THIRD GRADE
WORKBOOK

student ______________________
PROBLEM: Are there different types of invertebrates?

PREDICTION:

PROCEDURE: Look at the different invertebrates by using your eyes, hand lens, or microscope. Draw and describe your specimens.

<table>
<thead>
<tr>
<th>INVERTEBRATE</th>
<th>DESCRIBE</th>
<th>DRAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPONGE</td>
<td></td>
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<tr>
<td>SNAIL</td>
<td></td>
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<tr>
<td>CLAM</td>
<td></td>
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<tr>
<td>SEA COOKIE</td>
<td></td>
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<tr>
<td>CORAL</td>
<td></td>
<td></td>
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<tr>
<td>BARNACLE</td>
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</tbody>
</table>

CONCLUSION: What words can be used to distinguish the different invertebrates?
MARINE INVERTEBRATES

Use the Internet or books to find the real colors of these organisms that live in the sea.

- Barnacle (Arthropod)
- Nautilus (Mollusca)
- Chiton (Mollusca)
- Seastar (Echinoderm)
- Sea Anemone (Cnidaria)
- Cone shell (Mollusca)
- Lobster (Arthropod)
LIFE CYCLE - ORGANISMS (3B)

PROBLEM: How can you tell one arthropod from another?

PREDICTION: ________________________________

PROCEDURE: Sort the insects using and try to identify them using the worksheet. Describe the head, body and appendages. Fill in the information below.

<table>
<thead>
<tr>
<th>insect name</th>
<th>head</th>
<th>body</th>
<th>appendages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

Look at the horseshoe crab and crab. Describe them.

Horseshoe crab ________________________________

Crab ________________________________

Look at the brine shrimp under the microscope. Draw what you see on the back of the lab sheet. Describe what you see. Can you tell the difference between a female and male brine shrimp? How?

_____________________________________________________________________

_____________________________________________________________________

CONCLUSIONS: What characteristics do all arthropods share?

_____________________________________________________________________

_____________________________________________________________________

Describe how the arthropods are different from each other.

_____________________________________________________________________

LIFE CYCLE - HUMAN BIOLOGY (3A)

- Lungs
- Diaphragm
- Kidneys
- Liver
- Stomach
- Small Intestines
- Pancreas
- Gallbladder
- Large Intestines
- Heart
- Cerebrum
- Cerebellum
LIFE CYCLE - HUMAN BIOLOGY (3A)

PROBLEM: How can you determine what is going on inside your body?

PREDICTION:

PROCEDURE: mirrors, stethoscope, bag of bones
Look at the following parts of your body and see if you can determine what it is telling you about the inside. Describe what you see and try and determine the body system it belongs to. Consult reference material.

<table>
<thead>
<tr>
<th>PART OF BODY</th>
<th>DESCRIBE WHAT HAPPENS</th>
<th>PART OF WHAT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Movement of chest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Nails</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Pulse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Fold under eye</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Underside of tongue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Mid back</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Skin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Arm, flex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. arm, bend with no force</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. hair</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSIONS: Is there a relationship between the external part of the human body and the internal parts? Which systems does our body reflect the greatest?
RESPIRATORY SYSTEM

USING THE WORDS IN THE DIAGRAM, EXPLAIN HOW THE RESPIRATORY SYSTEM FUNCTIONS OR WORKS.

VOCABULARY

OXYGEN
CARBON DIOXIDE
PHARYNX
LARYNX
TRACHEA
BRONCHI
LUNG
AIR SACS
CAPILLARIES
RESEARCH TOPIC: How do the senses work?
LIFE CYCLE - HUMAN BIOLOGY (3B)

PROBLEM: How do we taste?

PREDICTION:

PROCEDURE: There are two experiments in this lab. Follow directions for each.

Experiment 1. MATERIALS: sugar cubes, towels

Dry your tongue with a towel. Put a sugar cube on your tongue. Can you taste it? Explain.

Experiment 2. MATERIALS: sugar + water (sweet), vinegar (sour), salt + water (salty), baking soda + water (bitter), cotton swabs, small containers, paper cups

Dip a cotton swab into a solution of each item and find out which area of your tongue has the sweetest, sourest, and saltiest sensation. Sip water after each item. Do this experiment carefully.

<table>
<thead>
<tr>
<th></th>
<th>salt (salt)</th>
<th>sour (vinegar)</th>
<th>sweet (sugar)</th>
<th>bitter (baking soda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>area of my tongue where I sensed the taste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>area of my partner's tongue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSION: In the diagram below, fill in the type of tastes your tongue sensed next to the four areas marked.
THE ORGANS OF THE DIGESTIVE SYSTEM ARE:

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>ORGAN NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>
DESCRIBE THE DIFFERENCES IN GERMINATION OF THE 4 SEEDS

- squash
- stringbean
- pea
- corn
LIFE CYCLE - PLANTS (3A)

PROBLEM: Do plants need sun and water to live?

PREDICTION:

MATERIALS: 4 plants, 2 cans
PROCEDURE: Record a description of your 4 plants before you start the experiment, then place the plants where they belong.

PLANT A:

PLANT B:

PLANT C:

PLANT D:

<table>
<thead>
<tr>
<th>RECORD OF EXPERIMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>1st Day</td>
</tr>
<tr>
<td>2nd Day</td>
</tr>
<tr>
<td>5th Day</td>
</tr>
<tr>
<td>8th Day</td>
</tr>
<tr>
<td>14th Day</td>
</tr>
</tbody>
</table>

CONCLUSION: Summarize your results.
LIFE CYCLE - PLANTS (3B)

PROBLEM: How can you detect plant cellulose in a product?

PREDICTION: _______________________________________________________

MATERIALS: cellulose samples, microscope

PROCEDURE: Look at the samples at your table. Describe the characteristics that you think connect the sample with plants. Draw your specimen.

<table>
<thead>
<tr>
<th>SAMPLE</th>
<th>DRAWING</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

CONCLUSION: Are there any characteristics that can help you determine if a product is made from a plant? Explain.
Using at least six of the key words listed below write a paragraph about why plants are important. Use reference material or the Internet to find information.

- cash crops
- soil conservation
- photosynthesis
- food
- water run off
- shelter
- reduce wind
- reduce noise
- beautiful
- raw materials
WHAT IS MY BIOME?
LIFE CYCLE - NATURAL ENVIRONMENT (3A)

**PROBLEM:** Do geographic biomes have certain organisms that live in that specific area (endemic population)?

**PREDICTION:**

___________________________________________________________

**MATERIALS:** Animal Inflatable Globes

Look at the inflatable globe and locate the different biomes listed on the lab sheet. Consult reference material your teacher may have and determine which animals or plants live in that specific biome. List them below.

<table>
<thead>
<tr>
<th>BIOME</th>
<th>ORGANISMS FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUNDRA</td>
<td></td>
</tr>
<tr>
<td>DESERT</td>
<td></td>
</tr>
<tr>
<td>TROPICAL FOREST, JUNGLE</td>
<td></td>
</tr>
<tr>
<td>FOREST</td>
<td></td>
</tr>
<tr>
<td>PRAIRIE</td>
<td></td>
</tr>
<tr>
<td>MEDITERRANEAN</td>
<td></td>
</tr>
<tr>
<td>MOUNTAIN FLORA AND MOORLAND</td>
<td></td>
</tr>
<tr>
<td>ICE/SNOW</td>
<td></td>
</tr>
</tbody>
</table>

**CONCLUSION:** Do specific organisms live in specific areas? Give two examples.

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

_____________________________________________________________________

Does the map correctly reflect the vegetation type? Explain.

_____________________________________________________________________

2. What is the vegetation in the capital of our country. Name the capital and then write down the vegetation?

_____________________________________________________________________

3. The cornbelt is in the midwest of the United States. What type of vegetation does the map refer this to?

_____________________________________________________________________

4. What is the difference between a warm and cold desert?

_____________________________________________________________________

5. Canada is mainly what vegetation type?

_____________________________________________________________________

6. Where is there little or not vegetation according to this map.

_____________________________________________________________________

7. Name all the forests.

_____________________________________________________________________

_____________________________________________________________________

8. New York State is in what type of vegetation?

_____________________________________________________________________

9. Nevada is in what type of vegetation?

_____________________________________________________________________

10. Where are the Redwood Forests located (in what vegetational biome)?

_____________________________________________________________________

LIFE CYCLE - NATURAL ENVIRONMENT (3A)
POST
LIFE CYCLE - NATURAL ENVIRONMENT (3B)

PRE
LIFE CYCLE - NATURAL ENVIRONMENT (3B)

PROBLEM: Can you determine how a gastropod eats?

PREDICTION:

____________________________

MATERIALS: package of shells

Determine how the specimens differ by comparing them with the pictures below. State whether you think the shell came from a carnivore or herbivore.

1. ____________________________________________
   ____________________________________________

2. ____________________________________________
   ____________________________________________

3. ____________________________________________
   ____________________________________________

4. ____________________________________________
   ____________________________________________

5. ____________________________________________
   ____________________________________________

6. ____________________________________________
   ____________________________________________

7. ____________________________________________
   ____________________________________________

8. ____________________________________________
   ____________________________________________

CONCLUSION: How can you determine if a snail is a herbivore or carnivore?

___________________________________________

___________________________________________
WAS THE ONCE-LER GREEDY? EXPLAIN.