**Life Science** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Block \_\_\_\_\_\_\_\_\_\_

**Hatching Rate of Brine Shrimp**

Student Objectives-You will be able to:

* Recall and apply the scientific method to a real life situation.
* Improve your observation skills.

**Introduction:** You are the owner of **Sea Monkey Inc.** and would like to give your customers the best results from your product. You decide to investigate to see if you can improve your hatch rate. Sea monkeys are actually brine shrimp and are also called artemia. You sell dried(dormant) resting eggs through pet supply shops and other stores.

**Background Information:** Brine shrimp are found in saline(salt) lakes. They are sensitive to light. They may lay eggs every four or five days. Dried eggs can last for several years if they are kept in a cool place. Eggs hatch in one to three days.

1. **Ask a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. **Form a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. **Design/perform an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:**

**Materials:**

Salt water

Glass beaker Saran wrap

Brine shrimp eggs magnifying glass

Graduated cylinder Wooden stirring stick

Masking tape Scrap paper

**Procedures:**

**Day 1:**

1. Obtain a piece of scrap paper. Place the paper on the balance. Press on/zero.
2. Pour the desired amount of salt on the paper. Write the mass here: **\_\_\_\_\_\_\_\_\_ grams**
3. Measure out 100 mL of water using the graduated cylinder and add to beaker.
4. Add the salt to the beaker. Mix until the salt is dissolved.
5. Obtain brine shrimp eggs from the teacher and pour into salt water mixture.
6. Write your name on the saran wrap with permanent marker, cover the beaker using it, and place by the gecko cage.
7. Clean up your lab area.

**Day 2:**  Each lab group will collect data on its beaker to

share with the class.

1. Remove the Saran wrap from your beaker.
2. Place the center of your beaker in the

middle of the cross.

1. Trace your beaker around the cross.
   * Using a magnifying glass, count(as best you can) the # of HATCHED shrimp in *one* of the parts.
   * Multiply by 4 and record your data on the class data table.
   * Write your data on the board.
2. Collect the data from the remaining lab tables.

**Data:**

|  |  |  |
| --- | --- | --- |
| **Group Number** | **Amount of Salt** | **Number of hatched brine shrimp** |
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1. **Analyze the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
2. Which amount of salt produced the most hatched brine shrimp?
3. Which amount of salt produced the least?
4. What is the independent variable?
5. What is the dependent variable?

On the graph paper, make a **line graph** representing the data collected in your data chart.



**5. Analyze the data and draw conclusions(Communicate results)**- Write a paragraph below that explains:

- Support or reject your hypothesis

-Which concentration of salt water should be recommended to our customers for hatching their sea monkeys?

-Use the data to support your conclusion

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* When counting the hatched brine shrimp, what is one thing you could do to insure that your count was more accurate?