

## Segment 3 - The Distribution of Earth's Resources

**Integrated Phenomenon:** At Yasuni National Park, forests can be so dense they are difficult to walk through. But at Big Bend National Park, there are vast open stretches of dry land. Create an initial model to explain this phenomenon.

### Processes that Shape Earth

**Anchoring Phenomenon:** Earth's natural resources, like minerals, energy, and groundwater, are unevenly distributed across communities.

16 **Earth's Tectonic Plates**

Phenomenon: Fossils of plants that had broad, flat leaves are found in Antarctica.

17 **The Rock Cycle**

Phenomenon: Some rock types can be found in a community, but not others.

18 **The Water Cycle**

Phenomenon: During the first week of January, New York was covered in four feet of snow, but by the end of May the streets were bare.

**Engineering Challenge: Test and Improve a Solar Distiller**

19 **Earth's Natural Resources**

Phenomenon: Every device contains parts that are made from natural resources.

**Performance Assessment: Fund a Natural Resource Company**

Anchoring Phenomenon: Earth's natural resources, like minerals, energy, and groundwater, are unevenly distributed across communities.

### Resources in Ecosystems

**Anchoring Phenomenon:** When various species of cichlid fish are combined in aquariums, some stop eating to the point of dying.

20 **Resources in Living Systems**

Phenomenon: Poison dart frogs kept in captivity lose their toxicity over time so they are no longer poisonous.

21 **Interactions Among Organisms**

Phenomenon: All the acacia trees in a forest are swarming with ants, but the other tree species have no ants.

**Engineering Challenge: Preserving Frog-Bat Interactions**

22 **Changing Ecosystems**

Phenomenon: Although the 1980 eruption of Mt. St. Helens destroyed all life near the eruption, the area is now covered in green and full of life.

**Performance Assessment: Changing Resources for Cichlid Fish**

Anchoring Phenomenon: When various species of cichlid fish are combined in aquariums, some stop eating to the point of dying.

### States of Matter

**Anchoring Phenomenon:** Ice eventually turns into water when it is left out, and water boils and seems to disappear when it is heated.

23 **The Motion of Particles**

Phenomenon: Drops of food coloring dissolve into water at very different rates depending on the temperature of the water.

24 **Heat, Temperature, and State Changes**

Phenomenon: In a warm room, water droplets form on a can of cold liquid.

**Performance Assessment: Writing to your Alien Pen Pal**

Anchoring Phenomenon: Ice eventually turns into water when it is left out, and water boils and seems to disappear when it is heated.

## Segment Wrap Up

Return to the model created at the beginning of the segment, and revise it based on what you learned about the processes that shape Earth, resources in ecosystems, and states of matter.

**ANCHORING PHENOMENON**

**Anchoring Phenomenon:** When various species of cichlid fish are combined in aquariums, some stop eating to the point of dying.



1. Complete the first two columns of this chart.
  - List what you think you already know about this unit’s phenomenon.
  - Then write at least three questions you have about this phenomenon.

Return to this chart at the end of the unit. Add the key information you learned about this phenomenon. Give evidence!

<b>Know</b>	<b>Want to Know</b>	<b>Learned</b>