

## CRICKET EXPERIMENT IDEAS - Choosing a question and an Hypothesis

### QUESTION: How do changes in temperature affect cricket behavior?"

- **Hypotheses Ideas:**

- Crickets will slow down in cooler temperatures.
- Crickets will slow down in warmer temperatures.
- Crickets will chirp more in cooler temperatures.
- Crickets will chirp more in warmer temperatures.
- Temperature will not affect cricket behavior.

### QUESTION: How do predators affect the movement of crickets?

- **Hypothesis Ideas:**

- Crickets will move away from the predator.
- Crickets will not move in the presence of a predator (dead).
- Crickets will continue random movements.

### QUESTION: How does the introduction of another cricket affect the behavior of crickets?

- **Hypothesis Ideas:**

- A male cricket allowed in a tank for 5 minutes will exhibit aggressive behavior when another male enters the tank.
- A male cricket allowed in a tank for 5 minutes will start chirping when a female enters a tank.
- Two males in a tank for 5 minutes will attack each other.
- Two males in a tank for 5 minutes will chirp when a female is added to the tank.

### QUESTION: How does light affect the behavior of crickets?

- **Hypothesis Ideas:**

- A light turned on a tank of one cricket will cause it to move toward the light.
- A light turned on a tank of 10 crickets will cause them to move away from the light.
- A tank of a lit and a dark end will cause more crickets to move toward the lit end.
- A tank of a lit and a dark end will cause more crickets to move toward the dark end.

### QUESTION: What type of food do crickets prefer?

- **Hypothesis Ideas:**

- If an apple, a piece of lettuce, and oatmeal are placed inside a tank, more crickets will eat the lettuce.
- If an apple, a piece of lettuce, and oatmeal are placed inside a tank, more crickets will eat the apple.
- If an apple, a piece of lettuce, and oatmeal are placed inside a tank, more crickets will eat the oatmeal.
- If an apple, a piece of lettuce, and oatmeal are placed inside a tank, more crickets will not eat any one type of food over another.

### QUESTION: How does the introduction of a cricket of the opposite sex affect mating behavior?

- **Hypothesis Ideas:**

- If a female is in a tank for 5 minutes, and a male is introduced the female will approach the male and begin mating behaviors. (Identify what mating behaviors are.)
- If a female is in a tank for 5 minutes, and 5 males are introduced, the female will approach all the males and begin mating behaviors. (Identify what mating behaviors are.)

#### **TIPS:**

- Be specific of what kind of behaviors you are noticing.
- Do not bump or disturb the tank any more than necessary.
- Decide how you will be able to tell the crickets apart.
- Be gentle when handling the crickets. Use a cup to avoid smashing them.
- Have your charts all ready to go when observing the trials.
- Remember to have a control. This is the set-up without the variable. (an area with no food, a neutral temperature zone, an area with no crickets. Etc.)
- Have the room as quiet as possible
- Have the room dimmed.
- Remember you have to run three trials.
- Be sure to only test one variable at a time.