Engage

Heterotrophs and Autotrophs

You have had several lessons concerning different types of cells. Imagine you could look at the items listed below with a very powerful microscope. With this microscope you could see inside all of the items listed.

Place an X next to each item that you think are made up of cells or was once made up of cells.

_____	Blood	_____	Apples
_____	Mushrooms	_____	Sand
_____	Flowers	_____	Worms
_____	Skin	_____	Seeds
_____	Rocks	_____	Water
_____	Milk	_____	Sugar
_____	Hamburger	_____	Atoms
_____	DNA	_____	Bone

Explain your thinking. Describe the "rule" you used to decide whether or not something was made of cells.

_____

_____

_____

_____

_____

_____

Explore

What To Do:

1.Watch the video of Elodea (a plant cell) streaming at https://www.youtube.com/watch?v=BB5rvjZzgFU

2. Draw and color what you observe in the space below.

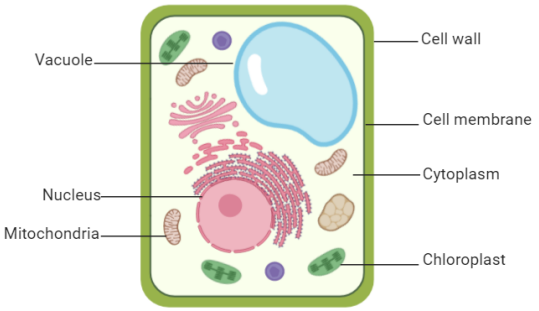
3. Watch the video of a human white blood cell (an animal cell) eating green bacteria at https://www.youtube.com/watch?v=438EovW4tzs

4. Draw and color what you observe in the space below.

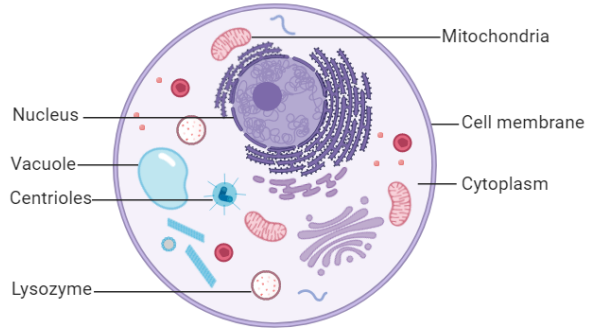
What To Do:

1. Look at the diagrams of the plant cell and animal cell below.
2. Find the parts they have in common and underline them in orange.
3. Find the parts that are different and underline them in green.
4. Answer the questions about the videos you saw and these diagrams.

Plant Cell



Animal Cell



Questions:

1. What parts of the plant cell were not in the animal cell?

_____

2. Think about what you saw in the elodea streaming video. What do you think the green balls that are moving around are?

_____

3. Did you see any green balls inside the animal cell other than the bacteria? _____

4. What do you think the green balls help the plant do?

_____

Explain

What To Do:

1. Read through the words in the Word Bank below.
2. Read through the fill in the blank questions.
3. Watch the video from the Amoeba Sisters – Autotrophs and Heterotrophs found at https://www.youtube.com/watch?v=f8G7IulYxiA&t=1s
4. Fill in the blanks with the words from the Word Bank.

WORD BANK

Chemoautotrophs	plants	chemical	animals
omnivores	light	heterotrophs	
Euglena	consumers	autotrophs	nitrogen
Producers	food	energy	

1. Herbivores eat _____, carnivores eat _____ and, _____ eat both plants and animals.
2. Animals are known as _____ and they are also known as _____.
3. Plants are known as _____.
4. Plants make their own _____.
5. Plants source of _____ is light.
6. Plants are also known as _____.
7. Carnivorous plants digest insects to obtain _____.
8. _____ are both heterotrophs and autotrophs.
9. Photo means _____.
10. Chemo means _____
11. _____ make their own food using chemicals.

Elaborate

What to Do:

1. Make a T-chart in your notebook and place **Autotroph** at the top of the first column and **Heterotroph** at the top of the second column.
2. Cut out the following words and place them in the correct column.

PLANTS	SELF-FEEDER
ANIMALS	OTHER FEEDER
PRODUCER	ROSE BUSH
CONSUMER	WOLF
MAKES IT OWN FOOD	HUMAN
GETS ITS FOOD FROM PLANTS AND ANIMALS	CARNIVORE, OMNIVORE, HERBIVORE

Evaluate

Name _____ period _____

EXIT TICKET

Heterotrophs and Autotrophs

1. What part of a plant cell allows it to make its own food?

   A. Chloroplast
   B. Cell wall
   C. Cell membrane
   D. Nucleus

2. How do autotrophs get their food?

   A. They hunt for it.
   B. They absorb it from the ground
   C. They make it using light
   D. They make it using water

3. How do heterotrophs get their food?

   A. They get it from plants and animal
   B. They absorb it from the ground
   C. They make it using light
   D. They make it using water

4. What are the different types of heterotrophs?

   A. Trees, bushes, and flowers
   B. Clams, oysters, and shrimp
   C. Carnivore, omnivore, and herbivore
   D. Consumer, producer, and decomposer

5. Examples of autotrophs are -

   A. Trees, bushes, and flowers
   B. Clams, oysters, and shrimp
   C. Lions, tigers, and bears
   D. Bee, spiders, and flys