
Makers, Takers, and Breakers

Overview

This lesson and related activities are designed to give students hands-on experience in observing and describing how organisms live together in an environment and use existing resources.

Grade: 7

TEKS

Scientific Processes

7.1 A

7.2 A, B, C, D

7.3 C

7.4 A

Science Concepts

7.12 B

Vocabulary

Producer

Consumer

Decomposer

Ecosystem

Materials

Colored paper clips

Downloadable Sheets

*Maker Job Cards

*Taker Job Cards

*Breaker Job Cards

*Scavenger Hunt

Pre-Eastman Classroom Activities

Before Class Begins:

1. Copy the Maker, Taker, and Breaker Job Cards.
2. Create two different work stations, one for the Makers and one for the Breakers. At the Maker station, you should have colored paper clips, Maker Job cards, and three pieces of paper labeled with one of the following—Wiffle-Waffles, Boulder-Rounders, and Bling-Things.

Lesson:

1. Students will participate in a role-play activity called “Makers, Takers, and Breakers” in which they will compete for paper clip resources.
2. Explain to the class that there will be three groups working today: the Makers, the Takers, and the Breakers. The Makers will be making items. The Takers will take these items from the Makers, show the teacher so the items can be recorded, and then give the items to the Breakers. The Breakers will break the items down into individual parts and return these parts to the Makers.
3. Choose about $\frac{1}{2}$ of the class to be Makers and seat them at their work station. Each Maker will be given a specific Job Card which he or she will follow. As Makers complete each item, they should be placed on the correctly labeled paper. Distribute the Maker Job Cards and let them begin working.
4. As the Makers work, select about $\frac{1}{2}$ of the remaining students to be Takers. Explain that they MUST follow the instructions on their Taker Job Cards. When Takers bring items to the teacher, he or she should note it on the Taker Job Card. Assign the remaining students the job of Breakers. Explain that they must follow the instructions on their Job Cards as well. Move students to the appropriate work station and distribute Job Cards. Let the competition begin!
5. NOTE: By participating in this activity, students should experience the competition for resources in an ecosystem. Be prepared to remind Takers of items needed for survival, knowing that this should increase competition. For example: “You must bring me a Wiffle-Waffle next time or you will not survive.” In order for the system to work efficiently, some of the Takers cannot survive.
6. After a sufficient amount of time, the teacher should stop the game. Allow each of the three groups to talk about their jobs—What were the problems, if any? Ask which Takers did not survive. Why? Did this affect the remaining Takers? Continue questioning in this manner.
7. Introduce the vocabulary words—producer, consumer, and decomposer. Let students determine which of the three jobs corresponds to the three vocabulary words.
8. Explain that in an ecosystem different living things play different roles in the cycling of matter. Plants are producers. They capture sunlight and store the energy in a form that can be used by animals. Consumers, such as humans, bears, and deer get energy from consuming plants and other animals. Decomposers consume the bodies and waste of dead organisms and turn it into a form that can once again be used by plants.

Makers, Takers, and Breakers

In The Field

1. Prior to leaving the school, make sure you have:
 - Ziploc bags
 - Tweezers to collect insects, one per pair of students
 - Copies of Scavenger Hunt, one per pair of students
 - First Aid Kit
2. Set behavior expectations and go over safety issues with the students. Remind students that they are not to touch or put anything into their mouths without permission.
3. Students will participate in a Scavenger Hunt locating producers, consumers, and decomposers.
4. Pair students up and provide each pair with a Scavenger Hunt sheet, Ziploc bag, and tweezers.
5. Explain to students that they have 15 minutes to find the items on their Scavenger Hunt sheet and return to this station.
6. After students return, discuss their findings.

SCAVENGER HUNT ANSWER KEY

1. Pine Cone
2. Leaf
3. Seed
4. Bug or worm
5. Grass

Makers, Takers, and Breakers

Post-Eastman Classroom Activities

1. As a class, brainstorm a list of organisms seen in the forest. Be sure to include those organisms not seen in your visit but that are known to share this habitat (deer, squirrels, raccoons, and rabbits.)
2. In small groups, have students classify each item on the list as a producer, consumer, or decomposer. Discuss findings as a class.
3. For final assessment, have students respond to the following writing prompt:

In class and in the forest we have observed the roles of organisms as they live together in an environment. Describe how organisms, including producers, consumers, and decomposers, live together in a forest environment and use existing resources.

<p style="text-align: center;">MAKER JOB CARD</p> <p>Your job is to make the following out of paper clips:</p> <p style="text-align: center;">WIFFLE-WAFFLE</p> <p>This is a 4 paper clip chain. The chain will consist of only 2 alternating colors. After making each one, place it in the correct area.</p>	<p style="text-align: center;">MAKER JOB CARD</p> <p>Your job is to make the following out of paper clips:</p> <p style="text-align: center;">WIFFLE-WAFFLE</p> <p>This is a 4 paper clip chain. The chain will consist of only 2 alternating colors. After making each one, place it in the correct area.</p>	<p style="text-align: center;">MAKER JOB CARD</p> <p>Your job is to make the following out of paper clips:</p> <p style="text-align: center;">WIFFLE-WAFFLE</p> <p>This is a 4 paper clip chain. The chain will consist of only 2 alternating colors. After making each one, place it in the correct area.</p>
<p style="text-align: center;">MAKER JOB CARD</p> <p>Your job is to make the following out of paper clips:</p> <p style="text-align: center;">BLING –THING</p> <p>To build this you need one paper clip of one color and six paper clips of a different color. Connect these six to the one of a different color. After making each one, place it in the correct area.</p>	<p style="text-align: center;">MAKER JOB CARD</p> <p>Your job is to make the following out of paper clips:</p> <p style="text-align: center;">BLING –THING</p> <p>To build this you need one paper clip of one color and six paper clips of a different color. Connect these six to the one of a different color. After making each one, place it in the correct area.</p>	<p style="text-align: center;">MAKER JOB CARD</p> <p>Your job is to make the following out of paper clips:</p> <p style="text-align: center;">BLING –THING</p> <p>To build this you need one paper clip of one color and six paper clips of a different color. Connect these six to the one of a different color. After making each one, place it in the correct area.</p>
<p style="text-align: center;">MAKER JOB CARD</p> <p>Your job is to make the following out of paper clips:</p> <p style="text-align: center;">BOUNDER-ROUNDER</p> <p>This is a paper clip circle. The circle will have 3 different colors of paper clips (3 clips of each color). Connect the like colors together and then join the three small chains to form a circle. After making each one, place it in the correct area.</p>	<p style="text-align: center;">MAKER JOB CARD</p> <p>Your job is to make the following out of paper clips:</p> <p style="text-align: center;">BOUNDER-ROUNDER</p> <p>This is a paper clip circle. The circle will have 3 different colors of paper clips (3 clips of each color). Connect the like colors together and then join the three small chains to form a circle. After making each one, place it in the correct area.</p>	<p style="text-align: center;">MAKER JOB CARD</p> <p>Your job is to make the following out of paper clips:</p> <p style="text-align: center;">BOUNDER-ROUNDER</p> <p>This is a paper clip circle. The circle will have 3 different colors of paper clips (3 clips of each color). Connect the like colors together and then join the three small chains to form a circle. After making each one, place it in the correct area.</p>

<p style="text-align: center;">TAKER JOB CARD</p> <p>In order to survive, you need to get the following items from the Makers and show them to the teacher:</p> <p>Bling-Thing Bling-Thing Bling-Thing Wiffle-Waffle Wiffle-Waffle Boulder-Rounder</p> <p>Once the teacher has noted the item, take it to the Breakers.</p>	<p style="text-align: center;">TAKER JOB CARD</p> <p>In order to survive, you need to get the following items from the Makers and show them to the teacher:</p> <p>Bling-Thing Bling-Thing Bling-Thing Wiffle-Waffle Wiffle-Waffle Boulder-Rounder</p> <p>Once the teacher has noted the item, take it to the Breakers.</p>	<p style="text-align: center;">TAKER JOB CARD</p> <p>In order to survive, you need to get the following items from the Makers and show them to the teacher:</p> <p>Bling-Thing Bling-Thing Bling-Thing Wiffle-Waffle Wiffle-Waffle Boulder-Rounder</p> <p>Once the teacher has noted the item, take it to the Breakers.</p>
<p style="text-align: center;">TAKER JOB CARD</p> <p>In order to survive, you need to get the following items from the Makers and show them to the teacher:</p> <p>Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle</p> <p>Once the teacher has noted the item, take it to the Breakers.</p>	<p style="text-align: center;">TAKER JOB CARD</p> <p>In order to survive, you need to get the following items from the Makers and show them to the teacher:</p> <p>Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle</p> <p>Once the teacher has noted the item, take it to the Breakers.</p>	<p style="text-align: center;">TAKER JOB CARD</p> <p>In order to survive, you need to get the following items from the Makers and show them to the teacher:</p> <p>Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle Wiffle-Waffle</p> <p>Once the teacher has noted the item, take it to the Breakers.</p>
<p style="text-align: center;">TAKER JOB CARD</p> <p>In order to survive, you need to get the following items from the Makers and show them to the teacher:</p> <p>Wiffle-Waffle Wiffle-Waffle Bling-Thing Bling-Thing Boulder-Rounder Boulder-Rounder</p> <p>Once the teacher has noted the item, take it to the Breakers.</p>	<p style="text-align: center;">TAKER JOB CARD</p> <p>In order to survive, you need to get the following items from the Makers and show them to the teacher:</p> <p>Wiffle-Waffle Wiffle-Waffle Bling-Thing Bling-Thing Boulder-Rounder Boulder-Rounder</p> <p>Once the teacher has noted the item, take it to the Breakers.</p>	<p style="text-align: center;">TAKER JOB CARD</p> <p>In order to survive, you need to get the following items from the Makers and show them to the teacher:</p> <p>Wiffle-Waffle Wiffle-Waffle Bling-Thing Bling-Thing Boulder-Rounder Boulder-Rounder</p> <p>Once the teacher has noted the item, take it to the Breakers.</p>

<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>	<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>	<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>
<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>	<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>	<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>
<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>	<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>	<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>
<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>	<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>	<p>BREAKER JOB CARD</p> <p>Your job is to break down the Wiffle-Waffles, Bling-Things, and Bounder-Rounders and return the individual paper clips to the Makers.</p>

SCAVENGER HUNT

Use the clues below to find the specific items in the forest. Place the items in your Ziploc bag.

1. Producers drop these to the ground,
The prickly things by squirrels are found.
2. On producers, they're small green parts,
This is where the flow of energy starts.
3. These are made by producers and are very small,
Producers grow where these things fall.
4. Underneath a rotten tree,
These decomposers you will see.
5. This producer is not very tall,
But for deer and cows, it is most important of all.

SCAVENGER HUNT

Use the clues below to find the specific items in the forest. Place the items in your Ziploc bag.

1. Producers drop these to the ground,
The prickly things by squirrels are found.
2. On producers, they're small green parts,
This is where the flow of energy starts.
3. These are made by producers and are very small,
Producers grow where these things fall.
4. Underneath a rotten tree,
These decomposers you will see.
5. This producer is not very tall,
But for deer and cows, it is most important of all.