find two or more vocabulary words that you think are synonyms and explain your thinking to a neighbor. Go back to any least known words and have students create meanings for them.

LESSON 3:

Building Background:

Ask students to tell a partner how a species changes their environment, changes their structure or changes their behavior for protection from a predator. Have students share out what their neighbor said.

Sharing out what their neighbor says makes them actually listen to their neighbor. Also, it gives them a second bit of language to practice production of.

Language Objective:

Read your description to a partner to match with the right vocabulary term. (Demonstrate comprehension of simple content language by matching pictures and words.3.2.2.P)

Vocabulary:

Play Find Your Partner matching words to meanings.

The key to FYP is that students hold the card to their chest and read it to others until they find their partner. This forces language production practice.

Reading:

Post Purpose: Identify the details of how species protect themselves.

While you read, students work together to fill out the graphic organizer.

Review:

Surprise Share with Outcome Sentences:

Choose a student to complete each sentence prompt—

- The most interesting thing I've learned this far is...
- Something I want to know is...
- I don't understand why...
- The best way to learn vocabulary is...
- In ELD class, I like it when...

These prompts help them metacognate about their learning.

LESSON 4:

Vocabulary:

Students sort and classify vocabulary words. Then they compare their sorts to their partners and discuss the differences.

It is important to stress that there is no right answer when we sort and classify words, it is the discussion that is most critical. This can be done whole group if necessary with students telling partners and then justifying their decisions. You can use word sort illustrations for conceptual support.

Beyond: Students apply their learning in meaningful ways.

This is where the language is used as their own and then becomes a springboard for more language production.

Lesson Comprehension:

Review the methods of survival from the species in the book. Emphasize whether the tactic is environmental, behavioral or structural. You may even want to create a poster for each.

True/False/False Game: Pass out one of the species from the book to partners. (This could be a mini research project if students find a different animal's survival traits from the net or trade books, etc.) Students write examples/explanations to describe the survival of their species. They must describe the survival traits for each area, but the students will make up two of them. (Use prompts if necessary.)

I am a _____. To escape my predator I:
 (environment) _____
 (structure) _____
 (behavior) _____

When students are done, use their writing to play the TFF Game. The class guesses which statement is true.

Language Objective:

Write a small narrative text using cause and effect text structure. (Write a simple narrative or expository text. 4.2.2.1)

Personalizing Content and Language:

Using all the information they've learned on survival of the species, students describe how the human species can survive in a variety of scenarios. You can give partners a context and they do a role play to explain how they would survive (i.e. If you're in the forest and a bear comes to me, I freeze (behavior). If I'm going to be mountain climbing where snakes live, I wear thick, tall boots (structural). If I am swimming and a jelly fish wants to zap me, I get out of the ocean (environment).) Giving them the "If _____, then _____." prompts works on cause/effect.

Review:

Have students review their Do You Know? Sort from the first day. Have them draw arrows for any words that are now in another category. Have them explain/describe those words to a neighbor.

This is an explicit way to show students their learning progress. For students who struggle, it is important and efficacious to see evidence of learning.