Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_

Lab: Super Worms

**Domain**: Eukarya, **Kingdom:** Animalia, **Phylum:** Arthropoda, **Class:** Insecta, **Order**: Coleoptera,

**Family**: Tenebrionidae, **Genus**: Zophobas, **species**: morio

**Common name**: Super Worm **Scientific name**: Zophobas morio *or* Z. morio

(Note: the species name as written in the Scientific name or Binomial name is in lower-case!)

“Super Worms” are **not** worms at all, they are caterpillars. Caterpillars are the *larva* form of some insects. Other insects that have a caterpillar stage are butterflies and moths. Super Worm caterpillars are mealworms. Meal is cereal – wheat, corn, oats, etc. Mealworms eat cereal (plants) only, and therefore are herbivores. The caterpillars are defenseless. They have no stinger, no biting jaws, no venom, etc. Their only defense is camouflage. Caterpillars eat a great amount of food. They have an exoskeleton that is hard. So, in order to grow, they must shed their skin. This is called molting. Once the skin is shed, the caterpillar may grow in size again. Once it is big enough, it undergoes metamorphosis into a pupa, and then the adult. Without the caterpillar form of an insect the beautiful adult butterflies we see would not be around us. By the way, before the mealworm was a caterpillar, it was an egg.

1. List the four stages of complete metamorphosis in order from beginning to end.
2. Do not injure the mealworm. However, using your powers of observation… seeing… list three things of interest about the mealworm. If you have a hand lens, the simplest microscope called a magnifying glass, use it to help you.
3. b. c.
4. Now, using your index card as a shade, try to determine if the mealworm is attracted to light or hides from light.

*Let’s try it in the form of a hypothesis*:

If I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then the mealworm moves to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

*The test is the* experiment.

*The conclusion is the answer to the hypothesis.*

The hypothesis I gave is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ . (*true or false*)