

## Ecoregions in Texas

Ecoregions	Location and Description	Key Characteristic
Piney Woods	East Texas, high in water resources, 32 to 50 inches of annual rainfall, forested area, mainly pine trees	wettest region
Gulf Coast Prairies and Marshes	Gulf Coast, lots of water resources, 23 to 56 inches of annual rainfall, marshes and beaches, flat land	Oceans and beaches
Post Oak Woods and Prairies	East Central Texas, high in water resources, 35 to 45 inches of annual rainfall	grasslands and forests
Blackland Prairies	East Central Texas, high in water resources, 35 to 45 inches of annual rainfall, gently rolling hills, grass	Rich, black clay soil
South Texas Plains	South Texas, good water resources, mild winters, flat with rolling hills, shrubs, and small trees	Acidic sandy soil
Edwards Plateau	Southwest Texas, low water resources, grassland, and hardwoods, soils vary	Fruit and veggie crops
Llano Uplift	Center of Texas, good water resources, large granite dome	Hilly terrain
Rolling Plains	North/Central Texas, low water resources, cold winters, grasslands	Rough terrain
High Plains	North West Texas Panhandle, low water resources, cold winters, very flat land, grass, and shrubs	Prairies
Mountains and Basins	West Texas, little water, mountains, pine forest	Deserts and mountains

2. Maps #2, #3, and #4 to explain which abiotic or biotic factor, or combination of factors would be the most influential in creating the ecoregions in West Texas? Explain your reason for choosing these factors.

West Texas is dry, so it will have fewer plants. Mountains will have different plant and animal life.

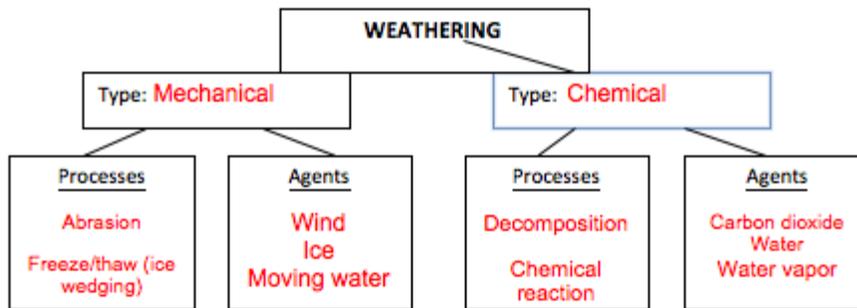
3. Use Maps #2, #3, and #4 to explain which abiotic or biotic factor or combination of factors, would be the most influential in creating the ecoregion of East Texas? Explain your reason for choosing these factors.

Water would probably be the most influential as it affects plants, weathering, and erosion. Wind could also be a factor on the plains.

4. Why does vegetation vary so greatly from west to east and from north to south in Texas?

The amount of water and the varying winter temperatures

## Part 2: Weathering Models



10. What is the difference between the two types of weathering?

Chemical weathering produces a new substance; mechanical weathering breaks the rock into smaller pieces but does not alter the chemical composition.

11. Look at the photo of weathered limestone in the photo gallery. Which weathering process most frequently affects limestone?

Chemical weathering mostly affects limestone. Acids cause a chemical reaction to occur that decomposes or breaks down the limestone.

12. Look at the photo of shale and gypsum layers in Palo Duro Canyon. Which weathering process most frequently affects the shale and gypsum layers?

Mechanical weathering most frequently affects the layers. Abrasion from the wind or from moving water wears away or weathers the rocks.

Part 3 – Mix and Match – Pick Up or Drop off:

<p><b>Group 1 (A &amp; B)</b> Circle one: Deposition or <b>Erosion</b> Agent: <b>Running Water</b></p>	<p><b>Group 2 (C &amp; D)</b> Circle one: Deposition or <b>Erosion</b> Agent: <b>Ice</b></p>
<p><b>Group 3 (E &amp; F)</b> Circle one: <b>Deposition</b> or Erosion Agent: <b>Wind</b></p>	<p><b>Group 4 (G &amp; H)</b> Circle one: <b>Deposition</b> or Erosion Agent: <b>Ice</b></p>
<p><b>Group 5 (I &amp; J)</b> Circle one: Deposition or <b>Erosion</b> Agent: <b>Wind</b></p>	<p><b>Group 6 (K &amp; L)</b> Circle one: <b>Deposition</b> or Erosion Agent: <b>Running Water</b></p>

You may want to share source information for the individual photos with your students after they complete the chart.

Photo A: The flooding river clearly carries great amounts of sediment, which will be deposited on the land once the water slows down.

Photo B: The stream has undercut its bank, making it unable to support the upper sediments. A section is slumping into the stream channel. These sediments will be eroded away with the next rise in stream level.

Photo C: Glaciers pluck rocks from the mountains and carry them long distances down the valleys.

Photo D: This glacier shows a bulldozing action. (It also shows ground-up rock at the end of a glacier moraine.)

Photo E: Dunes form as rounded sand grains build up in a pile in a desert.

Photos F: Dunes also form at beaches.

Photos G and H: Note the angular, sharp-edged rock fragments and the lack of sorting of the sediment that characterize the glacial sediment from moraines.

Photo I: Dust Storm Kansas - May 29, 2004

Photo J: Dust Bowl in 1935 - Stratford, Texas

Photo K: The stream is continuing to cut into its bank, removing sediment. Typical, rounded river rocks have been deposited on the inside of the curve.

Photo L: Rounded pebbles indicate erosion and deposition by running water.

1. What is the meaning of the title of this activity? What does pick it up refer to? What does drop it off refer to?

The meaning of the title of the activity Pick it up or Drop it off refers to erosion and deposition. The process of erosion is when weathered bits of rock are picked up and moved to a new location. Deposition occurs when the medium that is carrying the bits of rock drops the bits of weathered rock (such as water in a stream carrying sand and the depositing of sand in a sand bar).

2. What kind of damage would wind erosion do to property and livestock?

Wind can pick up fine sediment and sand-blast surfaces of buildings and animals. Wind can also bury plants with the blown sediment. The removal of top soil by wind erosion is very detrimental to agricultural fields.

3. What are the two types of glaciers? How are they different?

Alpine glaciers form in the mountains and carve out deep glacial valleys. Continental glaciers form as large sheets of ice and spread out over significant portions of a land mass.

4. Why do you find large mounds of rock at the end of a glacier?

Glaciers gouge out the land over which they flow. As they move outward, they push the gouged rock in front of the glacier edge. Melted waters from the glacier also carry rock material toward the glaciers edge.

5. Why would the velocity of a river affect its ability to erode sediment?

The faster the river moves, the more energy it has to bounce rocks along the river bed.

6. Why would the volume of a river affect its ability to erode sediment?

The greater the volume, the more area the river covers and the more contact it has with rock particles.

