Snail Slime

Science Film Festival Knowledge Through Entertainment

Science Film Festival Film

House of Little Scientists – Snail

Introduction

Snails are amazing figure skaters. They move their long, muscular foot along the ground, sliding on a rink that they make with their slime. This allows the snail to move across bumpy places that might otherwise hurt its sensitive foot.

So what is snail slime made of? Slime is made of sugars and protein, and it's fairly similar to the goopy mucus that comes out of your nose when you are sick. One difference is the way the snails use their slime: they use it to move. Snail slime a slippery liquid when it's under the snail, but when the snail has moved on, the slime left behind starts to become stickier. These two different properties allow the snail to glide over rough terrain and climb up the sides of plants and trees without falling off. Snail slime is so amazing that it's even been used in beauty creams. Now that's a sticky situation!

Key Objectives

- To understand that snail slime is a kind of mucus, an external bodily secretion, which is produced by snails.
- To understand the flat underside of the snail (known as the foot) exudes large quantities of slippery slime, on which the snail glides along.
- To understand that snails move by waves of muscle contraction in the foot.

Materials

- Snail
- Sand
- Pieces of leaf
- Dime
- Piece of clear plastic
- Lettuce
- Notebook and pencil

Safety Instructions

Ensure that the students wash their hands before and after the experiment.

Beginner

Resource Type
Experiment

Topics
Snail Slime | Mobility | Adhesion

Subjects
Life Science | Biology

Keywords
Snail | Slime | Adhesion

Time For Activity
30 – 45 minutes

Guiding Questions

1. What will happen if you allow the snail to move across the piece of clear plastic?
2. If the plastic gets slimy, do you think that objects will stick to it?

Tasks/Steps

1. Get ready for some slimy fun! Find a garden snail and set up your experiment outdoors so that the snail feels comfortable in its natural environment.
2. Create a hypothesis, your best guess about what is going to happen. What will happen if you allow the snail to move across the piece of clear plastic? If the plastic gets slimy, do you think that objects will stick to it?

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3. Set your snail free at one end of the clear plastic, and wait. Snails aren't known to be fast walkers, so you might have some time on your hands. If the snail looks like it's moving off of the plastic, gently move it back on. If the snail hides in its shell, that's all right – it's feeling shy. Leave it alone for a few minutes or gently spray it with some rainwater and it will feel better.

4. After the snail has completed its walk to the other end, let it go. Give it a piece of lettuce to munch on as a thank you.

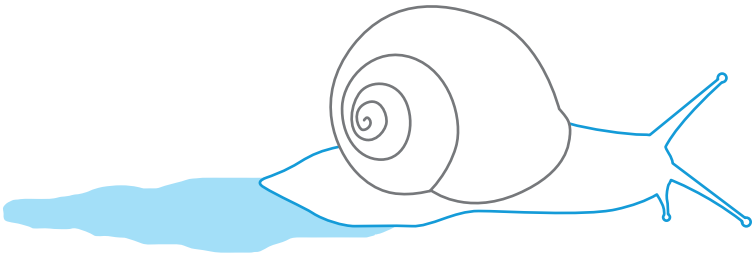
5. Now, look at what the snail has left behind. You should see a thin, clear layer of slime. Now you can explore snail power!

6. First, place a small piece of leaf on a clean surface. Press the piece of slimy plastic onto the leaf, and move it up into the air again. What happens?

7. Next, try the same thing with the dime. What happens?

8. Finally, place some sand on the surface and press the plastic onto that. What happens? As you do each part of the experiment, make notes in your notebook or get an adult to help you do this. If you wish, you can use a stopwatch to see how long certain things stick to the slime.

9. When the experiment's done, make sure to wash your hands!



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