

# Save the Rainforest

## Educator's Guide

The Rock by Rock Changemaker projects are a great addition to instruction either as a whole class or small group interdisciplinary unit or as a self-directed learning opportunity. Each project includes character growth, reading, writing, science, social studies and the arts.

At Rock by Rock, we believe that children learn best when they are having fun and are deeply engaged in rigorous, hands-on learning that has real-world application. We also believe that habits and character education are a core part of instruction. By infusing habits with academics we can better prepare children to thrive in our ever-changing world and to help make the world a better place.

The Hybrid Learning Series is ideal for students in 3rd-5th grade..

### Classroom Application and Module Structure:

Each module in the Hybrid Learning Series can be done together as a class, in small groups or individually as a self-directed project. Each project centers around one mission that is focused on how we can take small actions to address environmental or social challenges.

### Each Project has a real-world mission that empowers students to take action. Each project follows an inquiry arc:

1. **Invest:** Invest students in the Mission / Project.
2. **Reflect:** Reflect on the life habit focus: Learner, Creativity, Curiosity, Empathy, Courage, Kinship, Impact Awareness.
3. **Explore:** Understand the problem and real-world needs through reading, video and activities that enable students to connect personally to the issue or problem through writing and art.
4. **Take Action:** Engage in a take action project that involves taking action through writing, art and making (crafts, performance, etc).
5. **Share:** Enlist others to work towards or rally around a cause.
6. **Reflect:** Reflect on what students learned about themselves as leaders and how they grew in their life habits.

At Rock by Rock, we believe in creating flexible tools teachers can adapt based on student needs. Each project is a teacher-designed, interdisciplinary unit that can be flexibly customized. Teachers can follow our recommended lesson flow, or tailor activities to cater to specific student needs.



Use Case	Integrated as part of ELA instructional time.	Specific Science or Social Studies Learning Time	Self Directed Learning
Grouping	Whole Class , Small Group or Individual		Individual
<b>Purpose</b>	<ul style="list-style-type: none"> <li>● <b>Authentic Application-</b> Reading is a means to learning - I want kids to see real world applications of reading.</li> <li>● <b>21st century literacies</b> - I need my kids to be developing reading and writing skills in modern day multimedia formats (i.e. podcast, videos, dramatic play etc...).</li> <li>● <b>Word and world Knowledge</b> - My kids need to continue to develop their vocabulary and word and world knowledge to aid in literacy development.</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Hands-on Learning:</b> I want students to use multiple modes of learning from literacy to hands-on experiments to the arts.</li> <li>● <b>Real-world Relevance:</b> My kids need to see how what they are learning is relevant to their lives today.</li> <li>● <b>Global Citizenship/ Science Citizenship:</b> Foster global citizens that are engaged in taking action and developing the life habits that they need.</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Enrichment:</b> more advanced students can do projects independently to enhance learning.</li> <li>● <b>Remediation:</b> teacher uses projects with small groups to provide high engagement opportunities for learning.</li> </ul>
<b>Time Period</b>	Used during a language art or interdisciplinary/ humanities block.	Used to replace Science or Social Studies time and/or a specific project based learning time during the week.	Used as a learning center during traditional guided reading or small group rotations. Some kids engage independently while teachers pull groups to support as needed.
<b>Structure</b>	Whole Group Reading Lessons - Pre/During/Post Reading Close Reading or Read A-loud	Science and Social Studies Lessons	Guided Reading or Centers Time Independent Learning.

## Materials and Technology:

### Materials:

- **Student Mission Log:** You have the choice between a print Mission Log where students can write and take notes by hand or a digital Mission Log you can share with students in a variety of ways. Mission Logs have editable text to enable teacher customization.
- **Project Materials:** In the first lesson of the online module we outline all of the materials that students will need for the project and activities. Most materials are things that can be found in a classroom and/or purchased easily through amazon and/or teacher stores (i.e. discount school supplies).

### Materials List:

<ul style="list-style-type: none"> <li>- Glue</li> <li>- Scissors</li> <li>- Index cards</li> <li>- Tape</li> <li>- Clothes pins</li> <li>- Colored paper</li> <li>- Black cardstock (optional for shadow puppets)</li> <li>- Craft supplies (for puppet making)</li> </ul>	<ul style="list-style-type: none"> <li>- Pens or pencil</li> <li>- Colored pencils or markers</li> <li>- Small wooden dowels or popsicle sticks (optional for shadow puppets)</li> <li>- Confetti (assorted colors) OR use colored paper so students can cut-up small paper pieces for a collage.</li> <li>- Gold fastener clips (optional used to make shadow puppets)</li> </ul>
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**Technology:** All technology requirements include technology found in most classrooms.

- If doing this as a self directed project we recommend every student have access to a laptop/computer, wifi, Chrome browser and headphones.
- For teachers who are interested in whole group instruction we recommend additional technology such as a projector or smartboard and speakers.

### Standards Alignment:

**Each project is aligned to national and state standards for reading, writing, science, social studies and the arts.** Each module was designed to help students progress towards standards holistically. There is not a 1-1 correspondence between each standard and each lesson. Research shows that reading and writing standards develop holistically and more effectively when approached as a whole rather than teaching standards and skills in isolation. Our modules build NGSS aligned science content and practices, CCSS aligned reading, writing, listening and speaking skills, and 21st Century SEL competencies. While many lessons address all clusters of standards, one standard cluster often leads over others.

This modules specifically supports:

Reading CCSS	Writing CCSS	Listening and Speaking CCSS	Science NGSS	SEL 21st Century Skills/Arts
<b>Key Ideas and Details: 1-3</b> <b>Craft and Structure: 4-6</b> <b>Integration of Knowledge 7-9</b> <b>Text Complexity - 10</b>	<b>Text Types and Purposes 1,2</b> <b>Production and Distribution of Writing 4-6</b> <b>Research and Build to Present Knowledge 7-8</b>	<b>Comprehension and Collaboration 1,2</b> <b>Presentation of Knowledge and ideas 1-6</b>	<b>3-LS3-2</b> <b>3-LS4-4</b> <b>4-LS1-1</b> <b>5-ESS3-1</b>	<b>Focus: Impact Awareness</b> <b>Communication &amp; Presentation</b>  <b>CASEL: Social Awareness</b> <b>CASEL: Responsible Decision Making</b>

## This Project's Focus: Save the Rainforest: How can we work together to help save the rainforest?

Real-World Mission	Real-World Project	Character Focus
To learn that every voice matters and to exercise voice and power by raising awareness about the rainforests.	Create a Public Service Announcement to raise awareness about how to save the rainforest. PSAs can use puppets, costumes, props or some combination.	Impact Awareness. How do we impact others and the world around us? How can we adjust our actions to foster meaningful change?

### Types of Lessons within a module:

Type	Description	Student Output.
<b>Informational Text Based Lessons</b>	<p>Lessons that develop informational text skills (reading, graphic organizers, charts, graphs, science concepts, social studies concepts). All lessons follow a similar flow:</p> <ul style="list-style-type: none"> <li>● <b>Pre-reading:</b> Intro/hook</li> <li>● <b>During Reading:</b> Interactive Questions</li> <li>● <b>Post Reading:</b> Application activity - many times the post activity can lead to a discussion or supplemental activity aligned with particular class or student needs.</li> </ul>	<ul style="list-style-type: none"> <li>● Student mission log</li> <li>● Group discussion.</li> </ul>
<b>Hands-on Activities</b>	<ul style="list-style-type: none"> <li>● Experiential learning opportunities that are hands-on and require kids to go offline to learn by doing and making.</li> <li>● Focused on leveraging different learning modalities to engage kids and increase motivation, support internalization of content and aid retention.</li> </ul>	<ul style="list-style-type: none"> <li>● Student mission log</li> <li>● Activity products.</li> </ul>
<b>Habit Focus and Reflections</b>	<ul style="list-style-type: none"> <li>● Integrated life-habit lessons that develop a 21st century skill/habit.</li> <li>● Each project starts and ends with a habit reflection to show growth.</li> </ul>	<ul style="list-style-type: none"> <li>● Activity products.</li> <li>● Student reflections</li> </ul>
<b>Take Action Project</b>	<ul style="list-style-type: none"> <li>● Short texts/videos/lessons that develop foundational project content (i.e. what is podcast) and project skills (i.e. how do I create effective podcasts).</li> <li>● Short and quick application of the lesson as a guided practice before applying it to the project to ensure kids have internalized the concepts.</li> <li>● Creation of a take action project that leads to genuine impact. Projects use a modern day multimedia form of communication.</li> <li>● An opportunity to share with an authentic audience where kids present what they have learned.</li> </ul>	<ul style="list-style-type: none"> <li>● Student mission log</li> <li>● Take action project</li> <li>● Share/presentation</li> </ul>

## Unit Overview: (Whole Class or Small Group)

The "Save the Rainforests" project is all about amazing Rainforest ecosystems, why they are critical to our world's health, why they are in danger and how we can help. Our habit focus is impact awareness and students explore how all our actions have impacts and ripple effects, many of which we don't see unless we are intentional in thinking about how our choices impact others and our world. Students will use their understanding of impact awareness in a project that will help contribute to rainforest conservation.

For their culminating project, students will pick one topic or issue related to impact awareness and rainforest conservation and write and produce a public service announcement (PSA) video to advocate for their issue of choice. To prepare them for their PSA they will engage in a series of hands-on projects that a) deepen their understanding of rainforests and the issues they face and b) create tools and visuals they can choose to use in their PSA. This module embeds several hands-on activities to deepen student understanding. Each activity creates an artifact that will aid students in their PSA video. Kids focus on impact awareness and helping people think about how little actions can actually have a big impact.



## Virtual Field Trips



Our goal is for student projects to have real world impact and real-world connection. That's why the Save the Rainforest Project partners with the Birmingham Zoo. This project includes two asynchronous virtual field trips to the Birmingham Zoo. These virtual field trips are embedded in the content of the course and give students a chance to learn from experts in the field about why rainforests are unique and why they are in danger.

Each virtual field trip also includes a virtual Q&A with an expert where students can explore and hear follow-up questions they are curious to learn more about.

This unit also includes two stand-alone mini virtual field trips accessible online on the project page.

## Sample Unit Goal: Save the Rainforests

1. Develop a deep understanding of rainforest ecosystems, why they matter, why they are endangered and how we can help.
2. Explain the skill of impact awareness and how we can leverage impact awareness to support rainforest conservation.

3. Create a persuasive/ argumentative public service announcement video to help build impact awareness and persuade an audience to take an action that will reduce the impact they have on rainforest ecosystems.
4. Develop confidence, agency and voice as a leader and see how our everyday actions can help to better the world (science citizenship).

### Key Vocabulary

tropical	climate	ecosystem	habitat	adapt	equator
n. Places on the earth near the equator.	n. The weather in a place over time.	n. All the living and nonliving things in a place.	n. The environment where plants and animals live or can live.	v. To change or adjust.	n. The imaginary circle around earth between the north and south poles.



**Pro Tip**

Before you begin your planning, we suggest you read this teacher's guide, the student Mission Log and that you skim the online course to become familiar with the content. If you want to build your own background knowledge on rainforests, you can complete the online module as a student.

### Sample Lesson Flow

This project could be done in as little as 1 week with several full days devoted to project-based learning or as many as 4 weeks depending on how much time each day teachers allot to the project and how much depth they choose to explore with each activity. The below lesson sequence is designed to be a flexible jumping-off point for teacher planning and should be modified based on student need and teacher discretion.

Category	Objective and Description	Materials Needed	Standards Alignment
Engage			
<b>Module 1: Introduction to "Save the Rainforests" (~1 Day)</b>			
1-1 Hook	<p><b>Hook:</b></p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>• Build investment in the Save the Rainforest project.</li> </ul>	<ul style="list-style-type: none"> <li>• Module: Video</li> <li>• Mission Log</li> </ul>	21st Century Framework Aligned

	<ul style="list-style-type: none"> <li>● Explain the mission of the Save the Rainforest project and what students will produce at the end of the project and why.</li> </ul> <p>Methods:</p> <ul style="list-style-type: none"> <li>● <b>Intro Video:</b> Watch the intro to the project video.</li> <li>● <b>Sample PSA:</b> Watch the Sample Greenpeace PSA. Discuss: <ul style="list-style-type: none"> <li>○ What is a PSA? (A video that gets people to take action to help solve a problem)</li> <li>○ Do you think this was an effective PSA? (Why?)</li> </ul> </li> <li>● <b>Brainstorm:</b> Brainstorm PSAs, advertisements or other video ideas (including social media) that kids have seen that have inspired them to take action.</li> </ul>		NGSS - SEP: Asking questions
1-2	<p><b>Invest: "Guess Where I'm From? Game"</b></p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>● Make connections between the rainforest, which may feel distant and far away and student's day to day lives.</li> </ul> <p>Methods:</p> <ul style="list-style-type: none"> <li>● <b>Guess Where I'm From Game:</b> Complete the "Guess Where I'm From?" game (see online module) to determine if products in our homes, school, and stores are from the rainforest. This activity can be done in small groups, 1-1 or whole class. This can also be done in teams as a quick guessing game to see which team can guess the most correctly.</li> </ul>	<ul style="list-style-type: none"> <li>● Mission Log</li> </ul>	21st Century Framework Aligned NGSS - SEP: Asking questions CASEL: Social Awareness
1-3	<p><b>Rainforest Schema Map</b></p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>● Identify what students know about rainforests.</li> </ul> <p>Methods:</p> <ul style="list-style-type: none"> <li>● <b>Know, Learned, Misconceptions Schema Map:</b> Create a Schema Map (Know, Learned, Misconceptions) chart that shows what students know about rainforests. As students learn new information, it can be added to the "learned" section of the map. If something students thought they knew ended up being wrong, they can move it to the misconception section. This can be done as a whole class or in small groups.</li> </ul>	<ul style="list-style-type: none"> <li>● Mission Log</li> <li>● Index cards or post-its</li> <li>● Chart paper, or place to post (and keep up) schema map.</li> <li>● Markers, colored pencils, pen or pencil</li> <li>● Tape if needed</li> </ul>	21st Century Framework Aligned NGSS - SEP: Asking questions

**Module 2: Impact Awareness (1-2 Days)**

2-1	<p><b>Life-Habit Intro: Self-Awareness:</b></p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>● Explain the life habit of impact awareness and explain how our actions can have ripple effects that can travel around the world.</li> </ul> <p>Methods:</p> <ul style="list-style-type: none"> <li>● <b>Preview Video:</b> Students will engage with a short video to preview the concept of impact awareness.</li> <li>● <b>Reflection:</b> Students complete a short reflection activity where they think about how their past actions have had both positive and negative impacts on others. This activity is meant to make impact awareness feel more personal and to prime students to think about the causal relationship between our actions and their consequences (some intended, some unintended).</li> </ul>	<ul style="list-style-type: none"> <li>● Mission Log</li> <li>● Module: Video</li> </ul>	<p>CASEL: Social Awareness  CASEL: Responsible Decision Making</p>
2-2	<p><b>Impact Challenge Activity</b></p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>● Explain how everyday actions and products we use have a massive impact on our environment.</li> </ul> <p>Methods:</p> <ul style="list-style-type: none"> <li>● <b>“How many tons do we eat?” challenge:</b> Students will make predictions (individually, in pairs or in groups) about how much we consume certain consumer projects to get a sense of how small actions can lead up to big consequences. They’ll create an estimated bar graph to predict how much we consume palm oil, coffee and chocolate in the US each year.</li> </ul>	<ul style="list-style-type: none"> <li>● Mission Log</li> <li>● Markers, colored pencils, pen or pencil</li> </ul> <p>Note: If you are using the online Mission Log, you may want to print out this page to allow students to physically draw their bar graphs.</p>	<p>CASEL: Social Awareness  CASEL: Responsible Decision Making</p>
2-3	<p><b>Life Habit Reflection</b></p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>● Compare student answers on the impact challenge to the actual stats and explain the impact those actions have around the world.</li> </ul> <p>Methods:</p> <ul style="list-style-type: none"> <li>● <b>Check Predictions:</b> Students will compare their predictions on the impact challenge with the actual amount of each product we use and then reflect on the impact that consumption of plastic has on our world.</li> </ul>	<ul style="list-style-type: none"> <li>● Mission Log</li> </ul>	<p>CASEL: Social Awareness  CASEL: Responsible Decision Making</p>

Module 3A - What are Rainforests? (1-3 Days)

<p>3-1</p>	<p><b>Vocabulary Objectives:</b></p> <ul style="list-style-type: none"> <li>Become familiar with key vocabulary students will use throughout the project.</li> </ul> <p>Methods:</p> <ul style="list-style-type: none"> <li><b>Preview Words:</b> Preview words with the class. By clicking on each image you can see the definitions of each word.</li> <li><b>Interactive Sentences:</b> Complete online sentence completion activity to practice new words.</li> <li><b>Word Practice:</b> Select three words and then illustrate those words and write sentences for those words in Mission Log.</li> </ul>	<ul style="list-style-type: none"> <li>Mission Log</li> <li>Scissors and glue if you engage in a cut and paste activity</li> </ul>	<p>CCSS.ELA-LITERACY.RI.3.4</p>
<p>3-2</p>	<p><b>Reading &amp; Video: What are Rainforests?</b></p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>Read informational text to identify central ideas and supporting details that explain:             <ul style="list-style-type: none"> <li>The two kinds of rainforests (tropical and temperate)</li> <li>The layers of the rainforest</li> </ul> </li> </ul> <p>Methods:</p> <p><b>Pre-reading:</b> Preview the “did you know” fact with the class. Then watch the introductory video in the rainforest. Ask kids to think about the question “what is a rainforest?” as they watch the video.</p> <p><b>During Reading:</b> Read the online magazine together as a class. You can do this whole group as a shared reading or have students read in small groups. As students read, ask them to think about a) what connections they can make with the video and b) why rainforests are so important.</p> <p><b>Post Reading:</b> When students are done reading, they should update the fact finder section in their study guide to write down key information they want to remember for their final project.</p>	<ul style="list-style-type: none"> <li>Mission Log</li> <li>Module: Magazine and video</li> </ul>	<p>CCSS.ELA-LITERACY.RI.1-5</p>
<p>3-3</p>	<p><b>Reading: Rainforest Ecosystems, Habitat and Adaptations</b></p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>Explain that animals adapt to their environment.</li> <li>Share examples of physical and behavioral adaptations of rainforest species.</li> </ul>	<ul style="list-style-type: none"> <li>Mission Log</li> <li>Module: Magazine and video</li> </ul>	<p>CCSS.ELA-LITERACY.RI.1-5</p> <p>NGSS: 3-LS4-3</p> <p>NGSS: 4-LS1-1</p>

End of Preview

If you want to see the rest of the teacher's guide, sign-up for a free-trial.

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