What Did You Learn?

Answer the following questions about the chapter you read. Fill in the bubble next to the correct answer.

Which of these describes organisms?
- ○ environment
- ○ abiotic
- ○ biotic

Which of these is an example of a population?
- ○ a herd of elephants
- ○ a child
- ○ a sycamore tree

Which of these is not necessary for life?
- ○ food
- ○ sleep
- ○ air

What are the simple things that a group of like beings use every day?
- ○ nutrients
- ○ resources
- ○ organisms

Which of these is biotic?
- ○ pencil
- ○ pond slime
- ○ house

Which of these is abiotic?
- ○ desk
- ○ algae
- ○ zebra
What Did You Learn?

Answer the following questions about the chapter you read. Fill in the bubble next to the correct answer.

What is the largest organ in your body?
- muscles
- skin
- heart

How much of your body weight is made up of muscle?
- not quite one quarter
- almost all
- nearly half

Muscles cannot _____, they can only _____.
- push/pull
- pull/push
- lift/drop

By what are muscles attached to bones?
- ligaments
- tendons
- organs

Which of these is the job of your bones?
- help you move
- give you your shape
- protect your organs
- all of these
Fill in the blank with the word that best fits.

<table>
<thead>
<tr>
<th>bones</th>
<th>cartilage</th>
<th>cells</th>
<th>contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>dermis</td>
<td>ligaments</td>
<td>muscles</td>
<td>organs</td>
</tr>
<tr>
<td>skin</td>
<td>tendons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

parts of the body with special jobs

protects you from diseases

building blocks

your body has over 600

your body starts with over 300

to shorten

connect muscles to bones

connect bones to bones

cushion between bones

new sheets of skin cells inside
What Did You Learn?

Fill in the blank with the word that best fits.

long tube between throat and stomach

holds onto food until it’s needed

breaks down food into small pieces for blood to carry through body

move food from small intestine to blood

takes water out of food

clean waste products from blood

kills bacteria on food that’s been eaten

type of muscle found in digestive system

leftovers of food used in the body

a hole burned in the stomach

acid esophagus kidneys large intestine small intestine smooth stomach ulcer villi waste products
What Did You Learn?

Fill in the blank with the word that best fits.

<table>
<thead>
<tr>
<th>esophagus</th>
<th>large</th>
<th>liver</th>
<th>lungs</th>
<th>pancreas</th>
</tr>
</thead>
<tbody>
<tr>
<td>skeletal</td>
<td>small</td>
<td>smooth</td>
<td>stomach</td>
<td></td>
</tr>
</tbody>
</table>

You use your ____________ muscles to pick up an apple and take a bite. When you swallow the bite of apple, it heads down your ____________ and into the acidic storage of your ____________. There, ____________ muscles hold onto your food until it’s ready to be moved on in the digestion process. The apple’s next stop is your ____________ intestine, where the apple gets broken down into tiny pieces for transport to your blood. Your ____________ adds enzymes and the apple-blood goes through your ____________ where poison and waste are filtered out. The clean blood is sent to your ____________ for oxygen. The unused portion of the apple heads to your ____________ intestine and then out of the body.
Find the digestion words in the word search.

bile  digestion  enzymes
liver  intestine  esophagus
rectum  pancreas  gallbladder
stomach
Fill out this worksheet as you work through the experiment.

Question: How does chewing affect digestion?

<table>
<thead>
<tr>
<th>Container</th>
<th>Contents</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Whole candy in water</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Broken candy in water</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Whole candy in vinegar</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Broken candy in vinegar</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion: ________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Intestines

Color each part of the intestines a different color. Label the key at the bottom with the colors you use for each part.

- small intestine
- appendix
- anus
- large intestine
- rectum
What Did You Learn?

Fill in the blank with the word that best fits.

anything relating to the heart ______________
move blood away from the heart ______________
move blood back to the heart ______________
smallest branch of arteries ______________
clear liquid that makes up blood ______________
carry oxygen in the blood ______________
attack infection in the blood ______________
Review the Terms

Unscramble the words and write their definitions.

RAEETISR

PAAILCIRELS

DACRCIA

RDCEDELOLBOLS (3 WORDS)

NEVIS

TWSLIEEOBLHODCL (3 WORDS)

LMAPAS
Red Blood Cell Journey

Describe the journey of a red blood cell through the body. You can write it in the first person if you’d like.

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________
Find the words in the word search.

- arteries
- capillaries
- oxygen
- atrium
- circulation
- plasma
- ventricle
- blood
- heart
- veins
Muscle Coloring Pages

Color the muscles using the directions on the site.
Find the words in the word search.

- alveoli
- exhale
- oxygen
- bronchiole
- inhale
- respiratory
- diaphragm
- lungs
- trachea
Find the words in the word search.

bathroom  bladder  fluid
kidneys    nephrons  ureter
urethra    urinary tract  urine
Word Assembly

Reassemble the words by writing them on the lines.

<table>
<thead>
<tr>
<th>spin</th>
<th>lobe</th>
<th>hemisphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>occipital</td>
<td>cere</td>
<td>brum</td>
</tr>
<tr>
<td>right</td>
<td>temporal</td>
<td>stem</td>
</tr>
<tr>
<td>parietal</td>
<td>ves</td>
<td>lobe</td>
</tr>
<tr>
<td>cere</td>
<td>left</td>
<td>flexes</td>
</tr>
<tr>
<td>lobe</td>
<td>brain</td>
<td>al cord</td>
</tr>
<tr>
<td>ner</td>
<td>re</td>
<td>hemisphere</td>
</tr>
<tr>
<td>bellum</td>
<td>frontal</td>
<td>lobe</td>
</tr>
</tbody>
</table>

-----------------   -----------------   -----------------
What Did You Learn?

Fill in the blank with the word that best fits.

<table>
<thead>
<tr>
<th>cerebellum</th>
<th>cerebrum</th>
<th>frontal lobe</th>
<th>left hemisphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>nerves</td>
<td>occipital lobe</td>
<td>parietal lobe</td>
<td>reflexes</td>
</tr>
<tr>
<td>right hemisphere</td>
<td>temporal lobe</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

problem-solving part of the brain  

controls hearing and smelling  

helps with balance and controls reflexes  

controls vision  

creative part of the brain  

contains the four lobes of the brain  

send sensory messages to spinal cord  

controls speech and movement  

involuntary actions of the body  

controls feelings of touch and pain
Assemble the Brain

Study this brain before cutting out the various sections. Mix them up and see if you can put the brain back together correctly. Let others in your family try as well.
Follow the directions on the site to make a brain hat.
Answer the following questions about the chapter you read. Fill in the bubble next to the correct answer.

What is the part of the eye through which light enters?
- pupil
- iris
- retina

Which part of the eye takes a picture of what is seen and sends it to the brain?
- pupil
- iris
- retina

Which of these parts of the body contain nerve endings?
- hair
- fingernails
- fingers

Which of these experiences sound waves first?
- ear
- eardrum
- cochlea

Which of these is not one of the five senses?
- touch
- smell
- humor
What Did You Learn?

Fill in the blank with the word that best fits.

<table>
<thead>
<tr>
<th>cochlea</th>
<th>eyelashes</th>
<th>eyelids</th>
<th>iris</th>
</tr>
</thead>
<tbody>
<tr>
<td>nerve endings</td>
<td>pupil</td>
<td>skin</td>
<td></td>
</tr>
<tr>
<td>sound waves</td>
<td>tears</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

colorful part of the eye  

vibrations in the air causing noise  

act like the hairs in the nose to keep dirt away  

sense temperature and pain  

filled with fluid and hairs  

changes in size depending on light  

keep your eyes wet and clean  

the largest sense organ  

act like windshield wipers to keep dirt away
Secret Message

Use the key to decode the message.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3</td>
<td>10</td>
<td>16</td>
<td>6</td>
<td>21</td>
<td>25</td>
<td>13</td>
<td>18</td>
<td>7</td>
<td>23</td>
<td>19</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th>O</th>
<th>P</th>
<th>Q</th>
<th>R</th>
<th>S</th>
<th>T</th>
<th>U</th>
<th>V</th>
<th>W</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>4</td>
<td>9</td>
<td>2</td>
<td>17</td>
<td>15</td>
<td>20</td>
<td>26</td>
<td>8</td>
<td>24</td>
<td>12</td>
<td>22</td>
<td>14</td>
</tr>
</tbody>
</table>

15  6  11  15  6  4  17  25  5  11  15  15  6  11  16

1   6  15  15  5  25  6  15  20 4  20 13  6

3   17  5  18  11  20 13  5  20 10  4  11  20 17  4  19

15  1  6  19  19’  15  18  25  13  20’  20  5  15  20  6’

20  4  26  10  13’  5  11  16  13  6  5  17  18  11  25’
What Did You Learn?

Fill in the blank with the word that best fits.

<table>
<thead>
<tr>
<th>brain</th>
<th>external senses</th>
<th>mucus</th>
<th>saliva</th>
</tr>
</thead>
<tbody>
<tr>
<td>sense organ</td>
<td>smelling</td>
<td>taste buds</td>
<td></td>
</tr>
</tbody>
</table>

include hearing, sight, taste, touch, and smell

organ that controls what the body does

part of your sense of taste

sense sour, salty, bitter, and sweet

liquid created in the mouth to help with taste and digestion

the one for taste is the tongue

fluid used to trap junk that enters your nose
What Did You Learn?

Fill in the blank with the word that best fits.

<table>
<thead>
<tr>
<th>canals</th>
<th>echo</th>
<th>echolocation</th>
<th>electric sense</th>
</tr>
</thead>
<tbody>
<tr>
<td>infrared vision</td>
<td>internal senses</td>
<td>phototropism</td>
<td></td>
</tr>
</tbody>
</table>

include hunger, thirst, and pain

when a sound wave returns to the source of the sound

some animals use this to navigate, communicate, and find food

the use of an electric charge to move and survive

curved tunnels inside the ears

the ability of a plant to grow toward the sun

useful for seeing at night
Use this sheet to record the differences (on the lines) and similarities (in the box) of prokaryotic and eukaryotic cells.

<table>
<thead>
<tr>
<th>Prokaryotic</th>
<th>Eukaryotic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Use the clues to fill in the crossword puzzle.

Across:
3. small structures inside a cell with a specific job
4. the instructions for making everything an organism needs for survival
6. type of cell that contains organelles
7. gooey fluid that fills up a cell

Down:
1. type of cell found in bacteria
2. building blocks
5. nutrients, water, and air enter and exit a cell through this
What Did You Learn?

Answer the following questions about the chapter you read. Fill in the bubble next to the correct answer.

The covering that surrounds the cell and protects it is known as what?
- cytoplasm
- DNA
- membrane

Which type of cell has organelles?
- prokaryotic
- eukaryotic
- both

Which type of cell reacts to changes in the environment?
- prokaryotic
- eukaryotic
- both

Which type of cell is found in the bacteria kingdoms?
- prokaryotic
- eukaryotic
- both

Which of these is in order from largest to smallest?
- kingdom, population, tissue, organ, organism, cell
- kingdom, tissue, organism, population, organ, cell
- kingdom, population, organism, organ, tissue, cell
- kingdom, organism, population, tissue, organ, cell
Fill in the blank with the word that best fits.

small structures inside cells that have specific jobs

make up everything inside your body

populations are made up of individual

making another of your own kind

all the different kinds of life that exists

type of cell found in bacteria

largest grouping for living things

gooey fluid that fills a cell

type of cell found in animals
Reassemble the words by writing them on the lines.

<table>
<thead>
<tr>
<th>organ</th>
<th>mitoch</th>
<th>ribo</th>
</tr>
</thead>
<tbody>
<tr>
<td>ondria</td>
<td>nuc</td>
<td>tein</td>
</tr>
<tr>
<td>leus</td>
<td>some</td>
<td>elle</td>
</tr>
<tr>
<td>cyto</td>
<td>pro</td>
<td>plasm</td>
</tr>
</tbody>
</table>

Fill in the blank with the word that best fits.

- the boss of the cell: ____________
- the office which contains the boss: ____________
- these decode the message: ____________
- new messages read by organelles: ____________
- the message sent into the cytoplasm: ____________
Animal Cell

Color the animal cell according to the key at the bottom.

- Nucleus – red
- Ribosomes – orange
- ER – brown
- Lysosome – green
- Mitochondria – blue
- Vacuole – purple
- Golgi body – pink
- Cytoplasm – yellow
Use the key to decode the message.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>O</td>
<td>P</td>
<td>Q</td>
<td>R</td>
<td>S</td>
<td>T</td>
<td>U</td>
<td>V</td>
<td>W</td>
<td>X</td>
<td>Y</td>
<td>Z</td>
</tr>
</tbody>
</table>

-  📄  🗞️  ⌚️  📚  📋
-  📞  🔄  🐟  🛎️
-  📰  📞  🐟  🛎️  📚
Unscramble

Unscramble the words below, and then write definitions for each on the lines.

LOBGDYOIG (2 wds.) ________________________________

YHLHORLOCPL ________________________________

ZMEEYNS ________________________________

ALELCLWL (2 wds.) ________________________________

THRLCOPLOAS ________________________________

OLMSOSYE ________________________________
Experiment Worksheet

Fill out this worksheet as you work through the experiment.

Question: ________________________________

Hypothesis: ______________________________

Materials: ________________________________

Procedure: ______________________________

Observations/data: _______________________

Conclusion: _____________________________
Plant Cell

Color the plant cell according to the key at the bottom.

Nucleus – red
Ribosomes – orange
ER – brown
Chloroplast – green
Mitochondria – blue
Vacuole – purple
Golgi body – pink
Lysosome – yellow
### What Did You Learn?

Fill in the blank with the word that best fits.

<table>
<thead>
<tr>
<th>cell wall</th>
<th>chlorophyll</th>
<th>chloroplast</th>
<th>Golgi body</th>
<th>lysosome</th>
<th>photosynthesis</th>
<th>vacuole</th>
</tr>
</thead>
</table>

- rids the cell of waste
- organelle only found in plant cells
- wraps proteins into a bundle
- using sunlight, nutrients, and water to make food
- chemical that soaks up sunlight to use for energy
- stores extra water and nutrients
- a stiff structure that surrounds the cell and protects it
Fill in the Blanks

Fill in the blanks of the sentence using the words in the box.

<table>
<thead>
<tr>
<th>bacteria</th>
<th>flagella</th>
<th>liquid</th>
<th>push</th>
<th>whip</th>
</tr>
</thead>
</table>

The _____________ is a long __________ that helps to ________ a __________ through __________.

Fill in the blanks of this chart with a “yes” or “no.”

<table>
<thead>
<tr>
<th></th>
<th>Plant cell</th>
<th>Animal cell</th>
<th>Bacteria cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>cell membrane</td>
<td>yes</td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>cell wall</td>
<td></td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>chlorophyll</td>
<td>yes</td>
<td></td>
<td>some</td>
</tr>
<tr>
<td>chloroplast</td>
<td></td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>cytoplasm</td>
<td>yes</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>DNA</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>ER</td>
<td>yes</td>
<td></td>
<td>no</td>
</tr>
<tr>
<td>Golgi body</td>
<td>yes</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>lysosome</td>
<td></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>mitochondria</td>
<td>yes</td>
<td></td>
<td>no</td>
</tr>
<tr>
<td>nucleus</td>
<td></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>ribosome</td>
<td>yes</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>vacuole</td>
<td>yes</td>
<td></td>
<td>no</td>
</tr>
</tbody>
</table>
Fill in the blank with the word that best fits.

<table>
<thead>
<tr>
<th>cytoplasm</th>
<th>DNA</th>
<th>Golgi body</th>
<th>lysosome</th>
</tr>
</thead>
<tbody>
<tr>
<td>mitochondria</td>
<td>nucleus</td>
<td>ribosomes</td>
<td>vacuole</td>
</tr>
</tbody>
</table>

- rids the cell of waste
- the instructions
- packing station of the cell
- the largest organelle in a cell
- turns nutrients into energy
- the warehouse of the cell
- gel-like substance that fills a cell
- the decoders
Organelle Review

Gather objects to represent each of the organelles on the list.

<table>
<thead>
<tr>
<th>Organelle</th>
<th>Function</th>
<th>Object selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>cell wall</td>
<td>protects plant/bacteria cells</td>
<td></td>
</tr>
<tr>
<td>chlorophyll</td>
<td>collects sunlight in plants</td>
<td></td>
</tr>
<tr>
<td>ER</td>
<td>highway; sends messages</td>
<td></td>
</tr>
<tr>
<td>flagella</td>
<td>helps bacteria cell move</td>
<td></td>
</tr>
<tr>
<td>Golgi body</td>
<td>packages proteins</td>
<td></td>
</tr>
<tr>
<td>lysosome</td>
<td>gets rid of waste</td>
<td></td>
</tr>
<tr>
<td>mitochondria</td>
<td>makes energy for the cell</td>
<td></td>
</tr>
<tr>
<td>nucleus</td>
<td>houses the DNA</td>
<td></td>
</tr>
<tr>
<td>ribosome</td>
<td>decode; make proteins</td>
<td></td>
</tr>
<tr>
<td>vacuole</td>
<td>stores water and nutrients</td>
<td></td>
</tr>
</tbody>
</table>
Find the immune system words in the word search.

bacteria  disease  immune system
lysozyme  skin  white blood cells
What Did You Learn?

Fill in the blank with the word that best fits.

immune system over-working to get rid of something  
result when the immune system misses bacteria  
protects the body from things that can hurt it  
chemicals that attack bacteria  
bacteria-destroying enzyme  
attack foreigners in the body
Red and White Blood Cells

Use this sheet to record the differences (on the lines) and similarities (in the box) of red and white blood cells.

<table>
<thead>
<tr>
<th>Red blood cells</th>
<th>White blood cells</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Use this sheet to record your findings.

<table>
<thead>
<tr>
<th>Cup #</th>
<th>Contents</th>
<th>Prediction</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>nothing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>meat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>antibacterial agent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>meat and antibacterial agent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Unit Review

Fill in the blank with the word that best fits.

<table>
<thead>
<tr>
<th>cell wall</th>
<th>chlorophyll</th>
<th>ER</th>
<th>eukaryotic</th>
<th>flagella</th>
<th>Golgi body</th>
<th>lysosome</th>
<th>mitochondrion</th>
<th>nucleus</th>
<th>prokaryotic</th>
<th>vacuole</th>
</tr>
</thead>
</table>

turns nutrients into energy

single-celled organisms

whip-like tail to help with movement

surrounds and protects some cells

contains the DNA

uses sunlight to make food

more complex cells

bundles proteins

gets rid of waste

sends protein messages to organelles

stores extra water and nutrients
Unit Review

Answer the following questions about the unit. Fill in the bubble next to the correct answer.

Which of these represents the boss and office of a cell?
- DNA and nucleus
- ER and ribosomes
- Golgi body and lysosome

Which of the following is true?
- prokaryotic cells are found in plants
- eukaryotic cells have organelles
- prokaryotic and eukaryotic cells have chlorophyll

Which of these surrounds an animal cell?
- flagella
- cell membrane
- cell wall

Which of these surrounds a plant cell?
- flagella
- cell membrane
- cell wall

The gel-like substance that fills a cell is known as what?
- membrane
- mucus
- cytoplasm
- chloroplast
<table>
<thead>
<tr>
<th>Lightning</th>
<th>Heart</th>
<th>Cloud</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lightning</td>
<td>Heart</td>
<td>Cloud</td>
<td>Sun</td>
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</tr>
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<td>Sun</td>
</tr>
<tr>
<td>Lightning</td>
<td>Heart</td>
<td>Cloud</td>
<td>Sun</td>
</tr>
</tbody>
</table>
Dog Traits

Head Shape

Body Shape

Ears

Legs
Dog Traits

Hair

Tail

Eyes

Coat

Brown  Black  Red-Brown  Yellow
This page is your body bingo board.
Body Bingo

Cut out the pieces and arrange them on your board in a random order. There are more pieces than squares for variation purposes.

- stomach
- brain
- large intestine
- trachea
- liver
- diaphragm
- eye
- ear
- pancreas
- nerve
- tongue
- muscle
- lungs
- heart
- nose
- bone
- small intestine
- kidney
- gallbladder
- esophagus
Body Bingo

Have someone read out the questions and see if you have the answer on your bingo board. Can you figure it out without the answer being given to you?

1. This part controls all your body systems. (brain)
2. This part mixes your food into a paste. (stomach)
3. This part leads from the mouth to the stomach. (esophagus)
4. This helps you digest sugars. (pancreas)
5. This organ has a part called the pupil. (eye)
6. This muscle allows the lungs to expand. (diaphragm)
7. Vitamins and minerals pass into blood here. (small intestine)
8. This body part moves your bones. (muscles)
9. If you “swallow wrong,” your food tries to go here. (trachea)
10. This body part is made up of valves. (heart)
11. This organ keeps your blood clean. (liver)
12. This organ filters the liquid in your body. (kidney)
13. This organ stores bile. (gall bladder)
14. Taste buds can be found here. (tongue)
15. These transfer oxygen from the air to your blood. (lungs)
16. This organ removes extra water from your food. (large intestine)
17. This organ includes the cochlea. (ear)
18. These send sensory messages to your spinal cord. (nerves)
19. This gives your body structure and support. (bone)
20. This body part is responsible for smell as well as taste. (nose)
Use this sheet to record your observations.

<table>
<thead>
<tr>
<th>Plants</th>
<th>Things that need plants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fill in the blanks.

Gas produced by factories, vehicles, and humans exhaling

__________________________

Energy source; comes from the sun

__________________________

Soaked up through the roots; carries nutrients

__________________________

Tree produces this to use as its food

__________________________

Tree produces this gas humans need to survive

__________________________
Experiment Worksheet

Fill out this worksheet as you work through the experiment.

Question: ____________________________

Hypothesis: ____________________________

Materials: ____________________________

Procedure: ____________________________

Observations/data: ____________________________

Conclusion: ____________________________
Fill out this worksheet as you work through the experiment.

**Plant in the dark**
What I think will happen: ______________________

What actually happened: ______________________

**Plant without water**
What I think will happen: ______________________

What actually happened: ______________________

**Plant with light and water**
What I think will happen: ______________________

What actually happened: ______________________
Plant Categories

Write or draw as many examples of you can think of for each category.

<table>
<thead>
<tr>
<th>Roots</th>
<th>Seeds</th>
<th>Leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fruits</th>
<th>Flowers</th>
<th>Stems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Tree Observation

Sit quietly near your tree. Take notes on your observations.

<table>
<thead>
<tr>
<th>Looking</th>
<th>What living things do you see in and near your tree?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening</td>
<td>Do you hear animals playing or singing in the tree? Do you hear wind moving leaves or branches?</td>
</tr>
<tr>
<td>Touching</td>
<td>Is the bark smooth or rough? Are the leaves soft or prickly?</td>
</tr>
<tr>
<td>Smelling</td>
<td>What does the bark smell like? The leaves? Are there flowers on the tree?</td>
</tr>
</tbody>
</table>

Draw the tree. Use a tape measure to record the measurement around the tree.

- Make a rubbing of the bark.
- Make a rubbing or trace a leaf.

What season is it now?

What kind of tree are you observing?

Any other observations? Has the tree changed since the previous season?
## Tree Observation

Sit quietly near your tree. Take notes on your observations.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draw the tree. Use a tape measure to record the measurement around the tree.</td>
<td>Looking: What living things do you see in and near your tree?</td>
</tr>
<tr>
<td>Make a rubbing of the bark.</td>
<td>Listening: Do you hear animals playing or singing in the tree? Do you hear wind moving leaves or branches?</td>
</tr>
<tr>
<td>Make a rubbing or trace a leaf.</td>
<td>Touching: Is the bark smooth or rough? Are the leaves soft or prickly?</td>
</tr>
<tr>
<td>What season is it now?</td>
<td>Smelling: What does the bark smell like? The leaves? Are there flowers on the tree?</td>
</tr>
<tr>
<td>What kind of tree are you observing?</td>
<td>Any other observations? Has the tree changed since the previous season?</td>
</tr>
</tbody>
</table>
Scavenger Hunt

Use this page for your scavenger hunt if it is currently fall.

Fall

Look for these:
- A falling leaf
- A crawling insect
- A bird
- 3 different color leaves
  Colors found: ____________________________

Listen for these:
- Something moved by the wind
- Leaves crunching
- An animal’s call
- An insect
  What else do you hear?

Smell these:
- Campfire
- Pine cones
  What else do you smell?

Touch these:
- A crunchy, crinkly leaf
- A smooth rock
- Tree bark
  What did it feel like?
Scavenger Hunt

Use this page for your scavenger hunt if it is currently spring.

Spring

Look for these:

- Mud
- A bird
- A small wildflower
- Weeds
- A crawling insect
- New leaves on a tree
- A bird’s nest
- A tall wildflower
- A worm
- A flying insect

Listen for these:

- Something moved by the wind
- A bird’s song/call
- An animal’s call
- An insect

What else do you hear?

Touch these:

- A warm, sunny spot
- A shady, cool spot
- Flower petals
- A smooth rock
- Wet mud
- Tree bark

What did it feel like?

Smell these:

- A flower
- Grass

What else do you smell?
Scavenger Hunt

Use this page for your scavenger hunt if it is currently summer.

Summer

Look for these:

- A bird flying
- Fruit or berries
- A crawling insect
- Something red: ___________
- Something green: ___________

Listen for these:

- A flying insect
- Something moved by the wind
- An animal’s call
  What else do you hear?

Touch these:

- Something hot from the sun
- A smooth rock
- Somewhere cool and shady
- Tree bark
  What did it feel like?

Smell these:

- A flower
- Grass
  What else do you smell?
Scavenger Hunt

Use this page for your scavenger hunt if it is currently winter.

Winter

Look for these:

- Animal tracks
- An acorn or pinecone
- Berries on a plant
- Trees with no leaves
- A bird
- A feather
- Something with thorns
- Trees with a few leaves

Listen for these:

- An animal’s call
- What animal did you hear?
- Something moved by the wind
- What else do you hear?

Touch these:

- Something wet
- A smooth rock
- Smooth tree bark
- Rough tree bark
- A pinecone

Smell these:

- Hot cocoa!
- A crackling fire
- What else do you smell?
Soil Observations

Fill out this worksheet as you observe your soil.

I found in the soil: ____________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

I think that in the soil there might also be: _________________________________

___________________________________________________________________________

___________________________________________________________________________

Measure how deep your soil is: ________________________________

Draw a picture of your soil or the things you found in it.
Use the boxes to record your observations.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
# Soil Substitute Observations

Use the boxes to record your observations.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2.</td>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
<td>5.</td>
<td>6.</td>
</tr>
<tr>
<td>7.</td>
<td>8.</td>
<td>9.</td>
</tr>
</tbody>
</table>

1. ____________________________
2. ____________________________
3. ____________________________
4. ____________________________
5. ____________________________
6. ____________________________
7. ____________________________
8. ____________________________
9. ____________________________
Germination Observations

Use the boxes to record your observations.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
<td>6.</td>
<td>7.</td>
<td>8.</td>
</tr>
<tr>
<td>9.</td>
<td>10.</td>
<td>11.</td>
<td>12.</td>
</tr>
<tr>
<td>13.</td>
<td>14.</td>
<td>15.</td>
<td>16.</td>
</tr>
<tr>
<td>17.</td>
<td>18.</td>
<td>19.</td>
<td>20.</td>
</tr>
</tbody>
</table>
Germination

Radicle  Hypocotyl  Seed Coat  Cotyledon  Plumule Leaves  Roots
Minibook Template

Use this template to make your minibook.

COVER

4-Window Minibook

Valley fold

Mountain fold

Before cutting, lightly number the pages with a pencil.

Cut on solid lines. Fold on dotted lines.

BACK
Glue this sheet to the inside of cover/back.

Valley fold
Label the plant parts.
Does it Come from a Plant?

Do the following come from plants? Fill in the chart with yes or no. If the item does come from a plant, name the plant it comes from.

<table>
<thead>
<tr>
<th>Object</th>
<th>Yes or No/ Name of Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper clip</td>
<td></td>
</tr>
<tr>
<td>Tea/tea bag</td>
<td></td>
</tr>
<tr>
<td>Rope</td>
<td></td>
</tr>
<tr>
<td>Knife</td>
<td></td>
</tr>
<tr>
<td>Cotton ball</td>
<td></td>
</tr>
<tr>
<td>Thread</td>
<td></td>
</tr>
<tr>
<td>Toothpicks</td>
<td></td>
</tr>
<tr>
<td>Chopsticks</td>
<td></td>
</tr>
<tr>
<td>Paper</td>
<td></td>
</tr>
<tr>
<td>Marble</td>
<td></td>
</tr>
</tbody>
</table>
Leaf Rubbings

Use this page for your first leaf rubbing.

Height at the tallest point: ______________ 

Width at the widest point: ______________ 

Color: ________________

Texture (How does it feel?): ____________________________

Any other observations: _____________________________

_________________________________________________
Leaf Rubbings

Use this page for your second leaf rubbing.

Height at the tallest point: ________________
Width at the widest point: ________________
Color: ________________
Texture (How does it feel?): ________________________________
Any other observations: ________________________________

__________________________________________
__________________________________________
Fill in the sections of this chart as you work through the project.

<table>
<thead>
<tr>
<th>Topic: ____________________________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>What I Know</td>
</tr>
<tr>
<td>What I Want to Know</td>
</tr>
<tr>
<td>What I Learned</td>
</tr>
</tbody>
</table>
Draw the process from pollen to fruit.
Fill in the sections of this chart as you work through the project.

<table>
<thead>
<tr>
<th>Topic: ________________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What I Know</strong></td>
</tr>
<tr>
<td><strong>What I Want to Know</strong></td>
</tr>
<tr>
<td><strong>What I Learned</strong></td>
</tr>
</tbody>
</table>
Find the plant words in the word search.

autotrophic  conifer  fern
moss  nonflowering  photosynthesis
rhizomes  vascular
What Did You Learn?

Fill in the blank with the word that best fits.

an example of a non-flowering, vascular plant

doesn’t produce flowers, but does produce seeds

make their own food

areas on a root where a new plant can grow

cannot move water from roots to stem to leaves

an example of a nonvascular plant
Use these paper flowers to complete the experiment.
What Did You Learn?

Fill in the blank with the word that best fits.

- **algae**  
- decomposers  
- enzymes

- heterotrophic  
- protozoans  
- slime molds

---

**chemicals made by an organism to help the organism**  
________________________

**animal-like protists**  
________________________

**do not make their own food**  
________________________

**plant-like protists**  
________________________

**these break down biotic material into more useful forms**  
________________________

**fungus-like protists**  
________________________
Complete these lapbook pieces for lessons 151 and 152.

Steps of the Scientific Method piece:
Cut out on outer lines. Accordion fold leaving title section on top. Write one step in each section.

What is the Scientific Method?

What is a hypothesis?

Glue this side to the lapbook

Glue this side to the lapbook
Cut on the dark black lines. Fold on the center line and glue to your page where instructed. Under each flap, write a description of that variable.
Put the steps of the scientific method in order.

1. Make observations
2. Identify the problem
3. Study the data
4. State your hypothesis
5. Collect and record data
6. Make conclusions
7. Test your hypothesis
Form a Question

Formulate your question and fill it in here. You can cut out the pieces if you’d like to make a lapbook.

Who?
What?
Where?
When?
Why?
Which?
How?

My Question

________________________

________________________

________________________

________________________

________________________

________________________

________________________

________________________
Use these pages to make notes on your topic.

**Topic:**

**Resource 1:**
- Info: ________________
- Info: ________________
- Info: ________________
- Info: ________________

**Resource 2:**
- Info: ________________
- Info: ________________
- Info: ________________
- Info: ________________

**Resource 3:**
- Info: ________________
- Info: ________________
- Info: ________________
- Info: ________________

**Resource 4:**
- Info: ________________
- Info: ________________
- Info: ________________
- Info: ________________
<table>
<thead>
<tr>
<th>Resource 5:</th>
<th>Info:</th>
<th>Info:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource 6:</th>
<th>Info:</th>
<th>Info:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource 7:</th>
<th>Info:</th>
<th>Info:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource 8:</th>
<th>Info:</th>
<th>Info:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource 9:</th>
<th>Info:</th>
<th>Info:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis and Variables

Use this page to record your hypothesis and variables. You can cut the pieces out if you’re making a lapbook.

My Hypothesis: ____________________________

______________________________

______________________________

My independent variable(s):

______________________________

______________________________

My controlled variable(s):

______________________________

______________________________

Variables

Independent:
What I will change

Dependent:
What I will be measuring and observing

Controlled:
What I will keep the same
My Experiment

Use these pages to record your materials and the steps in your experiment. It’s okay if you don’t fill up all of the space.

My Materials: ________________________________

______________________________

______________________________

______________________________

______________________________
Steps in My Experiment

Steps

Steps

Steps

Steps
Formulate your question and fill it in here. You can cut out the pieces if you’d like to make a lapbook.

Who?  
What?  
Where?  
When?  
Why?  
Which?  
How?
Use these pages to make notes on your topic.

Topic: ______________________________________

Resource 1: ______________________________________
Info: ______________________ Info: ______________________
Info: ______________________ Info: ______________________
Info: ______________________ Info: ______________________

Resource 2: ______________________________________
Info: ______________________ Info: ______________________
Info: ______________________ Info: ______________________
Info: ______________________ Info: ______________________

Resource 3: ______________________________________
Info: ______________________ Info: ______________________
Info: ______________________ Info: ______________________
Info: ______________________ Info: ______________________

Resource 4: ______________________________________
Info: ______________________ Info: ______________________
Info: ______________________ Info: ______________________
Info: ______________________ Info: ______________________
Hypothesis and Variables

Use this page to record your hypothesis and variables. You can cut the pieces out if you’re making a lapbook.

My Hypothesis: _______________________

My independent variable(s):

____________________________________

____________________________________

My controlled variable(s):

____________________________________

____________________________________

Variables

Independent:
What I will change

Dependent:
What I will be measuring and observing

Controlled:
What I will keep the same
Use these pages to record your materials and the steps in your experiment. It’s okay if you don’t fill up all of the space.

My Materials:

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
Steps in My Experiment

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
**Tree Observation**

Sit quietly near your tree. Take notes on your observations.

<table>
<thead>
<tr>
<th>Looking</th>
<th>Listening</th>
<th>Touching</th>
<th>Smelling</th>
<th>Any other observations?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What living things do you see in and near your tree?</td>
<td>Do you hear animals playing or singing in the tree? Do you hear wind moving leaves or branches?</td>
<td>Is the bark smooth or rough? Are the leaves soft or prickly?</td>
<td>What does the bark smell like? The leaves? Are there flowers on the tree?</td>
<td>Has the tree changed since the previous season?</td>
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</table>

- Draw the tree. Use a tape measure to record the measurement around the tree.
- Make a rubbing of the bark.
- Make a rubbing or trace a leaf.
- What season is it now?
- What kind of tree are you observing?