

Expert Pack: Saving the Tropical Rainforests

Submitted by: Whitman School, Milwaukee Public Schools

Grade: 3

Date: February 2016

Topic/Subject Saving the Tropical Rainforest
<p style="text-align: center;">Texts/Resources</p> <p>Book(s)</p> <ol style="list-style-type: none">1. <i>The Rainforest Grew All Around</i> <p>Articles</p> <ol style="list-style-type: none">1. "35 Tropical Rainforest Facts"2. "Amazon Rainforest Deforestation Shows Positive Trends"3. "Can the Amazon be Saved?"4. "Kids! 10 Easy Ways YOU Can Help Save the Rainforests"5. "The Mysterious Troll-Haired Insect Discovered in South American Rainforest"6. "Why Save the Rainforest?" <p>Video</p> <ol style="list-style-type: none">7. "The World of Plants: Plants and People" (Discovery Ed) <p>Each expert pack contains a variety of selections grouped to create as coherent and gradual a learning process for students as possible, generally beginning with lower levels as measured by quantitative and qualitative measures, and moving to more complex levels in the latter selections. This graduated approach helps support students' ability to read the next selection and to become 'experts' on the topic they are reading about. <i>Refer to annotated bibliography on the following pages for the suggested sequence of readings.</i></p>
<p style="text-align: center;">Rationale and suggested sequence for reading:</p> <p>The article, "Mysterious Troll-Haired Insect Discovered in South American Rainforest," is the first text in this set to capture student's attention. The read aloud, <u>The Rainforest Grew All Around</u>, introduces the characteristics of the rainforest, including animals, plants, ecosystem and habitats. The next resource is an article that lists 35 facts about the rainforest, which could be presented as, "A Fact of the Day," throughout the unit and displayed in the classroom as public notes. The next resource is a video entitled, "The World of Plants: Plants and People," which depicts how the resources found in the rainforest contribute to human life. The materials shift focus to issues of diminishing rainforests. The article, "Can the Rainforest be Saved?" raises awareness of the disappearance of rainforests due to deforestation. Next, the article, "Why Save the Rainforest?" explains how the rainforest touches all of our lives. The article, "Amazon Rainforest Deforestation Shows Positive Trends" discusses the positive effects of the establishment of the Amazon Fund by the Brazilian Government. The final resource is an article titled, "Kids! 10 Easy Ways YOU can Help Save Rainforests." This article lists 10 kid-friendly ways students can help the cause. The additional resources listed may be used as a teacher's guide including class and school projects to protect and defend the rainforest. They include:, "Protect an Acre," "Start a Rainforest Student Group," " Make a Difference Through Service Learning, "along with teaching materials and information about an organization started by two 9- year-old girls called, "Kids Saving the Rainforest."</p>
<p>The Common Core Shifts for ELA/Literacy:</p> <ol style="list-style-type: none">1. Regular practice with complex text and its academic language2. Reading, writing and speaking grounded in evidence from text, both literary and informational3. <i>Building knowledge through content-rich nonfiction</i> <p>Though use of these expert packs will enhance student proficiency with most or all of the Common Core Standards, they focus primarily on Shift 3, and the highlighted portions of the standards below.</p>

College and Career Readiness Anchor Standards for Reading Literary and/or Informational Texts (*the darkened sections of the standards are the focus of the Expert Pack learning for students*):

1. **Read closely to determine what the text says explicitly and to make logical inferences from it;** cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. **Determine central ideas or themes of a text and analyze their development;** summarize the key supporting details and ideas.
10. **Read and comprehend complex literary and informational texts independently and proficiently**

Annotated Bibliography
and suggested sequence for reading

N/A “Mysterious Troll-Haired Insect Discovered in South American Rainforest”

Author: Meera Dolasia: DOGO News

Genre: Nonfiction article

Length: 2 pages

Synopsis: This brief nonfiction article explores a recently discovered rainforest insect that has a fascinating adaptation to distract its predators and get away unharmed.

Citation: Dolasia, M. (2013, November 30). Mysterious troll-haired insect discovered in South American rainforest. Retrieved May 1, 2015, from <http://www.dogonews.com/2013/11/30/mysterious-troll-haired-insect-discovered-in-south-american-rainforest>

Cost/Access: \$0.00

Recommended Student Activities: Quiz Maker

880L *The Rainforest Grew All Around*

Author: Susan K. Mitchell

Genre: Nonfiction picture book

Length: 32 pages

Synopsis: Large, colorful paintings depict close-up views of plants and animals in the rainforest and the main text revises the lyrics of the song, "The Green Grass Grew All Around."

Citation: Mitchell, S., & McLennan, C. (2007). *The rainforest grew all around*. Mount Pleasant, SC: Sylvan Dell Pub.

Cost/Access: \$8.95

Recommended Student Activities: Quiz Maker

N/A “35 Facts on Tropical Rainforest”

Author: Unknown

Genre: Informational text

Length: 3 pages

Synopsis: A list of 35 little known facts about the rainforest including facts about this unique habitat and the plants and animal that live there, as well as, many important resources we use that come from the rainforest.

Citation: 35 facts of tropical rainforest - Conserve Energy Future. (2014, March 7). Retrieved May 1, 2015, from <http://www.conserve-energy-future.com/various-tropical-rainforest-facts.php>

Cost/Access: \$0.00

Recommended Student Activities: Pop Quiz

N/A “The World of Plants: Plants and People”

Author: John Colgren and Paul Fuqua

Genre: Video

Length: 12:51 minutes

Synopsis: Depicts ways in which the rainforest contributes to human life including providing food, medicines, raw materials, oxygen and a foundation for most ecosystems.

Citation: *The world of plants: Plants and people* [Video]. (2000). Discovery Education.

Cost/Access: \$0.00 (for Discovery Education subscribers)

Recommended Student Activities: Quiz Maker

950L “Can the Amazon be Saved?”

Author: Unknown

Genre: Informational text

Length: 3 pages

Synopsis: This is an article which highlights the disappearance of the rainforest due to deforestation and emphasizes why this is a cause for concern. Article includes photos, maps and other graphic organizers that make it especially kid friendly.

Citation: Can the Amazon be Saved? ReadWorks.org | The Solution to Reading Comprehension. (2012, January 1). Retrieved May 1, 2015, from

<https://www.readworks.org/article/Can-the-Amazon-Be-Saved/49b2156c-83b3-4394-91c7-16313983409e#!articleTab:content/>

Cost/Access: \$0.00

Recommended Student Activities: Picture of Knowledge

N/A “Why Save the Rain Forest?”

Author: Donald Silver

Genre: Informational text

Length: 1 page

Synopsis: This article is a summary of the book by Donald Silver, *Why Save the Rain Forest?* and explains how the rainforests touch everyone's life. It gives a brief look into the products that come from the rainforests and why we should be proactive in continuing to save rainforests from disappearing.

Citation: Silver, D. (2000, January 1). Why save the rainforest? Retrieved from <http://www.eduplace.com/kids/sla/5/rainforest.html>

Cost/Access: \$0.00

Recommended Student Activities: Picture of Knowledge

N/A “Amazon Rainforest Deforestation Shows Positive Trends”

Author: Meera Dolasia

Genre: Informational text

Length: 2 pages

Synopsis: The article includes text features including maps and graphs that report the decrease in deforestation of the Amazon Rainforest since the formation of the *Amazon Fund* established by the Brazilian Government to reward individuals and groups who actively help to preserve the Amazon Rainforest.

Citation: Dolasia, M. (2012, August 8). Amazon rainforest deforestation shows positive trends. Retrieved May 3, 2015, from <http://www.dogonews.com/2012/8/8/amazon-rainforest-deforestation-shows-positive-trends>

Cost/Access: \$0.00

Recommended Student Activities: Quiz Maker

N/A “Kids! 10 Easy Ways YOU Can Save Rainforests”

Author: Unknown

Genre: Informational text

Length: 1 page

Synopsis: A list of ten ways kids can help preserve the rainforests.

Citation: Rainforest Alliance: Kids! 10 easy ways **you** can help save rainforests. (n.d.). Retrieved May 3, 2015, from http://www.rainforest-alliance.org/education/documents/kids_easy_ways.pdf

Cost/Access: \$0.00

Recommended Student Activities: Picture of Knowledge

Additional Resources

Kids. (n.d.). Retrieved May 3, 2015, from <http://kidssavingtherainforest.org/kids/>

Protect an Acre. (n.d.). Retrieved May 3, 2015, from <http://www.rainforestfoundation.org/protect-acre>

Start a Rainforest Student Group. (n.d.). Retrieved May 3, 2015, from <http://www.rainforestfoundation.org/start-rainforest-student-group>

Make a Difference Through Service Learning. (n.d.). Retrieved May 3, 2015, from <http://www.rainforestfoundation.org/make-difference-through-service-learning>

Africa-Explore the Regions-Rainforests. (n.d.) Retrieved May 21, 2015 from http://www.pbs.org/wnet/africa/explore/rainforest/rainforest_overview.html

Journey into Amazonia. (n.d.) Retrieved May 21, 2015 from <http://www.pbs.org/journeyintoamazonia/index.html>

Seaworld Parks and Entertainment Tropical Forests. (n.d.) Retrieved May 21, 2015 from <http://seaworld.org/en/animal-info/ecosystem-infobooks/tropical-forests/>

Supports for Struggling Students

By design, the **gradation of complexity** within each Expert Pack is a technique that provides struggling readers the opportunity to read more complex texts. Listed below are other measures of support that can be used when necessary.

- Provide a brief **student-friendly glossary** of some of the academic vocabulary (tier 2) and domain vocabulary (tier 3) essential to understanding the text
- Download the Wordsmyth widget to classroom computers/tablets for students to access student-friendly definitions for unknown words. <http://www.wordsmyth.net/?mode=widget>
- Provide brief **student friendly explanations** of necessary background knowledge
- Include **pictures or videos** related to the topic within and in addition to the set of resources in the pack
- Select a small number of texts to **read aloud** with some discussion about vocabulary work and background knowledge
- Provide **audio recordings** of the texts being read by a strong reader (teacher, parent, etc.)
- **Chunk the text** and provide brief questions for each chunk of text to be answered *before* students go on to the next chunk of text
- Pre-reading activities that focus on the **structure and graphic elements** of the text
- Provide **volunteer helpers** from the school community during independent reading time.

Why Text Sets Support English Language Learners

Those acquiring English as a second language have to learn many words in English to catch up with their English-only peers. Vocabulary builds at a much quicker pace when reading a set of connected texts. Text sets are an adaptable resource perfect for building knowledge and vocabulary. Student use of text sets can vary in terms of independence or teacher supports based on the individual needs of the students in the room. Activities found within the text set resources reflect several best practices for English Language Learner instruction including:

- Providing brief, engaging texts that provide a high volume of reading on a topic.
- Providing web-based resources and/or videos that are tied to the content of the texts students are reading.
- Providing opportunities for students to learn new vocabulary through the use of student-friendly definitions in resource-specific glossaries.
- Allowing for options to reinforce newly learned vocabulary and/or content through graphic organizers.
- Providing opportunities for students to reinforce new vocabulary through multi-modal activities including written work, group discussion, viewing visual content, and reading texts that feature the vocabulary.

Teachers of ELLs may use the protocols on the following pages to provide additional support to students who are struggling to access the content within text sets because they are new to English.

ELL Text Set Protocol Grades 3-12

The goal of text sets is to help students build knowledge through a volume of independent reading, and it is important that educators provide scaffolds to allow English Language Learners to be successful in engaging meaningfully with the texts, even as students are still developing English language skills. The protocol below can be used for teaching with text set resources as a full class. Students can also be trained on the protocol so that they can utilize text sets in small groups or partnerships as a resource for independent or reciprocal reading and study.

Please note that this protocol includes options for teachers. Individual decisions should be made considering the needs of the students and the demands of the content, keeping in mind that the goal of each scaffold is to allow students to meaningfully access the text and move toward independent, knowledge-building reading.

Step one: Build knowledge and vocabulary.

Introduce students to the overall topic/content of the text set, including knowledge demands needed to engage in the content, and domain-specific vocabulary necessary for comprehension. This should be done prior to engaging with the texts themselves; time allotted to this activity should reflect student needs (anywhere from 5 minutes prior to reading, to a full day's lesson is appropriate).

Options for this step include:

- Engage students in reading and discussing auxiliary texts (of lesser complexity) and resources (illustrations, photographs, video clips) on the topic of the text set.
- Pre-teach a few key content-specific terms prior to students engaging with a text set. (Ideas for text-focused vocabulary instruction can be found [here](#).)
- Provide the student-friendly glossary included in the text set prior to reading each text.
- When possible, allow students to read texts in their home language about the topic under study.

Step two: Read text orally.

Focusing on one resource at a time, allow students to listen to a fluent read of the resource, while following along with their own copy of the text.

Options for this step include:

- Have a fluent reader model the first read of a text or resource.
- Have students engage in a buddy/partner read.
- Use recordings of the text to provide additional opportunities to hear expert reading.

Step three: Engage in group discussion about the content.

Allow students time in partnerships or small groups to discuss the content of the resource.

Options for this step include:

- Allow for discussion/conversation (in the students' home language if possible) with a small group of students reading the same text set prior to writing or provide heterogeneous language groupings to talk about content and discuss what students are learning.
- Have students refer to the student-friendly glossary included with each text set to identify meanings for new vocabulary necessary for comprehension.

Step four: Write about what was read.

Options for this step include:

- Use the "Rolling Knowledge Journal" and/or "Rolling Vocabulary Journal" as a shared writing routine/graphic organizer to help to scaffold the writing process and capture student knowledge over time.

- Provide students with several supports to help students engage in writing/drawing about what they read:
 - Use mentor texts about which students can pattern their writing.
 - Allow them to write collaboratively.
 - Show students visual resources as prompts, etc.
 - Provide language supports such as strategically chosen sentence starters.

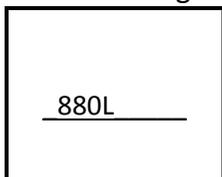
Repeat steps one through four with each resource in the text set as appropriate.

Text Complexity Guide

The Rainforest Grew All Around by Susan K. Mitchell

Quantitative Measure

Go to <http://www.lexile.com/> and enter the title of the text in the Quick Book Search in the upper right of home page. Most texts will have a Lexile measure in this database. You can also copy and paste a selection of text using the Lexile analyzer.



2-3 band	420 -820L
4-5 band	740 -1010L
6-8 band	925 - 1185L
9 -10 band	1050 – 1335L
11 – CCR	1185 - 1385

1. Qualitative Features

Consider the four dimensions of text complexity below. For each dimension*, note specific examples from the text that make it more or less complex.

<p>In this nonfiction picture book, the children learn about the many different inhabitants of the rainforest. The text describes the plants and animals that live in the rainforest through song and includes sidebars that give facts and information about the plant or animal featured on the pages.</p>	<p>The narrative is written using rhyme and song, to the tune of the, “The Green Grass Grows All Around”. Informational sidebars dispersed throughout the text tie the rhyme and interesting facts together. The progression of the text is thoughtful as it begins on the forest floor moving to the understory, canopy and ending at the emergent layer. The colorful illustrations grab the reader’s attention and the text features provide a starting point for all readers.</p>
Meaning/Purpose	Structure
<p>The tone of the text is upbeat and memorable and includes rich Tier 2 (dozing, clusters, pluck) and Tier 3 (lianas, bromeliads, echolocation) vocabulary words. A working definition is included with the Tier 3 (content specific) words.</p>	<p>Students will begin the text with an understanding of the different types of ecosystems and habitats around the world. This unit of study will provide an in-depth look at the rainforest ecosystem and would follow a unit study of one or more other habitats.</p>
Language	Knowledge Demands

2. Reader and Task Considerations

What will challenge students most in this text? What supports can be provided?

- The sidebars will present some challenging vocabulary that would require explicit instruction.
- Close reading strategies may be used to study the new information.
- Rereading, chunking and discussion could support students understanding of sidebar information.
- Encouraging readers make text-to-text connections within the expert pack will deepen understanding of the material.

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Learning Worth Remembering

Cumulative Activities – The following activities should be completed and updated after reading each resource in the set. The purpose of these activities is to capture knowledge building from one resource to the next, and to provide a holistic snapshot of central ideas of the content covered in the expert pack. *It is recommended that students are **required** to complete one of the Cumulative Activities (Rolling Knowledge Journal or Rolling Vocabulary) for this Expert Pack.*

1. Rolling Knowledge Journal

1. Read each selection in the set, one at a time.
2. After you read *each* resource, stop and think what the big learning was. What did you learn that was new *and important* about the topic from *this* resource? Write, draw, or list what you learned from the text about (topic).
3. Then write, draw, or list how this new resource added to what you learned from the last resource(s).

Sample Student Response

Title	Write, Draw, or List	
	New and important learning about the topic	How does this resource add to what I learned already?
1. "Mysterious Troll-Haired Insect Discovered in South American Rainforest"	A unique looking insect is found in the rainforest with amazing adaptations that aid in its survival.	The article focuses on just one of thousands of interesting looking animals that live in the rainforest.
2. <i>The Rainforest Grew All Around</i>	This book has many facts about the plants and animals that live in the rainforest.	The book shows examples of what animals and plants live in the rainforest using colorful pictures and facts.
3. "35 Tropical Rainforest Facts"	The article includes 35 fascinating facts about the rainforest.	Some of the facts helped me to understand what an interesting and diverse place the rainforest is.
4. "The World of Plants: Plants and People"	This video shows how resources that are produced in the rainforest are used in many different ways, including important medicines.	This video shows many more reasons why it is important to protect tropical rainforest because of the many valuable resources that are found there.
5. "Can the Rainforest be Saved?"	The article talks about the negative effects of deforestation of the rainforest and how it impacts life as we know it.	The article reminds us that people are responsible for the destruction of the rainforest and it is people who need to take responsibility for stopping the destruction.
6. "Why Save the Rainforest?"	The article focusses on why it is important to save the rainforest and what could result from continued destruction.	The rainforest provides many to the resources used to make things that we enjoy (or use) daily like chocolate, gum, rubber, soap and rope.
7. "Amazon Rainforest Deforestation Shows Positive Trends"	Authorities in parts of the world are taking action to encourage people to stop destroying the rainforest.	There is now hope that people will stop clearing the rainforest for their own use and plants and animals will continue to live and grow there.

8. "Kids! 10 Easy Ways YOU Can Help Save the Rainforests"	The article gives ways that kids can make a difference in the fight to save the rainforest. Things like raising money for organizations that work to conserve rainforests to encouraging adults to use environmentally friendly products.	Throughout the unit we have learned about the ways rainforests impact our lives and the how without them, we would suffer. This article give us hope because there are things even kids can do to help save rainforests.
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2. Rolling Vocabulary: "Sensational Six"

- Read each resource then determine the 6 words from each text that most exemplify the central idea of the text.
- Next use your 6 words to write about the most important idea of the text. You should have as many sentences as you do words.
- Continue this activity with EACH selection in the Expert Pack.
- After reading all the selections in the Expert Pack, go back and review your words.
- Now select the "Sensational Six" words from ALL the word lists.
- Use the "Sensational Six" words to summarize the most important learning from this Expert Pack.

Title	Six Vocabulary Words & Sentences
<p>"Mysterious Troll-Haired Insect Discovered in South American Rainforest"</p> <p>(DOGOnews.com)</p>	<p>Words: ecologists, adorned, distinct, emanate, predators, nimble</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. 60 new creatures found by ecologists on an expedition in South America's Suriname rainforest in 2012. 2. It has a gorgeous gold body adorned with bright orange dots and stripes. 3. But its most distinct feature is its hair that resembles the popular toy dolls. 4. The tufts emanate from the rear of the body. 5. The researcher that captured the tiny insect on camera believes that it (tuft) may be to distract predators into attacking the wrong part of the body. 6. The nimble insect snuck away into the thick vegetation and was not seen again, during the rest of the expedition.
<p>"The Rainforest Grew All Around"</p>	<p>Words: dozing, lianas, fungi, bromeliads, digits, kapok</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. Jaguars spend their days dozing on tree branches and their nights hunting. 2. Thick woody vines called lianas are usually as thick as adult's arm. 3. Ants eat the fungi that grow on the dead leaves. 4. Bromeliads have round clusters of leaves that catch rain and make "little ponds." 5. Their wings are their "hands" and have digits, just like our figures-including the thumb! 6. The wind blows the kapok fluff and the seeds off to make new trees.
<p>"35 Tropical Rainforest Facts"</p>	<p>Words: combating, species, deforestation, underdeveloped, depletion, multinational</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. Many of these plants can be helpful in combating cancer. 2. Less than one percent of the species of plants in the tropical rainforests have been analyzed to determine their value in the world of medicine. 3. Due to large scale deforestation worldwide, only 2.6 million square miles of rainforest remain.

	<ol style="list-style-type: none"> 4. 90% of the world’s forests are in the underdeveloped or developed countries around the world. 5. At the current rate of depletion, it is estimated that 5-10 percent of tropical rainforest species will be lost per decade. 6. Rainforests are constantly being destroyed by multinational logging companies.
<p>“The World of Plants: Plants and People”</p> <p>Discoveryeducation.com</p>	<p>Words: Shaman, chemicals, raw material, fossil fuels, anthropoids, atmosphere</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. A highly respected Shaman, or healer makes the medicine he uses form plants. 2. More than half the medicines we use today come from chemicals found in plants. 3. Lumber is a raw material we get from plants. 4. Fossil fuels include petroleum, coal and natural gas. 5. Scientists have discovered a huge number of different birds, anthropoids, amphibians and other creatures living among and sheltered by the rainforest. 6. Rainforests give off huge amounts of oxygen into the atmosphere.
<p>“Can the Rainforest be Saved?”</p> <p>Readworks.org</p>	<p>Words: Amazon, satellite, biodiversity, greenhouse gases, destruction, solutions</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. The Amazon, in South America, is the largest rain forest in the world. 2. Using the latest satellite technology, researchers discovered that the Amazon is shrinking at about twice that rate. 3. Deforestation reduces the rain forest’s biodiversity, or the variety of plants and animals in a particular area, 4. Greenhouse gases trap the sun’s heat close to Earth. 5. Stopping the destruction of the rain forest is not an easy task. 6. Solutions need to involve the very people who destroy the forest.
<p>“Why Save the Rain Forest?”</p> <p>Eduplace.com</p>	<p>Words: canopy, understory, recycling, evaporates, irrigating, extinct</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. Above, sunlight filters through the canopy of leaves, but you are walking in deep shade. 2. Many animals live up in the canopy, while other creatures are well hidden in the thick foliage of the understory. 3. Rain forests are essential to recycling water. 4. Plants trap water in the soil and then slowly release it into the air, where it evaporates. 5. The water is later used for drinking and irrigating crops. 6. Thousands of rain forest animals become extinct every year.

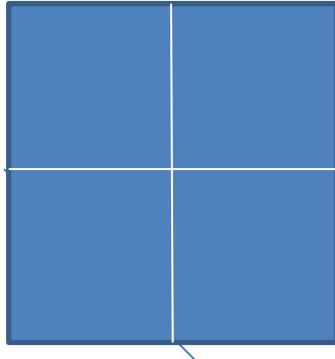
<p>“Amazon Rainforest Deforestation Shows Positive Trends”</p> <p>DOGOnews.com</p>	<p>Words: environmentalists, Amazon Fund, stringent, peak levels, compiled, exotic</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. The authorities in Brazil along with environmentalist took immediate action to save the rainforest. 2. The Amazon Fund was established to reward those who help preserve the rainforest. 3. The Amazon Fund along with more stringent regulations resulted in dramatic results. 4. The Brazilian government announced that deforestation had declined sharply from peak levels. 5. When data from other sources was compiled, the long term trends remain positive. 6. The Amazon Rainforest is home to a large variety of exotic plants and animals.
<p>“Kids! 10 Easy Ways YOU Can Help Save “Rainforests”</p> <p>Rainforest-alliance.org</p>	<p>Words: sustainable, environmentally friendly, conserve, depend, organization, originate</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. Buy products grown in a sustainable way-in a way that is safe for the environment, for wildlife, and for people. 2. Ask your school to buy environmentally friendly paper. 3. Raise money to donate money to an organization that works to conserve rainforests. 4. See how children and families depend on plants and animals in the rainforest. 5. Write a letter to an organization or company that is working to protect the rainforest and tell them they are doing a great job! 6. Think about how many things that we use every day that originate in the rainforest.
<p>Sensational Six</p>	<p>Ecosystem, adapted, biodiversity, conserve, deforestation, sustainable way</p>
<p>Summary:</p>	<p>Tropical Rainforests are a unique ecosystem, home to a wide variety of helpful plants and interesting animals. The four layers of the rainforest create an environment that plants and animals have adapted to in order to survive. The warm and wet conditions in the rainforest create perfect conditions for extensive biodiversity with new species of plants and animals being discovered daily. Many environmental agencies and organization work to convince others of the importance of conserving valuable resources found only in the rainforest. Deforestation, to make room for population growth, has had a negative impact on rainforests, destroying numerous species of plants and animals. Groups such as The Rainforest Alliance are educating people about buying products that can be produced in a sustainable way that does not harm the environment.</p>

Learning Worth Remembering

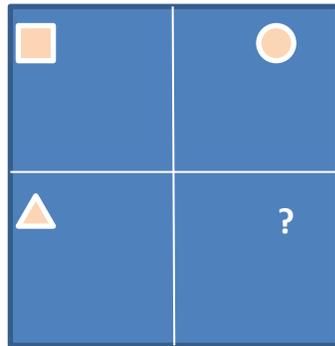
Singular Activities – the following activities can be assigned for each resource in the set. The purpose of these activities is to check for understanding, capture knowledge gained, and provide variety of ways for students to interact with each individual resource. Students may complete some or none of the suggested singular activities for each text. Singular activities should be assigned at the discretion of the teacher.

1. A Picture of Knowledge (“Can the Amazon be Saved?”, Kids! 10 Easy Ways YOU Can Save the Rainforest!, “Why Save the Rain Forest?”, “Kids Saving the Rainforest”)

- Take a piece of paper and fold it two times: once across and once top to bottom so that it is divided into 4 quadrants.



- Draw these shapes in the corner of each quadrant.



1. Square
2. Triangle
3. Circle
4. Question Mark

3. Write!

Square:	What one thing did you read that was interesting to you?
Triangle:	What one thing did you read that taught you something new?
Circle:	What did you read that made you want to learn more?
Question Mark:	What is still confusing to you? What do you still wonder about?

- Find at least one classmate who has read *Rain Forest Inside Out* and talk to each other about what you put in each quadrant.

2. Quiz Maker (Recommended for *The Rainforest Grew All Around*, “Amazon Rainforest Deforestation Shows Positive Trends”, “The World of Plants”)

- Make a list of # questions that would make sure another student understood the information.
- Your classmates should be able to find the answer to the question from the resource.
- Include answers for each question.
- Include the where you can find the answer in the resource.

Question	Answer
1. Ex. What is being done in Brazil to stop deforestation?	The <i>Amazon Fund</i> was set up to reward those who do things to protect the rainforest from further destruction.
2.	
3.	

3. Wonderings (Recommended for “The Mysterious Troll-Haired Insect Discovered in South American Rainforest”)
 On the left, track things you don’t understand about the article. On the right, track things you are still wonder (or wonder now) about this *topic*.

I’m a little confused about:	This made me wonder:

4. Pop Quiz (Recommended for “35 Tropical Rainforest Facts”)

Answer the following questions.

Question	Possible Answer
1. What is the only continent that you would not find a rain forest? Why?	Antarctica because the temperature is way too cold.
2. What is one reason the rain forest is an important ecosystem for human survival?	About ¼ of all natural medicines have been found in rain forests.
3. What impact could the depletion of the rain forest have on animals?	If rain forest destruction continues, between 5-10 % of their species will be extinct every 10 years.
4. What type of living creature is most commonly found in the rain forest?	Insects.

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Grade: 3

Date: February 2016

Expert Pack Glossary

“Mysterious Troll-Haired Insect discovered in the South American Rainforest”

Word	Student-Friendly Definition
ecologists	A scientist who deals with the relationships between groups of living things and their environments. The boy wants to be an ecologist when he grows up because he loves to learn about living things.
adorned	To make something more attractive by adding something beautiful. The Tucan, a bird that lives in the canopy layer of the rainforest, is adorned with brightly colored feathers.
distinct	Different in a way that you can see, hear, feel or smell. Nocturnal animals have a distinct sense of hearing, because it is difficult for them to see their enemies in the darkness of night.
emanate	Something that flows out from a source. Orchids, a sweet smelling flower found in the rainforest, emanate the most lovely scent.
nimble	Able to move quickly, easily and lightly. Spider monkeys are very nimble animals that gracefully swing from tree to tree in the emergent layer of the rainforest.

The Rainforest Grew All Around

Word	Student-Friendly Definition
lianas	Thick woody vines that grow in the rain forest. Lianas provide the perfect rope for rainforest animals to swing on and to climb to the upper layers of the rainforest.
fungi	A group of related plants that have no flowers and live on dead or decaying things. Many of the plants found on the rainforest floor are covered in fungi because of the damp and dark conditions.
Commensalism	A relationship between two organisms in which one benefits and the other is not affected. Tree frogs using plants and trees for protection without causing harm to the plants and trees is an example of commensalism.
digits	Another name for fingers or toes. Tarsiers are small primates that resemble a bat, but ten fingers and uses it second and third digit, or finger, to groom itself.

“35 Tropical Rainforest Facts”

Word	Student-Friendly Definition
combating	Fighting. Many foundations are combating the destruction of the rainforest by corporations who are cutting rainforest trees down for their own use.
species	A group of plants or animals that are similar and can reproduce. New species of plants and animals are being discovered in the rainforest every year.
deforestation	The act or result of cutting down or burning all the trees in an area. Many agree that it is sad when land developers are causing deforestation of the rainforest for their own financial gain.
depletion	To use most or all of something. If deforestation continues, the fascinating inhabitants of the rain forest will face depletion.

“The World of Plants: Plants and People”

Word	Student-Friendly Definition
raw materials	The basic material that can be used to make or create something. The rainforest has an abundance of raw materials that can be used to create many kinds of medicines used to treat cancer.
fossil fuels	A fuel that is formed in the earth from dead plants and animals. Fossil fuels are found in the rainforest and are a valuable resource that can be used as a source of energy.
anthropoids	An animal resembling a human being, such as a gorilla. Anthropoids, like chimpanzees and spider monkeys, can be found in the rainforest.
atmosphere	The whole mass of air that surrounds the Earth. The atmosphere on the canopy layer of the rainforest is the perfect temperature to host many species of plants and animals.

“Can the Amazon be Saved?”

Word	Student-Friendly Definition
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Amazon	A moist broadleaf forest that covers most of South America. Visiting the Amazon Rainforest would be an adventure one would never forget!
satellite	An object that moves around a much larger planet. Researchers have launched satellites into space to study the ecosystem of the rainforest from above.
biodiversity	The existence of many different kinds of plants and animals in an environment. The biodiversity within the Amazon Rainforest results in an abundance of animals and plants inhabiting the area
greenhouse gases	Gases that trap the sun's heat close to the Earth. Carbon dioxide is one of the greenhouse gases that contribute to the greenhouse effect.

“Why Save the Rainforest?”

Word	Student-Friendly Definition
canopy	The tree top home to many plants and animals found in the rainforest. The canopy layer is where you will find the most varied types of plants and animals in the rainforest.
understory	The cool, shady part of the rain forest between the leafy treetops and the ground below. Snakes, frogs parakeets and the largest concentration of insects are just some of the animals that live in the understory layer of the rainforest.
evaporates	To change from liquid to gas. Although some rainforests get in excess of 100 inches of rain a year, it evaporates making for damp conditions that plants and animals need for survival
irrigating	To supply something with water by using artificial means. When irrigation is done properly, the excess water found in the rainforest can be used as drinking water.
extinct	No longer existing. If the destruction of rainforest continues, it will result in the extinction of some of the world's most beautiful plants and animals.

“Amazon Rainforest Deforestation Shows Positive Trends”

Word	Student-Friendly Definition
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environmentalist	A person who works to protect the natural world from pollution and other threats. In order to become an environmentalist, you must study many different plants and animals and the habitats that most suit their needs.
stringent	Very strict or severe. Governmental agencies have written stringent laws forbidding misuse of the resources found in the rainforest.
compiled	To create by gathering things. Much data has been compiled by scientists to show the benefits of preserving the rainforest.
exotic	Very different, strange or unusual. The Harpy eagle, which has a wingspan of over six feet wide, is one of many exotic birds that can be found in the rainforest.

“Kids! 10 Easy Ways YOU Can Help Save Rainforests!”

Word	Student-Friendly Definition
sustainable way	Products grown in a way that is safe for the environment. Producing resources in a sustainable way is an important way that we can help the survival of the rainforest.
depend	To be determined or decided by something. Plants and animals living in the rainforest depend on the warm and humid conditions to thrive.
organization	A company, business or club that is formed for a particular purpose. The Rainforest Alliance is one of several organizations that works to protect the rainforest from further destruction.
originate	To begin to exist: to be produced or created. Many interesting species of plants and animals originated in the ecosystem of the rainforest.

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