

# VIRGINIA ANIMALS & THEIR HABITATS

## Topic 7 Unit Culmination

### TABLE OF CONTENTS

<b><u>TOPIC 7 – UNIT CULMINATION</u></b> .....	<b><u>224</u></b>
<b><u>Topic 7: Overall Information</u></b> .....	<b><u>224</u></b>
<u>Overview</u> .....	<u>224</u>
<u>Topic 7 Virginia SOL</u> .....	<u>224</u>
<u>Student Learning Expectations</u> .....	<u>224</u>
<u>Procedure</u> .....	<u>224</u>
<b><u>Session 7.1 – Student Project Presentation Preparations</u></b> .....	<b><u>225</u></b>
<b><u>Session 7.2 – Student Project Presentations</u></b> .....	<b><u>227</u></b>
<b><u>Session 7.3 – Interdependence: Animals with their Living and Nonliving Surroundings</u></b> .....	<b><u>229</u></b>
<b><u>Session 7.4 – Classifying our Virginia Animals</u></b> .....	<b><u>230</u></b>
<b><u>Session 7.5 – Virginia Animal Food Chains and Food Webs</u></b> .....	<b><u>231</u></b>
<b><u>Session 7.6 – Protecting Virginia’s Habitats</u></b> .....	<b><u>232</u></b>
<b><u>Acknowledgments</u></b> .....	<b><u>i</u></b>
<b><u>Special Thank You for Permission to Use Items in Virginia Animals and their Habitats</u></b> .....	<b><u>iii</u></b>

## TOPIC 7 – Unit Culmination

### Topic 7: Overall Information

#### Overview

In this group of lessons students will present their projects. Evaluation of what students have learned throughout the unit will be conducted and conclusions will be drawn by the students about the interdependency of organisms and the importance of conservation.

Topic 7 Virginia SOL			
Science	English	Mathematics	History & Social Science
2.1 a, d, g, h, i, j, k, l, m	2.1	2.3 a	2.5
2.4 a	2.2 a, b, c, e	2.17	2.6
2.5 a, b, c	2.3 a, b, c	2.19	2.7
2.7 a	2.10		2.9
2.8 c	2.12		

#### Student Learning Expectations

- Construct and interpret a graph.
- Create a map key for a Virginia map.
- Demonstrate the interdependency of organisms.
- Orally share information with a group.
- Compose a reflection statement to synthesize their learning.

Excellent resources about environmental issues that can be included as an extension to Topic 7 can be found on the New Hampshire Fish and Game Department (NHFGD) at <http://www.wildnh.com/Kids/kids.htm>, *Here Today, Gone Tomorrow* Vol. 1, Issue 2, and *Wildlife at Risk* Vol. 6, Issue 2.

*Wild Times for Kids* is published twice a year by the NHFGD. The magazine can be downloaded.

#### Procedure

**NOTE:** The procedures in the topic sessions may be divided into several different lesson periods. Each session may take more than one lesson period to complete.

**\*\*Activities in Topic 7 sessions are intended to be used as summative assessments.**

## Topic 7: Session 7.1 – Student Project Presentation Preparations

### Session Supplies:

- Several different maps that use symbols and have a key for those symbols
- One 3”x5” index card for each team
- Scissors – one pair per team
- Supplies for teams to create their animals’ symbols
- Envelope for each team to store the team’s symbols (the symbols will be a small size since the symbol cards will be 1 ¾” x 2 ½”)

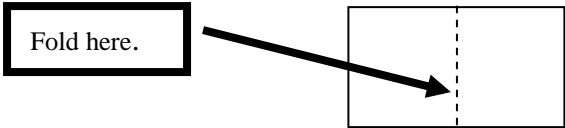
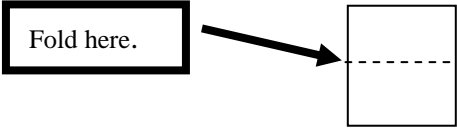
### Session Virginia SOL

Science	English	Mathematics	History & Social Science
	2.2 e	2.3 a	2.6

## Session 7.1 – Student Project Presentation Preparations

Teacher Questions & Notes	Procedures
	<ol style="list-style-type: none"> <li>1. Each team needs to design and create a symbol for their team animal that will be placed on a Virginia map.</li> <li>2. Discuss with the students the definition of a map symbol.</li> <li>3. Look at several different maps. Look specifically at the different symbols that are used.</li> <li>4. Ask the students why you would use a symbol on a map instead of writing out the name of the various objects on a map.</li> <li>5. Explain that as a team they will design and make four identical copies of a symbol for their animal.</li> <li>6. Discuss with the students that their symbols should be simple line drawings and should not have a great deal of detail. Discuss with them why that would be true.</li> </ol>
	<ol style="list-style-type: none"> <li>7. Give the teams time to design their animals’ symbols on a blank piece of paper.</li> <li>8. Remind them to keep the drawings simple.</li> <li>9. Remind them that they will be drawing the actual symbols fairly small.</li> </ol>
	<ol style="list-style-type: none"> <li>10. Give each team one 3x5 index card. They are going to divide and cut their card into four equal pieces.</li> </ol>

## Session 7.1 – Student Project Presentation Preparations

Teacher Questions & Notes	Procedures
	<p>a. Have each team hold their 3x5 card so that the long sides are on the top and bottom. Fold the 3x5 card in half.</p> <p>b. Discuss what should be alike about the two sides of the card if they folded it correctly.</p> <div data-bbox="695 558 1256 684"></div> <p>c. Now fold the 3x5 card in half again.</p> <div data-bbox="768 772 1221 898"></div> <p>d. Discuss what should be alike about all four divisions of the card now.</p> <p>e. Have students unfold the card and, using the scissors, cut the card on the folds so that they now have four equal pieces.</p>
	<p>11. Have the teams draw their symbols on each of the four cards. Remind them that the symbols should be the same on all four cards.</p> <p>12. Have each team put their four symbol cards in an envelope and label the envelope with their team members' names. Seal the envelopes so that the cards are not lost before they are needed.</p>

## Topic 7: Session 7.2 – Student Project Presentations

### Session Supplies:

- Envelopes with the team map symbols
- Copies of the *Presentation Rubric* (pg. 242) for each team presentation

### Session Virginia SOL

Science	English	Mathematics	History & Social Science
2.1 a, l, m 2.4 a 2.5 a, b, c 2.7 a 2.8 c	2.1 2.2 a, b, c, e 2.3 a, b, c 2.10		2.5 2.6

## Session 7.2 – Student Project Presentations

Teacher Questions & Notes	Procedures
	<i>You may want to break the presentations into several days depending on the length of the presentations and the number of groups. Student teams giving their presentations will need the envelopes with their animal symbols so they can place them on the large classroom Virginia map. Animals may be located in more than one place in the state, so the teams may need to place multiple copies of their symbols on the map.</i>
-What have we learned so far? -Is there a connection between the animals? -Are the habitats similar?	<ol style="list-style-type: none"> <li>1. Before student teams begin their team presentations, review the <i>Presentation Rubric</i> (pg. 242) with the class.</li> <li>2. Have each student team give their presentation about their animal. Each student should have a part in the team’s presentation.</li> <li>3. After each presentation, allow audience members to ask at least three questions. Each team member should contribute to the answers.</li> </ol>
	<ol style="list-style-type: none"> <li>4. A large scale Virginia map should be posted where all students can see the map.</li> <li>5. After each presentation, have the student team add their animal symbol to the map key and place their animal symbols on the map.</li> <li>6. Stop after every two to three presentations to discuss how the animals and habitats are related.</li> </ol>

## ***Session 7.2 – Student Project Presentations***

<b>Teacher Questions &amp; Notes</b>	<b>Procedures</b>
	7. After all the presentations have been given, have the students examine the map and discuss.

## Topic 7: Session 7.3 – Interdependence: Animals with their Living and Nonliving Surroundings

### Session Supplies:

- Project WILD 2006, (pg. 9) “Classroom Carrying Capacity”

### Session Virginia SOL

Science	English	Mathematics	History & Social Science
2.1 g, j, k, m 2.4 a 2.5 a, b, c 2.7 a 2.8 c	2.3 a, b, c 2.12		2.7 2.9

## Session 7.3 – Interdependence: Animals with their Living and Nonliving Surroundings

Teacher Questions & Notes	Procedures
-How are the different Virginia animals we’ve studied interdependent with each other? -Are they interdependent with anything else in their habitat?	1. Review class discussions about how animals and habitats are related.
-Is there an unlimited supply of living and nonliving resources within their habitat?	2. Review the “Classroom Carrying Capacity” activity in the <u>Project WILD 2006</u> (pg. 9). This was completed during Topic 3, Session 3.2.  3. Emphasize the meaning of <i>carrying capacity</i> (the number of plants and animals that an environment can support) prior to beginning the activity.
	4. In their journal, have students respond to the following scenario:  <i>Pretend the animal you studied left its habitat. In your journal on the next blank page, write the title “What if _____ Left its Habitat...” Write a story explaining what you think would happen.</i>  5. Put students into small groups that are not their project teams. (Each student within the group should have studied a different animal.) Allow students to share their journal responses.  6. Have one representative from each group share with the class something they learned from their small group discussion.

## Topic 7: Session 7.4 – Classifying our Virginia Animals

### Session Supplies:

- The Virginia class map with the student project animal symbols

### Session Virginia SOL

Science	English	Mathematics	History & Social Science
2.1 a, d, h, i, j, k 2.5 a, b, c		2.17 2.19	

## Session 7.4 – Classifying our Virginia Animals

Teacher Questions & Notes	Procedures
-How could we sort the animals we studied? (Lead students to name the six classifications from the beginning of the unit.)	<ol style="list-style-type: none"> <li>1. Discuss with the class that they have now mapped the location of all the animals that were researched by the student teams. Discuss the importance of having a balance within a habitat.</li> <li>2. Remind the students that at the beginning of the unit, they sorted Virginia animals into six different classifications. Review the six classifications.</li> <li>3. As a class, sort the specific Virginia animals the students studied into the six classifications.</li> </ol>
	<ol style="list-style-type: none"> <li>4. The next activity should be done independently as it is intended to be used as an assessment.               <ol style="list-style-type: none"> <li>a. Have students create a graph of the data that were collected and sorted in #3.</li> <li>b. Have each student write one statement about what the data on their graph show and one question that can be answered using the information on the graph. They should do this activity on a blank page in the back of their journal. Encourage them to make comparisons. (Additionally, the teacher may want to create specific questions for the students to answer based on the data.)</li> <li>c. After students have completed their graphs, share some of their ideas as a class.</li> </ol> </li> </ol>



## Topic 7: Session 7.5 – Virginia Animal Food Chains and Food Webs

### Session Supplies:

- The Virginia class map with the student project animal symbols
- Chart paper for each small group

### Session Virginia SOL

Science	English	Mathematics	History & Social Science
2.1 a, g, h, i, j, k, l 2.4 a 2.5 a, b, c 2.7 a 2.8 c	2.2 a, b, c, e 2.3 a, b, c		

## Session 7.5 – Virginia Animal Food Chains and Food Webs

Teacher Questions & Notes	Procedures
	1. Review the Virginia map with the team animals added, review the sorting and graphing of the animals, and the carrying capacity lesson. Emphasize how all organisms depend on each other to survive and how animals are connected to each other.
	2. Review the concept of food chains and food webs.  3. In small groups, have students use chart paper and work together to create a food chain or web based on the Virginia animals they have studied. Students may need to add additional Virginia animals and plants to complete the chain or web.  4. Share the webs and discuss any similarities and differences.

## Topic 7: Session 7.6 – Protecting Virginia’s Habitats

### Session Supplies:

- Construction paper
- Supplies for art work

### Session Virginia SOL

Science	English	Mathematics	History & Social Science
2.1 a, g, h, i, j, k 2.5 a, b, c 2.7 a 2.8 c	2.12		2.7 2.9

## Session 7.6 – Protecting Virginia’s Habitats

Teacher Questions & Notes	Procedures
	<ol style="list-style-type: none"> <li>1. As a class, discuss why it’s important to protect our habitats and the animals that live in them.</li> <li>2. As a class, make a list of human activities that are helpful for the survival of plants and animals.</li> <li>3. As a class, make a list of human activities that can be harmful to the survival of plants and animals.</li> <li>4. Have students pick one of the human activities than can be harmful and write about what they might do to help change it. For example:               <ol style="list-style-type: none"> <li>a. Harmful activity: littering</li> <li>b. What they can do to change it: I can throw away my trash and pick up litter I see.</li> </ol> </li> <li>5. Have students illustrate the statements that have been written on the construction paper and post them around the Virginia map. Students who want to complete more than one could post them throughout the school.</li> <li>6. Have students select the next blank page in their journal and write the title “Final Journal Reflection.”</li> <li>7. Have the students complete the following reflection on their page: <i>If everyone studied animals and their habitats, do you think that the world would be different? Why or why not?</i></li> </ol>

## ***Acknowledgments***

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*Insect Image Gallery*

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

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

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

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

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

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*\*American Painted Lady Butterfly*

*\*Great Spangled Fritillary*

*\*Monarch Butterfly*

*\*Tiger Swallowtail Butterfly*

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USDA Forest Service  
Washington, DC

*The NatureWatch, Wildlife, Fish, and Threatened and Endangered Species  
Program's Photograph Library*

- \**Prince Baskettail* (David Arboux, photographer)
- \**Argiope Spider* (David Arboux, photographer)

Virginia Department of Forestry  
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- \**Measuring Tree Height*

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*Wildlife Information*

- \**Eastern Gray Fox* (Dave Schaffer, USFWS, photographer)
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- \**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*