Unit 4/Week 3

Title: A Tree Is Growing

Suggested Time: 5 days (45 minutes per day)

Common Core ELA Standards: RI.3.1, RI.3.2, RI.3.3, RI.3.4, RI.3.5, RI.3.7; W.3.2, W.3.4; SL.3.1, SL.3.2; L.3.1, L.3.2

Teacher Instructions

*Refer to the Introduction for further details.*

**Before Teaching**

1. Read the Big Ideas and Key Understandings and the Synopsis. Please do **not** read this to the students. This is a description for teachers about the big ideas and key understanding that students should take away **after** completing this task.

Big Ideas and Key Understandings

Trees are made up of many important parts that grow and change.

Synopsis

This informational text describes the ways in which trees are made up of many important parts that grow and change. A tree’s leaves help the tree to grow by making food for the tree. The tree’s roots grow underground to hold the tree in place and to bring water to it. The outer layer of bark does not grow, but just under the bark is a layer called the cambium. As the cambium grows, the tree gets wider. Flowers grow on trees in the spring, and parts of the flowers become seeds. In cooler climates, trees stop growing in the autumn. Many trees have leaves that change color and fall to the ground. Trees rest in the winter, but begin the cycle over again in the spring.

1. Read entire main selection text, keeping in mind the Big Ideas and Key Understandings.
2. Re-read the main selection text while noting the stopping points for the Text Dependent Questions and teaching Vocabulary.

**During Teaching**

1. Students read the entire main selection text independently.
2. Teacher reads the main selection text aloud with students following along. (Depending on how complex the text is and the amount of support needed by students, the teacher may choose to reverse the order of steps 1 and 2.)
3. Students and teacher re-read the text while stopping to respond to and discuss the questions and returning to the text. A variety of methods can be used to structure the reading and discussion (i.e.: whole class discussion, think-pair-share, independent written response, group work, etc.)

Text Dependent Questions

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| **Text-dependent Questions** | **Evidence-based Answers** |
| Why does the author tell us a big tree may seem like it has always been big? (Pg. 74) | The author is calling our attention to the idea that a tree grows and changes. This is the main idea of the selection. |
| Reread page 76. What is the important information on this page? | Leaves make a special kind of sugar that the tree uses for food. |
| Use the information on page 77 to define tree sap. Why is tree sap important? | Tree sap is juice inside a tree that is mixed with the sugary water made in leaves. Sap can be found in the trunk and branches of a tree.  The sap carries the sugary water, which is food for the tree, throughout the tree.  Some types of sap can have a strong smell, which protects the tree from insects. |
| Look at the illustration along the right-hand side of page 78.  What do you learn about the Baobob tree from this illustration and caption? | The Baobob tree is able to survive during times where there is plenty of water and during dry times.  The tree at the top is storing extra water. Its trunk is round. At this time, the tree is able to store plenty of water. The tree at the bottom is thinner. This must be a dry time. The tree has used the water stored in its trunk. |
| Look at the diagram on page 79. Use information from the text on page 79 to describe what is happening in this diagram. | This diagram shows water traveling up a branch and to the leaves of a tree. The text says that water moves up as if it is being sucked through a straw. |
| What are the main jobs of a tree’s roots? (Pg. 81) | The tree’s roots hold the tree in place and absorb water from the soil to carry to the tree. The tree’s roots absorb minerals that help the tree to grow. These minerals are dissolved in the water. |
| How do trees benefit from mushrooms? How do mushrooms benefit from trees? (Pg. 81) | Mushrooms help the tree to get minerals. A tree’s roots bring water to mushrooms. |
| Look at the diagram on page 84. Use the diagram and the text on pages 84 and 85 to define cambium. | The cambium is a layer of growing bark. It is located underneath the outer bark and the phloem. |
| Why does the author show us two trees along the left-hand side of page 84? How are they the same? Different? | In cooler climates, the cambium grows only in the spring and summer. The top illustration shows that this results in growth rings that can be used to find the age of a tree. The bottom illustration shows a tree in the tropical rain forest. In tropical rain forests, the cambium grows all year long. Therefore, there are not growth rings visible within these trees. |
| Review the illustrations on pages 86-87. On page 86, the author writes “If you find a mark on a tree trunk today, that mark would stay at the same height for as long as the tree lives.” What fact about the growth of a tree is the author trying to make clear? | A tree grows taller only when the tips of its top branches grow upward. |
| What is pollen? Why is pollen important? (Caption on pg. 88) | Pollen is a powder that is found on a flower. When pollen from one flower is spread to certain parts of another flower, seeds can grow. |
| Look at the illustration on page 90. Many acorns have fallen from the oak tree in this picture. Why does this oak tree produce so many seeds? | Most of these seeds will not grow into new trees. Most of these acorns will be eaten, crushed, will rot, or they will remain in a place where they cannot take root. Only some of these seeds will be carried away and dropped or buried by animals to grow in new places. |
| When and why do leaves change color? (Pg. 92) | Leaves change color in autumn. They change color because leaves stop making sugary food and lose their green color. When they lose their green color, you can see the red, brown, yellow, and orange colors that are also in the leaves. |
| How are trees that grow in cool climates different from trees that grow in warmer climates? (Pgs. 84 and 92) | Trees that grow in cool climates stop growing in autumn. They lose their leaves and rest in the winter. Trees that grow in places such as the tropical rain forest grow all year long. They do not lose their leaves or have a time of rest. |
| What idea does the author leave us with on page 94? How does this fit with the rest of the text? | Trees rest in winter. They may appear to be dead, but in the spring the cycle of growth described in this selection will begin again. |

Vocabulary

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|  | **KEY WORDS ESSENTIAL TO UNDERSTANDING** | **WORDS WORTH KNOWING**  General teaching suggestions are provided in the Introduction |
| **TEACHER PROVIDES DEFINITION**  not enough contextual clues provided in the text | Page 74 - buds  Page 77 - throughout  Page 81 - absorb  Page 84 - climate, rings, tropical  Page 86 - branches  Page 91 - coverings | Page 77 - oozes  Page 78 - sugary  Page 80 - columns  Page 81 - bicolored  Page 88 - attracted, brush  Page 89 - dangling, clumps  Page 91 - sprout  Page 94 - bare, rustling |
| **STUDENTS FIGURE OUT THE MEANING**  sufficient context clues are provided in the text | Page 78 - store  Page 79 - passages  Page 81 - dissolve  Page 83 - cork, spines |  |

Culminating Tasks

* Re-Read, Think, Discuss, Write
* *(Provide students with a diagram of a tree.) Label all of the tree’s important parts. Then, look over your diagram. For each tree part, explain 1) what makes this part essential to the tree as a whole and 2) how this part grows and changes as the tree grows and changes.*

Answer:

Leaves: These begin as buds and unfold into leaves during the spring. Leaves make sugar, which is used by the tree as food.

Roots: The roots spread out far underground as the tree grows; a little farther than the tree’s branches. The roots hold the tree in place and absorb water and carry it into the tree.

Flowers: These grow on trees in the spring; flowers attract animals that help to spread pollen. The mixing of pollen in parts of the flower allows a seed to grow, and seeds grow new plants.

Bark or cambium: Bark is the tree’s skin and protects it. As the tree grows, it adds one new layer or ring of bark each year. This means that not only does the tree grow up (taller), but it also grows out (wider).

Trunk and branches: The trunk and branches are passageways that carry water and minerals to all parts of the tree. The top branches grow upward as the trees grows, and the low branches may fall off.

Additional Activities

* *This text includes a wide variety of text and graphic features. Text features include captions and words in italics. Graphic features include illustrations and diagrams. With a partner, look back through the selection. Create a t-chart. One side will be labeled text features, and the other side will be labeled graphic features. Note the types of text and graphic features you find. Then, discuss the kinds of extra information the text and graphic features add. How do the text and graphic features help you better understand the text?*

Answer: The graphic features help you clearly picture what the author is explaining with words. Also, all of the illustrations and caption clarify the information presented in the main text and also add other interesting facts and bits of information. For example, on page 78, there are pictures and explanations of the baobab tree storing water in its trunk. The illustration compares what a baobab tree looks like in both the wet season and the dry season.

* *How do trees adapt to the climate?*

Answer: In colder climates trees become dormant in the winter months. Many trees stop making food and lose their leaves. In warmer climates the tree grows all year long. It is hard to tell how old these trees are because there are no growth rings. In places with a dry season, some trees, like the Baobob tree, store water in the lower part of the trunk and use this water until the rainy season starts. In swamps and wetlands, roots can grow down from branches, forming columns of roots that support the tree.

Note to Teacher

* This text contains an abundance of Tier III domain-specific vocabulary. It will be important for students to understand these words, in addition to the Tier II academic vocabulary words presented in the vocabulary chart.
* Many specific examples of flora (plants) and fauna (animals) are included in the diagrams of this informational text. Students could choose a plant or animal pictured in the text and complete a short research project on it. Additionally, teachers could make numerous connections to science including experiments on the needs of plants, plant parts, and plant functions.

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**“A Tree Is Growing”**

1. Why does the author tell us a big tree may seem like it has always been big? (Pg. 74)
2. Reread page 76. What is the important information on this page?
3. Use the information on page 77 to define tree sap. Why is tree sap important?
4. Look at the illustration along the right-hand side of page 78. What do you learn about the Baobob tree from this illustration and caption?
5. Look at the diagram on page 79. Use information from the text on page 79 to describe what is happening in this diagram.
6. What are the main jobs of a tree’s roots? (Pg. 81)
7. How do trees benefit from mushrooms? How do mushrooms benefit from trees? (Pg. 81)
8. Look at the diagram on page 84. Use the diagram and the text on pages 84 and 85 to define cambium.
9. Why does the author show us two trees along the left-hand side of page 84? How are they the same? Different?
10. Review the illustrations on pages 86-87. On page 86, the author writes “If you find a mark on a tree trunk today, that mark would stay at the same height for as long as the tree lives.” What fact about the growth of a tree is the author trying to make clear?
11. What is pollen? Why is pollen important? (Caption on pg. 88)
12. Look at the illustration on page 90. Many acorns have fallen from the oak tree in this picture. Why does this oak tree produce so many seeds?
13. When and why do leaves change color? (Pg. 92)
14. How are trees that grow in cool climates different from trees that grow in warmer climates? (Pgs. 84 and 92)
15. What idea does the author leave us with on page 94? How does this fit with the rest of the text?

Supports for English Language Learners (ELLs) to use with Basal Alignment Project Lessons

When teaching any lesson, it is important to make sure you are including supports to help all students. We have prepared some examples of different types of supports that you can use in conjunction with our Basal Alignment Project Lessons to help support your ELLs. They are grouped by when they would best fit in a lesson. While these supports reflect research in how to support ELLs, these activities can help ALL students engage more deeply with these lessons. Note that some strategies should be used at multiple points within a lesson; we’ll point these out. It is also important to understand that these scaffolds represent options for teachers to select based on students’ needs; it is not the intention that teachers should do *all* of these things at every lesson.

**Before the reading:**

* Read passages, sing songs, watch videos, view photographs, discuss topics (e.g., using the [four corners strategy](http://www.theteachertoolkit.com/index.php/tool/four-corners)), or research topics that help provide context for what your students will be reading. This is especially true if the setting (e.g., 18th Century England) or topic (e.g., boats) is one that is unfamiliar to the students.
* Provide instruction, using multiple modalities, on selected vocabulary words that are *central to understanding the text*. When looking at the lesson plan, you should note the Tier 2 words, particularly those words with high conceptual complexity (i.e., they are difficult to visualize, learn from context clues, or are abstract), and consider introducing them ahead of reading. For more information on selecting such words, go [here](https://achievethecore.org/page/3167/selecting-and-using-academic-vocabulary-in-instruction). **You should plan to continue to reinforce these words, and additional vocabulary, in the context of reading and working with the text. (See additional activities in the During Reading and After Reading sections.)**

**Examples of Activities:**

* Provide students with the definition of the words and then have students work together to create [Frayer models](http://www.theteachertoolkit.com/index.php/tool/frayer-model) or other kinds of word maps for the words.
* When a word contains a prefix or suffix that has been introduced before, highlight how the word part can be used to help determine word meaning.
* Keep a word wall or word bank where these new words can be added and that students can access later.
* Have students create visual glossaries for whenever they encounter new words. Then have your students add these words to their visual glossaries.
* Create pictures using the word. These can even be added to your word wall!
* Create lists of synonyms and antonyms for the word.
* Have students practice using the words in conversation. For newcomers, consider providing them with [sentence frames](https://achievethecore.org/page/3159/ell-supports-for-writing-and-discussion) to ensure they can participate in the conversation.
  + Practice spelling the words using different spelling practice strategies and decoding strategies. Students could take turns spelling with a partner.
* Use graphic organizers to help introduce content.

**Examples of Activities:**

* Have students fill in a [KWL chart](http://www.nea.org/tools/k-w-l-know-want-to-know-learned.html) about what they will be reading about.
* Have students research setting or topic using a pre-approved website and fill in a chart about it. You could even have students work in groups where each group is assigned part of the topic.
* Have students fill in a bubble map where they write down anything that they find interesting about the topic while watching a video or reading a short passage about the topic. Then students can discuss why they picked the information.

**During reading:**

* Read the text aloud first so that ELLs can hear the passage read by a fluent reader before working with the text themselves.
* Allow ELLs to collaborate in their home languages to process content before participating in whole class discussions in English. Consider giving them the discussion questions to look over in advance (perhaps during the first read) and having them work with a partner to prepare.
* Encourage students to create sketch-notes or to storyboard the passage when they are reading it individually or with a partner. This will help show if they understand what they are reading as they are reading it.
* Ask questions related to the who, what, when, why, and how of the passage. For students that may need a little more help, provide them with [sentence stems](https://achievethecore.org/page/3159/ell-supports-for-writing-and-discussion).
* Continue to draw attention to and discuss the words that you introduced before the reading.

**Examples of Activities:**

* Have students include the example from the text in their glossary that they created.
* Create or find pictures that represent how the word was used in the passage.
* Practice creating sentences using the word in the way it was using in the passage.
* Have students discuss the author’s word choice.
* Use graphic organizers to help organize content and thinking.

**Examples of Activities:**

* Have students fill in a chart to keep track of their 5ws while they read to help them summarize later and figure out the central idea of a passage.
* It may again be beneficial to have somewhere for students to store new words that they encounter while reading the text. Students could use a chart to keep track of these new words and their meanings as they read.
* If you had students fill in a KWL, have them fill in the “L” section as they read the passage.
* Utilize any illustrations or text features that come with the story or passage to better understand the reading.
* Compare/contrast the passage with what the illustrations convey about the passage. Have students consider if the illustrations look the way they visualized the passage in their own minds or if the passage matches their predictions based on the illustrations.
* Identify any text features such as captions and discuss how they contribute to meaning.

**After reading:**

* Present directions for any post-reading assignments orally and visually; repeat often; and ask English Language Learners to rephrase.
* Allow ELLs to use English language that is still under development. Students should not be scored lower because of incorrect spelling or grammar (unless the goal of the assignment is to assess spelling or grammar skills specifically). When grading, be sure to focus on scoring your students only for the objective(s) that were shared with students.
* Scaffold questions for discussions so that questioning sequences include a mix of factual and inferential questions and a mix of shorter and more extended responses. Questions should build on each other and toward inferential and higher-order-thinking questions. There are not many factual questions already listed in the lesson instructions, so you will need to build some in as you see fit. More information on this strategy can be found [here](https://achievethecore.org/aligned/creating-sequencing-text-dependent-questions-support-english-language-learners/).
* Reinforce new vocabulary using multiple modalities

**Examples of activities:**

* Using the words that you had students work with before reading, have students write sentences in reference to the passage that you just finished reading.
* Require students to include the words introduced before reading in the culminating writing task.
* For newcomers, print out pictures that represent the words that you focused on and have students match the words to the pictures.
* Based on different features of the words, have the students sort them into different categories and explain their choices. For example, the students could sort the words by prefixes, suffixes, connotation, etc.
* After reading the passage, continue to examine important sentences (1–2) in the text that contribute to the overall meaning of the text. Guide students to break apart these sentences, analyze different elements, and determine meaning. More information on how to do this, including models of sentence deconstruction, can be found [here](https://achievethecore.org/page/3160/juicy-sentence-protocol).
* Provide differentiated scaffolds for writing assignments based on students’ English language proficiency levels.

**Examples of Activities:**

* For all students, go over the prompt in detail, making sure to break down what the prompt means before having the students get to work. Then have the students explain the directions back to you.
* Have students create an evidence tracking chart during reading, then direct them to look back over their evidence chart and work with a group to see if their evidence matches what the rest of the class wrote down. If some of the chart does not match, students should have a discussion about why.
* For students who need more support, model the proper writing format for your students and provide them with a properly formatted example for reference.
* For newcomers, you may consider creating sentence or paragraph frames to help them to write out their ideas.
* To further discussion about the passage, have students create their own who, what, when, where, why, and how questions related to the passage to ask each other and have students pair up and practice asking each other the questions. If available, pair students of the same home language to support the use of language still under development.