

Title: **Lab- Escape!! Survival of the Fittest Grasshopper**

Objective: Design and Measure a “grasshopper’s” ability to survive in the predator-prey relationship by escaping with a high jump, a far jump or a distracting jump.

Materials: paperclip meter stick
 ruler Calculators

Preparing: (answer on the back)

1. List 5 ways a prey could survive a predator.
2. List 3 predators of a grasshopper.
3. List 3 ways a grasshopper could survive a predator.

Procedure:

1. Gather the materials listed.
2. Design a paper clip grasshopper. There are several variations that are possible. The main idea is to pull the paper clip open and use the paperclip like a spring by compressing it with your finger against the table top and releasing it: this will make it ‘jump’.
3. Practice your jump & adjust your paperclip grasshopper until you can get him to jump **high, far, and with a distracting behavior** (= a confusing movement or unexpected jump to gain time to escape).
4. Name the grasshopper and record in on your data table.
5. Now join your group and measure the grasshoppers’ jumps. One member will make their grasshopper jump, one will need to measure the jump with the ruler or meterstick and a third member can record the measurement. Measure each type of jump three times. Remember to include units.
6. Calculate the average of the three jumps.
7. Cleanup your work area and return all materials.
8. Exchange averages of the grasshoppers’ jumps within the group on the second data table.
9. Circle the best grasshopper for each of the survival skills from your group.

Data table for _____ (grasshopper’s name):

#	High	Far	Distracting Behavior
1			
2			
3			
average			

Data table for group:

Student Name	Grasshopper name	High jump average	Far jump average	Distracting behavior

Conclusion Paragraphs: **topic** - The ability to survive the predator-prey relationship = Escape?

A. What would be the effect if a hungry grasshopper-eating bird saw your group’s grasshoppers? Explain. Base your predictions on the results of your lab. Include each grasshopper and each of the survival skills.

B. Explain the effect if a hungry grasshopper-eating snake was the predator. Base your predictions on the results of your lab. Include each grasshopper and each of the survival skills.