

Freshwater Acidification- Effects on Mollusks

Introduction

Acidification of freshwater is a decreased pH level caused by climate change and elevated carbon emissions. When fossil fuels are burned, carbon dioxide is released into the atmosphere. This greenhouse gas is then dissolved into the water and reacts to form hydrogen ions.

These hydrogen ions use up a lot of the carbonate that the mollusks need to make their shells, causing their shells to become weak and making it harder for them to grow. This results in smaller mussels which effects the food chain all the way up to the people who depend on fish and other aquatic animals for food.

Tasks

Activity 1 (2 Minutes and 51 seconds)

Short video on ocean acidification – Ace Science Short: Ocean Acidification

Activity 2 (15 minutes)

Snail shell experiment

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Activity/Process

- Hand out 100 mL beakers
- Have kids pick out a shell and place them into the beakers
- Cover shells with vinegar
- Observe immediate reaction
- Let shells sit in vinegar for three days
- After three days, observe the effects of vinegar on the shells
- Drain vinegar into the sinks and throw away what's left of the shells

Resources

Video from Alliance for Climate Education at <https://www.youtube.com/watch?v=6SMWGV-DBnk>