

All About Bugs

Investigation Data Sheet



Build a Bug Vacuum

There are over one million species of bugs that have been discovered. Scientists separate bugs into different groups in order to tell them apart. Two characteristics that all bugs have in common are a hard outer skeleton and bodies that are broken up into segments.

Objective

Build a bug vacuum trap to examine bugs that are too tiny to catch with your fingers.

Materials

- a small, clear plastic container
- 2 straws
- a rubberband
- some putty
- a few pieces of gauze
- a single-hole puncher

Safety Notice: All applicable laboratory safety rules must be followed. Students should not perform any experimental activity without the teacher's supervision and express permission. Students must follow safety guidelines and wear appropriate protective gear.

Procedure

1. Take the hole puncher and carefully punch two holes on opposite sides of the container. The holes should be large enough for each straw to fit through. You might need to ask an adult for help with this.
2. Slide one straw halfway through the first hole and put putty around the straw so that it closes any gaps around the hole. Be sure to seal both the inside and the outside of the hole in the container.
3. Cover one end of the other straw with a small piece of gauze, wrapping a rubber band around it to hold it in place. Now take this second straw and slide it through the empty hole in the container from the inside, making sure you seal the hole with putty, just like the first straw. The end of the straw with the gauze wrapped around it should be on the inside of the container.
4. Put the lid on the container. You can now test your new bug vacuum trap.
5. It's important that you only try to catch bugs small enough to fit easily through the straw. Suck through the straw that is wrapped with a piece of gauze. You will create a vacuum inside the container. This lets you pull the bugs in, without pulling them through the second straw. When you're done looking at the bugs, remember to set them free. That way they can return to their proper home in nature.

Conclusions

- Use the space below to sketch the bugs you captured. What characteristics do these bugs have in common? How do they differ?

- Can you classify the bugs you captured as insects? Why or why not?

- What effect do these bugs have on their environment?
