Texas Ecoregion Puzzle

Grades: K-3

TEKS:
K: 1B, 2A, 9B
1: 1B, 2A, 9A
2: 1B, 2A, 9A, 10A
3: 1B, 2A, 9A, 10A

Topics:
Adaptations
Basic Needs
Habitats and Ecosystems
Natural Resources
Plants
Properties/Characteristics
Soil
Wildlife

Methodologies:
Critical Thinking
Poster/Visual Aid

Setting: Classroom

Activity Time: 45-60 minutes

Additional Subjects: Art, ELAR, Social Studies

Objective:
Students will identify the basic needs of various animals in the ecoregions of Texas while emphasizing good stewardship practices.

Materials:

Provided	**Not Provided**
Gould Ecoregions of Texas map	Pencils
Ecoregion Cutouts (10)	Crayons or markers
Animal pictures	
C.A.R.E. Acronym page	

Vocabulary:

basic needs, conservation, ecoregion, environment, habitat, native, survive

East FOUNDATION

TEXAS WILDLIFE ASSOCIATION
CONSERVATION LEGACY

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Background:

Organizing Texas into 10 ecoregions allows educators to teach students about the diversity that exists throughout the state, with each ecoregion having its own distinctive characteristics. An ecoregion consists of recurring patterns associated with combinations of landforms, wildlife, and plants that characterize that region. Each ecosystem is made up of living and nonliving things in an area that functions as an ecological unit. Through researching and studying similarities and differences between each ecoregion, students can discover how nature, including humans, has shaped our state.

Texas is quite unique from most states because of its size and geographic location. Covering 266,807 square miles, its large land area has major differences in rainfall, climate, and habitat diversity. Southern habitats are subtropical and northern are temperate. Rainfall varies from an average of 8 inches in West Texas to about 56 inches per year in East Texas. In addition, our state has vast topographical diversity with 91 mountain peaks that average a mile or more in height.

Texas is divided into 10 natural ecoregions. These regions are the Pineywoods, the Gulf Prairies and Marshes, the Post Oak Savannah, the Blackland Prairies, the Cross Timbers, the South Texas Plains, the Edwards Plateau, the Rolling Plains, the High Plains, and the Trans-Pecos.

Activity Preparation:

- Make one copy of each of the provided *Ecoregion Cutouts* (10 in total).
- Post the provided *Ecoregions of Texas* map in the classroom or project onto a screen or wall.
- Post the provided C.A.R.E. Stewardship Acronym page.

Procedure:

Discussion
1. Engage students by telling them to think of the projected map of Texas as a giant puzzle. Provide some information from the background section and explain that watching the following video will help them understand how diverse the ecoregions of Texas are. This YouTube video explores the last "wild" places in Texas and why they must be preserved as it briefly discusses the regions of Texas.
   Keep Texas Wild: Introduction - Texas Parks and Wildlife (2:54)

2. Discuss how the video talked about the importance of conserving and protecting our wildlife and their habitats. Introduce or review the term "steward" as a person who is responsible for taking care of or protecting something.

3. Post the provided stewardship acronym, C.A.R.E. Go over each letter to give students examples of actions we can all take to be good land stewards.
   C   Care for the protection of wildlife and their habitats.
   A   Act to become a caretaker or steward of water, land, and animals.
   R   Represent stewardship by being a positive role model for others.
   E   Educate others about stewardship and conservation.

4. Ask students how they could be stewards toward the wildlife, such as deer, birds, prairie dogs, or even the plants they saw in the video. Point out that wildlife consists of plants or animals that live in nature and do not have caretakers.
What might they do to help others understand why it is important to be a steward?

Activity

1. Assign students into 10 groups and give each group a provided *Ecoregion Cutout* of one of the regions. Students are to think of the cutout as a piece of a puzzle that fits on the projected map of Texas.

   If desired, the following Texas Parks and Wildlife YouTube videos can be viewed by individual groups or as a class to discover more about ecoregions. Note: Not all Texas Ecoregions have a corresponding video.
   - *Keep Texas Wild: Pineywoods - Texas Parks and Wildlife* (8:23)
   - *Keep Texas Wild: Gulf Coast - Texas Parks and Wildlife* (6:05)
   - *Keep Texas Wild: Blackland Prairie - Texas Parks and Wildlife* (5:23)
   - *Keep Texas Wild: Edwards Plateau - Texas Parks and Wildlife* (8:47)
   - *Keep Texas Wild: South TX Plains - Texas Parks and Wildlife* (7:52)
   - *Keep Texas Wild: Panhandle - Texas Parks and Wildlife* (7:43)
   - *Keep Texas Wild: Trans-Pecos - Texas Parks and* Wildlife (6:46)

2. Continue to explain that each puzzle piece represents an ecoregion or a section of Texas and that while some may share similarities, they also have differences. For example, one ecoregion may have a forest, while others may have a desert, swamp, mountains, or sand dunes. Additionally, each of the ecoregions has plants and animals that are well suited to live in that region. The specific environment in which the animal or plant lives is known as its habitat, providing it with basic needs.
   - *Who can remember what basic needs are made up of?*
   - *Why is it important for us to act as stewards for the plants and animals in each of the ecoregions or sections of Texas?*

3. Provide each group with a picture of an animal that lives in their assigned ecoregion. Explain what it means to be a native animal. Introduce or review the term "native" as a living thing such as a plant or an animal that originated from a specific region or place. Tell students that each of the animals is a native wild animal that has basic needs of food, water, shelter, and space, which are essential for survival. Ecoregions with suggested animals are listed below.
   - Edwards Plateau - rattlesnake
   - Piney Woods – Virginia opossum
   - Post Oak Savannah – Wild Turkey
   - Trans-Pecos – bighorn sheep
   - Cross Timber - American beaver
   - South Texas Plains - white-tailed deer
   - Gulf Prairies and Marshes - Blue Heron
   - Rolling Plains – Northern Bobwhite (quail)
   - High Plains – black-tailed prairie dog
   - Blackland Prairies - black-tailed jackrabbit

   You can find information about each of these animals in the archived editions of *Critter Connections* magazine on the Texas Wildlife Association website (http://www.texas-wildlife.org/).

4. Ask each group to use the provided pictures to help them draw the animal corresponding to their ecoregion on their cutout.

5. Allow each group to place their cutout on the projected map and to share which animal they drew. As each group shares, ask the following questions.
    - What are the basic needs of your animal?
    - How can the physical characteristics of your animal help it meet its basic needs?
    - How can you be a steward for this animal and its habitat?

        Ask older students:
    - Think about the adaptations. What kind of habitat or do you think is available in its ecoregion to help it meet its basic needs?

Wrap-up
1. As a closing to the lesson, initiate a discussion about stewardship and explain that being a good steward is much like being a good caretaker. Use the map to show students which ecoregion their school is in. Ask students how they can be caretakers or stewards to wildlife that lives in their particular ecoregion of Texas, including those that may live nearby their schoolyard.