

Name: _____

Protecting an Ecosystem The **Rain Forest**



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PORTFOLIO

Protecting an Ecosystem: The Rain Forest

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FRIEZE GUIDE

Work with your group to plan and make your section of the rain forest. You are responsible for what section?

☐ The canopy ☐ The understory ☐ The forest floor

1. Plan the setting.

Make a list of ideas for your section of the frieze. Let everyone offer ideas. Include ideas from the class discussion.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2. Prioritize your ideas.

Work together to select the best ideas. Circle the ideas on your list that you will use.

3. Assign jobs. List what you will do.

Make sure everyone has a job.



FRIEZE GUIDE (CONT.)

4. Complete your section of the frieze.

Ask questions and help each other. If you finish early, help someone else.

5. Assess your work.

Put a check next to the things you did.

- ☐ I offered ideas about our section of the frieze.
- ☐ I listened to other people's ideas.
- ☐ I asked questions when I didn't understand something.
- ☐ I made positive comments to my group members.
- ☐ I was willing to change my ideas to help the group.
- ☐ I helped someone else (if I finished my tasks early).



WORD BANK: THE RAIN FOREST

Imagine you are walking through the rain forest you have created. What do you see? What do you hear? What do you smell? Write words in each of the columns below. Think of as many words as you can.

What do you see?	What sounds do you hear?	What scents do you smell?

Assessment: The words are appropriately categorized and reflect the created frieze.



WRITING: SENSE POEM

Write a sense poem to describe the rain forest environment. Imagine yourself somewhere in the environment shown on the frieze and think about what you would see, hear, touch, smell, and feel. Then complete the lines below with at least one describing word (adjective) and one thing (noun). Use words from the word bank or any other words that will give your readers a vivid picture of the environment.

I see _____

I hear _____

I touch _____

I smell _____

I feel _____

Rewrite the poem on a separate sheet of paper. Use only the words you wrote on the lines. Use your best handwriting and check for correct spelling. You will take the poem home to show your family.

Your finished poem might look something like this:

Brightly colored macaws
Gurgling rushing water
Velvety delicate orchids
Damp rotting leaves
Wonder in this vibrant forest

Assessment: The poem follows the given format and creates an accurate picture of the place. The poem uses adjectives and nouns to create a logical sequence for each sense; vivid and interesting adjectives describe the nouns. The modifiers of the nouns add depth of understanding and create “color.” There is evidence of care in choosing words and in construction; correct spelling is used.



JOB TITLES FOR A RAIN FOREST RESERVE

Read the job descriptions. Decide what jobs you might like to have in the rain forest reserve. Make a first and a second choice.

Scientists

Job Title	Job Description
Arachnologist	Studies spiders
Biologist	Studies living things
Botanist	Studies plants
Ecologist	Studies how living things react to their environments
Entomologist	Studies insects
Environmentalist	Studies the environment and pollution
Medical researcher	Studies plants and animals to find medicines to help humans
Ornithologist	Studies birds
Veterinarian	A doctor who treats animals
Zoologist	Studies animal life



JOB TITLES FOR A RAIN FOREST RESERVE (CONT.)

Other Staff Members

Job Title	Job Description
Advertiser	Promotes the reserve to the public
Artist	Makes drawings of plants and animals
Carpenter	Builds structures to support the work of the reserve, such as research areas, pathways through the reserve, and a visitor center
Educator	Prepares lessons to teach visitors about the reserve
Game warden	Protects wildlife habitats
Manager	Oversees the work of the reserve and coordinates the workers
Photographer	Photographs plants and animals as well as their habitats

First choice: _____

Second choice: _____



MAKING FIGURES

Follow the steps below to create a head-and-torso figure. Then you can decide what you will look like, including hair, facial expression, and clothing.

1. Make the face.

- ☐ On a sheet of construction paper, draw an oval about 9 inches long and 6 inches wide.
- ☐ Cut out the oval.

2. Make the eyes.

- ☐ Fold white paper in half so that you can cut out two eyes at once.
- ☐ Trim the eyes to make them the size and shape you want.
- ☐ Color the middle of each eye.
- ☐ Measure halfway down on the face and place the eyes there. Don't glue the eyes in place until you've made the nose and mouth.

3. Make the nose.

- ☐ Fold a scrap of paper in half and then cut out half a nose. You can use a scrap of paper leftover from making the face.
- ☐ Unfold the paper, and you'll have a whole nose.
- ☐ Place the nose, slightly folded, on the face. Don't glue the nose on yet.

4. Make the mouth.

- ☐ Draw a mouth and cut it out.
- ☐ Slightly fold the mouth the long way.
- ☐ Measure midway between the eyes and chin and place the mouth there.

MAKING FIGURES (CONT.)

5. Glue the face together and add other features.

- ☐ Once you have decided where the eyes, nose, and mouth should be on the face, glue them in place.
- ☐ Then add other features, such as eyelashes, eyebrows, and shading for cheeks.

6. Add hair and ears.

- ☐ Decide on the hair you want for your character. Use yarn, wool fiber, or curled construction paper. Add ears by cutting out shapes and gluing them to the sides of the face.

7. Make a torso.

- ☐ Add a neck and upper body to your character.
- ☐ Use construction paper, wallpaper scraps, or cardboard to make a shirt. Another option is to attach the head to a hanger using tape and hang a real shirt on your figure.

8. Make or draw an object that you will use on your job.

Assessment: Figure is carefully completed and includes details related to the job application.



INTRODUCTIONS

Part 1

Prepare an introduction for yourself using the guidelines below.

- ☐ Get into role as a rain forest reserve employee.
- ☐ Underline important information in your job application.
- ☐ Keep your introduction short and to the point.
- ☐ Speak clearly and confidently.
- ☐ Make eye contact with your audience.
- ☐ Practice your introduction with your group and make improvements as necessary.

Part 2

Give feedback to one of your group members on the practice introduction.

Student's name: _____

Criteria	Needs lots of work	Needs some work	Great
You were in role.			
Important information was shared.			
You told interesting details about yourself.			
The introduction was short and to the point.			
You spoke clearly and confidently.			
You made eye contact with your audience.			



ASSESS THE DIORAMA AND SCIENCE REPORT

Use this rubric to assess your diorama and science report.

Criteria	1 (low)	2	3 (high)
Accuracy of information	Some information is not accurate. Little effort was made to show the actual colors and location of plants and animals.	Correct depiction of the rain forest plants and animals in terms of color and location in the layers of the rain forest.	Correct depiction of the rain forest plants and animals in terms of color and shape. Shows the relative size and location in the layers of the rain forest.
Relationship and dependencies of plants and animals in the ecosystem	The relationship among the plants and animals is not clear. The dependency of the animals on the plants is not clear.	The relationships among the plants and animals is shown. Report includes an explanation of how a plant or animal depends on another living thing.	The relationships among plants and animals are demonstrated. At least two other components of the ecosystems are included, such as sunlight, soil, air, or water. An explanation of the dependencies is included.
Neatness and care	The diorama does not demonstrate careful construction.	A few objects are not well attached. Plants and animals lack detail such as color and design or pattern. Some space is not used in the diorama.	Diorama is carefully constructed and items are attached. Includes detailed features on the plants and animals. All the space in the diorama is filled in—no empty space.
Depth of information on science report	Labels for layer(s) of rain forest only.	Information from Content Cards has been included in science report.	Information from Content Cards and other resources, such as classroom books, has been included.



MAKING A DIORAMA

1. What is the focus of the diorama? _____

2. In what area of the rain forest do you need to do your research? Circle one.

forest floor

understory

canopy

emergents

3. What does your plant or animal need to survive?

4. Who depends on your plant or animal?

5. What other features—plants and animals—do you need to include to create an authentic setting?

Think about ...

✓ Colors of plants and animals ✓ Sizes ✓ Shapes ✓ Patterns

6. Look at the rubric on page 13. What else do you need to do?

7. Plan your diorama. Sketch out a plan on a separate sheet of paper.



SCIENCE REPORT: A PLANT

Use this guide to help you organize your report.

Name of plant: _____

Where does the plant live in the rain forest? Circle one.

forest floor

understory

canopy

emergents

Describe the plant. Include color(s), size, shapes, and any other special information about the plant.

What is the plant's life span? _____

What does the plant need to live? _____

Who depends on this plant for survival? _____

Create a diagram on a separate sheet of paper showing at least three ways your plant depends on the ecosystem for survival.



DATE _____

SCIENCE REPORT: AN ANIMAL

Use this guide to help you organize your report.

Name of animal: _____

Where does the animal live in the rain forest? Circle one.

forest floor

understory

canopy

emergents

Describe the animal. Include color(s), size (length/height and weight), and any other special information about the animal.

What is the animal's life span? _____

Is the animal an omnivore, carnivore or herbivore? _____

What is the animal's diet? _____

How does the animal protect itself? _____

Who are the animal's predators? _____

Create a diagram on a separate sheet of paper showing at least three ways your animal depends on the ecosystem for survival.



MAKING A PRESENTATION

You and your partner will make a presentation to the rain forest reserve staff. Use the guidelines below to prepare for your oral presentation. You will make your presentation in your job role.

The title of your presentation: _____

1. Tell your job role in the reserve. _____
2. Decide what information each of you will share. Underline important information from your report.
3. Each of you should share three important facts about your topic.

4. Ways to make your presentation interesting: _____

5. Special information or details to include: _____

6. Be prepared for questions from the rain forest reserve staff.

Practice your presentation with your partner. Together check off the boxes below that you included in your practice presentation. Use feedback from your partner to make improvements to your presentation.

- ☐ I introduced myself in role.
- ☐ I included three important facts.
- ☐ I presented the information in an organized way.
- ☐ I presented accurate information that demonstrated careful research.
- ☐ I spoke clearly and confidently.
- ☐ I was enthusiastic about my topic.



TAKING NOTES: RAIN FOREST PRESENTATIONS

As you listen to the presentations, write key words or draw quick pictures that will help you remember important information. Be prepared to ask questions of the presenters.

Topic:	Topic:
Topic:	Topic:
Topic:	Topic:



DATE _____

TAKING NOTES: RAIN FOREST PRESENTATIONS (CONT.)

Topic:	Topic:
Topic:	Topic:
Topic:	Topic:



TAKING A POSITION

What is the issue?

What is your position on the issue?

Write at least three reasons to support your position.

1. _____
2. _____
3. _____

Write at least two reasons why someone would not support your position.

1. _____
2. _____

How will you respond to the other point of view?

Assessment: The issue is identified with a clear position statement. Reasons for and against reflect an understanding of the issue and the impact on the reserve. Response to the opposite point of view is realistic and reflects an understanding of the issue.



USING WORDS EFFECTIVELY

You are going to create a persuasive argument for your position. Here are two writing traits to use to help you. With a partner, brainstorm words that you can use and write them in the columns below.

<p>Word choice: Interesting words create a vivid picture of the topic. Describing words add depth of understanding and color to the picture created in the reader's mind.</p>	<p>Ideas and content: The topic should be focused and include important details. The information should be accurate and the writer should write as an expert on the topic.</p>
<p style="text-align: center;">Describing Words</p>	<p style="text-align: center;">Key Words That an Expert Would Use</p>



WRITING: AN INVITATION

In a well-written invitation, the writer helps create a picture in the reader's mind about the event so the reader will want to attend. **Word choice** and **ideas and content** are important writing traits for this assignment.

Word choice: Interesting words create a vivid picture of the event. Describing words add depth of understanding and color to the picture created in the reader's mind.

Ideas and content: The invitation should be focused and include important details. The purpose for the event is clear and information is provided so that the reader will not want to miss the event.

Use the questions below to help you organize your ideas.

1. Who are you inviting? _____

2. What specific information do you need to include?

Date: _____

Time: _____
(From what time to what time?)

Place: _____

3. What will happen at the event?

4. Why would someone want to attend the event?

Remember to use words from the word bank on page 6. Write your invitation on a separate sheet of paper. Be sure you have spelled all the words correctly.

Assessment: The invitation uses "ideas and content" by including an appropriate greeting, accurate information regarding date, time and place, and information about why one would want to attend. The invitation makes effective use of "word choice" to create a vivid picture about the event and depth of understanding of why the event is important.

GLOSSARY

bacteria *plural noun* a group of tiny life-forms that are too small to see without a microscope

biologist *noun* a scientist who studies living things

biosphere reserve *noun* a natural environment with areas set aside for conservation, scientific research, farming, and other human activities

botanist *noun* a scientist who studies plants

buttress roots *plural noun* wide winglike structures at the bottom of a tree

camouflage *noun* the method an animal uses to blend in with its surroundings

canopy *noun* the highest level of a forest formed by the leafy tops of trees

conifer *noun* a type of plant, such as a pine tree, with exposed seeds that are usually in cones; most conifers are evergreen and pyramid-shaped

cycad *noun* a type of plant that was common when dinosaurs lived; cycads have cones with fleshy seeds and look like either palm trees or ferns

ecosystem *noun* a complex system created by the interactions between living things

emergent *noun* a tree that grows higher than most of the other trees in a forest

entomologist *noun* a scientist who studies insects

epiphyte *noun* a plant that does not grow in soil, but instead grows on a rock or another plant without harming it

evaporate *verb* to change from a liquid or a solid into a gas

evolution *noun* the scientific theory that plants and animals change from one form to another over long periods of time

flight tunnels *plural noun* the openings through branches and thick leaves in the canopy used by birds and bats for flying

forest floor *noun* the lowest, darkest level of a forest, where small plants and the trunks of giant trees grow among dead leaves and branches

fungus *noun* (plural: **fungi**) a type of organism that grows without leaves or roots, needs no light, and uses spores to reproduce

immune *adjective* able to withstand a certain poison

light gap *noun* an area in a forest—usually formed when an old tree falls down—where direct sunlight reaches the forest floor

nectar *noun* a sweet liquid made by a plant that attracts insects and birds

nocturnal *adjective* active at night

nutrients *plural noun* chemicals that plants and animals need to grow

ornithologist *noun* a scientist who studies birds

pollen *noun* thousands of tiny, usually yellow, grains used by a plant to reproduce

slash-and-burn farming *noun* a farming method in which an area of forest is cut down and burned, releasing nutrients into a thin layer of soil for crops

tank bromeliad *noun* an epiphyte that uses overlapping leaves to hold its water supply in tiny pools; bromeliads are members of the pineapple family

understory *noun* the middle layer of a rain forest, containing small trees and other plants