

# VIRGINIA ANIMALS & THEIR HABITATS

## Appendix A Student Project Information

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# Appendix A - Student Project Information

## Teacher Directions for the Student Team Projects

Throughout the unit, students will be working in teams of three to four students to create a culminating project. This project is to be completed at school. Each team will select one Virginia animal to research. The final products from the student teams will include: a presentation about their animals to be given to the class, a visual product to be displayed, and a written report about their animals. The three final products will include information about the animal, its habitat, life cycle, adaptations, and its place within a food chain.

### Assigning the Project:

- Before beginning the *Virginia Animals and their Habitats* unit, you need to place your students in teams of three to four students. Use your discretion to assign teams. Students will work in these teams for their projects throughout the unit. The project is to be completed at school, not at home.

### Materials:

- Examine the list of Virginia animals ahead of time and gather a variety of books from your classroom and school library that students can use during their research. When appropriate, utilize your science textbook and grade-level resources. If your school has a science lead teacher, he/she would be an excellent resource. The intent is for you to use the resources your school has available.
- You may want to bookmark Web sites about Virginia animals for your students ahead of time so that they will be able to easily access data about their team animals from the Internet.
- The *Design Brief* is included in Appendix A and is an overview of the components of the project. It is to be utilized as a checklist to make sure that each student team has all of the required elements for their projects. When you introduce the project to the student teams, go over the *Design Brief* with them.
- You have been provided a rubric for each section of the project. You will need to preview these ahead of time so that you know the student team expectations for each part of the project. These will be given to student teams at different times during the unit and discussed with them so that they understand the expectations for their project's culminating products. Each student team should keep the *Design Brief* and the rubrics in their team notebooks so they can refer to them as they are working.

### Logistics

- Time has been built in throughout the unit for students to work on the different components of their team projects during class time. Additional class time can be added if needed. At the end of the unit, each team will combine all the pieces they have been working on and put them together into the final project products – the presentation, the visual product, and the written report. The intent is not for the student teams to do the project all at once!
- You will have many roles throughout the unit. Your instruction will give students the content and tools necessary to complete each aspect of the project. You will monitor each student team's progress throughout the unit. At the end of the unit, you will facilitate the analysis of the cumulative information gathered and given during the unit. You will also help students to develop group statements on the key concepts of interdependency and conservation within Virginia's ecosystems.

Team Members' Names: \_\_\_\_\_

## Virginia Animals and their Habitats Project Design Brief

You have learned about animals and their habitats. Now you need to use this knowledge to complete a team project.

### Design Challenge:

Your team must choose one Virginia animal to research. You will create a project that will be presented to the class. The project will include a written report with information about the animal, its habitat, life cycle, adaptations, and its place within the food chain. Your team will also create a visual product such as a poster, a diorama, a PowerPoint presentation, or a play.

### Criteria:

- The written report must include:
  - description of your animal;
  - description of your animal's habitat;
  - picture of your animal's life cycle;
  - description of your animal's adaptations; and
  - description of your animal's food chain including your animal's place in the chain.
  
- The visual product must include:
  - map of Virginia showing where your animal lives;
  - a graph; and
  - a picture of your animal and its habitat.

- The presentation must include:
  - description of your animal;
  - description of your animal's habitat;
  - picture of your animal's life cycle;
  - description of your animal's adaptations; and
  - description of your animal's food chain including your animal's place in the chain.
  
- Team rules for the presentation:
  - Everyone on your team must have a role in the presentation.
  - Your team will answer at least three questions from the class.

## Virginia Native Animals List

This list includes a sampling of Virginia animals. You are NOT limited to only these animals when you are working with this unit.

American Shad	Mallard
Bald Eagle	Monarch Butterfly
Big-eared Bat	Mosquito
Black Bear	Mussels
Black Rat Snake	Nurse Shark
Blue Crab	Osprey
Brook Trout	Oyster
Bullfrog	Painted Turtle
Canvas-backed Duck	Pileated Woodpecker
Cardinal	Praying Mantis
Cow-nosed Ray	Raccoon
Deer	River Otter
Dolphin	Snapping Turtle
Dragonfly	Spotted Salamander
Egret	Sturgeon
Great Blue Heron	Tiger Swallowtail
Large Mouth Bass	Water Strider
Laughing Gull	Wood Duck
Loggerhead Sea Turtle	Gray Squirrel

Team Members' Names: \_\_\_\_\_

### Habitat Research Planning Sheet – Student Sheet

<p>Where in Virginia is your animal's habitat located?</p> <hr/> <hr/> <hr/> <hr/>	<p>Describe how your animal's habitat looks?</p> <hr/> <hr/> <hr/> <hr/>
<p>What types of plants/flowers grow in your animal's habitat?</p> <hr/> <hr/> <hr/> <hr/>	<p>What other animals live in your animal's habitat?</p> <hr/> <hr/> <hr/> <hr/>
<p>Is there a water source in your animal's habitat? What is it?</p> <hr/> <hr/> <hr/> <hr/>	<p>What are your animal's sources of food?</p> <hr/> <hr/> <hr/> <hr/>

On the back, list any other interesting facts you learn during your research.

**Group Reflection**

<b>What did my group do?</b>	<b>What did I do?</b>					
<b>What questions do we still have?</b>	<table border="1"><tr><td style="text-align: center;"><b>Reflection Window</b> Date: _____</td><td><b>How well did we work together?</b></td></tr><tr><td></td><td><p>We worked at a level: _____</p><table border="1"><tr><td><p><b>3</b> – Everyone contributed and cooperated.</p><p><b>2</b> – Most of us contributed and cooperated.</p><p><b>1</b> – Some of us contributed and cooperated.</p></td></tr></table><p>I think this because</p></td></tr></table>	<b>Reflection Window</b> Date: _____	<b>How well did we work together?</b>		<p>We worked at a level: _____</p> <table border="1"><tr><td><p><b>3</b> – Everyone contributed and cooperated.</p><p><b>2</b> – Most of us contributed and cooperated.</p><p><b>1</b> – Some of us contributed and cooperated.</p></td></tr></table> <p>I think this because</p>	<p><b>3</b> – Everyone contributed and cooperated.</p> <p><b>2</b> – Most of us contributed and cooperated.</p> <p><b>1</b> – Some of us contributed and cooperated.</p>
<b>Reflection Window</b> Date: _____	<b>How well did we work together?</b>					
	<p>We worked at a level: _____</p> <table border="1"><tr><td><p><b>3</b> – Everyone contributed and cooperated.</p><p><b>2</b> – Most of us contributed and cooperated.</p><p><b>1</b> – Some of us contributed and cooperated.</p></td></tr></table> <p>I think this because</p>	<p><b>3</b> – Everyone contributed and cooperated.</p> <p><b>2</b> – Most of us contributed and cooperated.</p> <p><b>1</b> – Some of us contributed and cooperated.</p>				
<p><b>3</b> – Everyone contributed and cooperated.</p> <p><b>2</b> – Most of us contributed and cooperated.</p> <p><b>1</b> – Some of us contributed and cooperated.</p>						

Team Members' Names: \_\_\_\_\_

### Written Report Rubric

REQUIRED VOCABULARY WORDS:					
<b>Animal Words (Choose a minimum of five.)</b>					
habitat	life cycle	adaptation	food chain	interdependence	
migration	hibernation	camouflage	organism	survival	
<b>Verbs (Choose a minimum of three.)</b>					
observe	identify	describe	compare	contrast	investigate
predict	data	conclude	explore	measure	summarize

	<b>3 POINTS</b>	<b>2 POINTS</b>	<b>1 POINT</b>
<b>CONTENT</b>	The report contains all the criteria from the design brief.	The report contains most of the criteria from the design brief.	The report contains some of the criteria from the design brief.
<b>VOCABULARY</b>	The report includes all of the required animal words (5) and required verbs (3).	The report includes most of the required animal words (4) and required verbs (2).	The report includes some of the required animal words (<4) and required verbs (<2).
<b>SPELLING</b>	All words are spelled correctly.	Most of the words are spelled correctly.	Some of the words are spelled correctly.
<b>GRAMMAR: PUNCTUATION &amp; CAPITALIZATION</b>	Every sentence begins with a capital letter and ends with the appropriate punctuation.	Most sentences begin with a capital letter and end with the appropriate punctuation.	Some sentences begin with a capital letter and end with the appropriate punctuation.
<b>APPEARANCE</b>	The product is written neatly. There is good organization. The title page includes the name of project, team member names, date, name of teacher, grade level, school, a colorful border, and the paper is either stapled or placed in a folder.	The product is written neatly. The organization is somewhat clear. The title page includes most of the required components (name of project, team member names, date, name of teacher, grade level, school, a colorful border, and the paper either is stapled or placed in a folder).	The product is difficult to read and unorganized. The title page is missing or has only some of the required components (name of project, names in team, date, name of teacher, grade level, school, a colorful border, and the paper either is stapled or placed in a folder).

Team Members' Names: \_\_\_\_\_

**Visual Product Rubric**

	<b>3 POINTS</b>	<b>2 POINTS</b>	<b>1 POINT</b>
<b>ANIMAL AND HABITAT</b>	The product clearly shows the animal in its appropriate habitat.	The product shows the animal in its habitat, but some mistakes may be present.	The animal and/or habitat is not clearly shown.
<b>MAP</b>	The map includes all of the required elements: a title, compass rose, map key, and date. The James River, Appalachian Mountains, and Atlantic Ocean are accurately labeled. Symbols are used to show where the animal lives.	The map includes most of the required elements.	The map includes some of the required elements.
<b>GRAPH</b>	The graph includes a title, headings, key, and scale with equal increments. The graph accurately reflects the data and is made correctly.	The graph includes most of the required elements (a title, heading, key, and scale with equal increments). For the most part, the graph accurately reflects the data and is made correctly.	The graph includes some of the required elements (a title, heading, key, and scale with equal increments). The graph somewhat accurately reflects the data and is partially correct.
<b>APPEARANCE</b>	The product is well-planned, neatly presented, and done to the best of the group's ability.	Most of the product is well-planned, neatly presented, and done to the best of the group's ability.	Very little of the product is well-planned, neatly presented, and done to the best of the group's ability.

Teacher Comments:

Team Members' Names: \_\_\_\_\_

**Presentation Rubric**

	<b>3 POINTS</b>	<b>2 POINTS</b>	<b>1 POINT</b>
<b>PREPARATION</b>	The group is prepared and knows their material.	The group is mostly prepared and knows most of their material.	The group is somewhat prepared and knows some of their material.
<b>GROUP PARTICIPATION</b>	Everyone in the group participated.	Most of the students in the group participated.	Some of the students in the group participated.
<b>PUBLIC SPEAKING</b>	Everyone looks at the audience. Speakers use a clear and loud voice.	Most group members look at the audience. Speakers mostly use a clear and loud voice.	Some group members look at the audience. Speakers sometimes use a clear and loud voice.
<b>RESPONSE TO QUESTIONS</b>	The group answers questions from the class with clear explanation and details.	The group answers most questions from the class with clear explanation and details.	The group answers some questions from the class with clear explanation and details.

**Teacher Comments:**

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*Insect Image Gallery*

*\*Tailed Jay Butterfly (Jon Lelito, photographer)*

*\*Postman Butterfly (Jon Lelito, photographer)*

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*\*Isabella Butterfly (Jon Lelito, photographer)*

*\*Leopard Moth (Maryann Frazier, photographer)*

*\*Imperial Moth (Maryann Frazier, photographer)*

*\*Io Moth (Maryann Frazier, photographer)*

*\*Giant Swallowtail Butterfly Caterpillar (Maryann Frazier, photographer)*

*\*Pandora Sphinx Moth Caterpillar (Maryann Frazier, photographer)*

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*\*Black Swallowtail Butterfly*

*\*American Painted Lady Butterfly*

*\*Great Spangled Fritillary*

*\*Monarch Butterfly*

*\*Tiger Swallowtail Butterfly*

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*University of Kentucky Entomology Kentucky Critters*

- \**Waved Sphinx Moth* (Blake Newton, photographer)
- \**Clearwing Sphinx Moth* (Blake Newton, photographer)
- \**Pipevine Swallowtail Caterpillar* (Ric Bessin, photographer)
- \**Spicebush Butterfly Caterpillar* (Ric Bessin, photographer)
- \**Fritillary Caterpillar* (Ric Bessin, photographer)
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- \**Prince Baskettail* (David Arboux, photographer)
- \**Argiope Spider* (David Arboux, photographer)

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- \**Measuring Tree Height*

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*Wildlife Information*

- \**Eastern Gray Fox* (Dave Schaffer, USFWS, photographer)
- \**Virginia Opossum* (John White, photographer)
- \**White-tailed Deer* (Lee Walker, photographer)
- \**White-tailed Deer Fawn* (WJ Berg, USFWS, photographer)
- \**Black Bear* (Steven Ferguson, photographer)
- \**Eastern Gartersnake* (John White, photographer)
- \**Black Vulture*
- \**Gray Squirrel* (Jeff Trollinger, photographer)
- \**Eastern Box Turtle* (John White, photographer)
- \**Osprey*
- \**American Toad* (John White, photographer)
- \**Largemouth Bass*
- \**Bullfrog* (Bob Greenlee, photographer)
- \**Little Grass Frog* (Paul Sattler, photographer)
- \**Mountain Chorus Frog* (Paul Sattler, photographer)
- \**Northern Green Frog* (Paul Sattler, photographer)
- \**Pickerel Frog* (John White, photographer)
- \**Insects student sheet*
- \**A Look Outside DVD*
- \**Compare Yourself to a Black Bear student sheet*

- \*Virginia map with no labels*
- \*Tundra Swan 888 Migration Path*
- \*Tundra Swan 893 Migration Path*
- \*Tundra Swan 894 Migration Path*

Virginia Tech – Department of Entomology  
Blacksburg, Virginia

*Insect Identification Lab*

- \*Gypsy Moth* (E.A. Roberts, Senior Research Associate, Department of Entomology; Virginia Tech)
- \*Tent Caterpillar*
- \*Green-striped Mapleworm*
- \*Gypsy Moth Caterpillar* (E.A. Roberts, Senior Research Associate, Department of Entomology; Virginia Tech)
- \*Hickory-Horned Devil*
- \*Saddleback Caterpillar*
- \*Fall Webworm Caterpillars*