

# Make a Rainbow

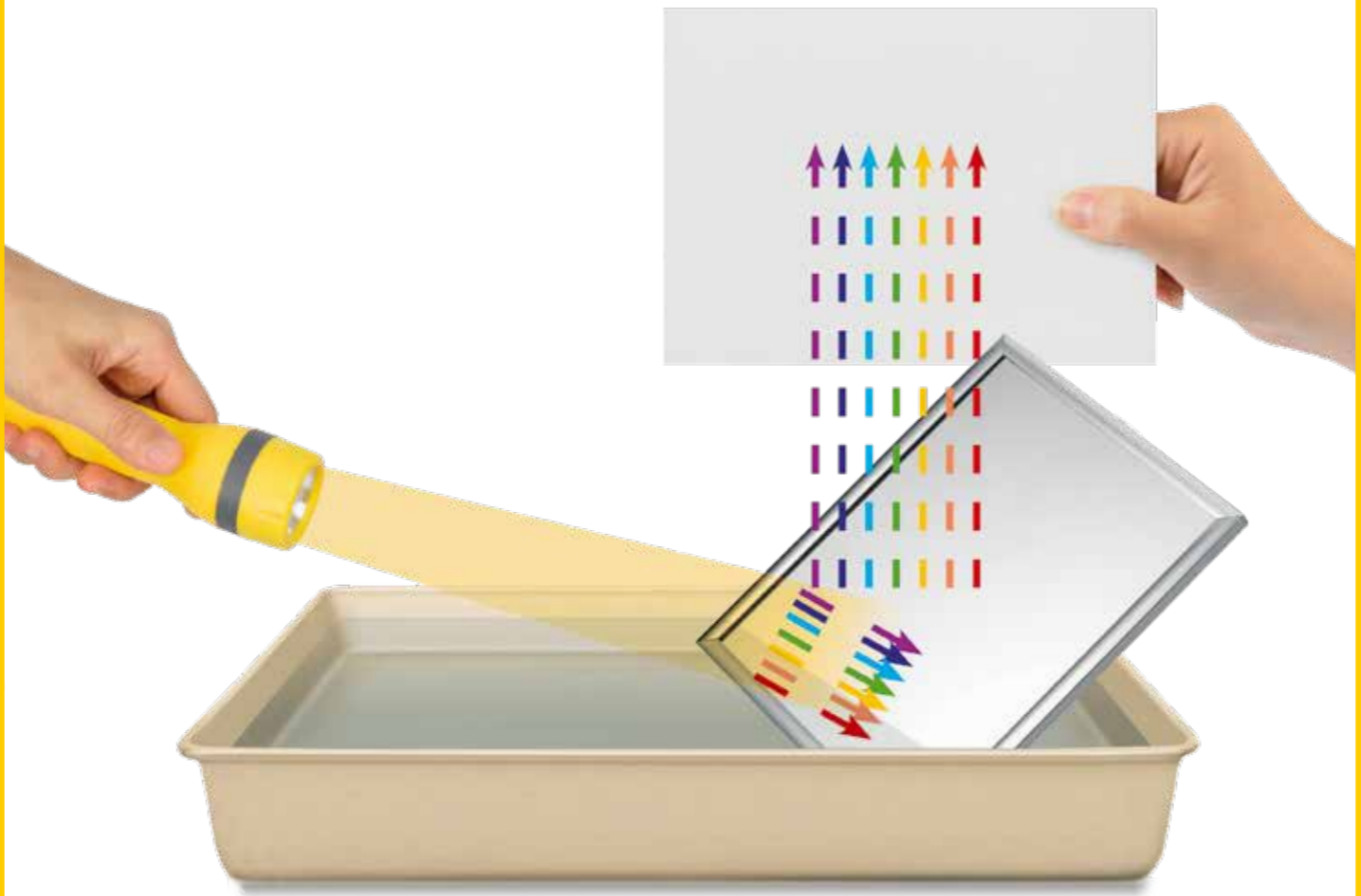
Use household items to make your own rainbow.

## You Need:

- a shallow pan
- water
- a mirror
- a torch
- a sheet of white paper

## To Do:

1. Fill the pan half way with water.
2. Place the mirror in the water at an angle so that it rests on the side of the pan.
3. Shine the torch on to the water where the mirror is submerged.
4. Hold the white paper above the mirror. Adjust the angle until you see a spectrum of 7 colours.



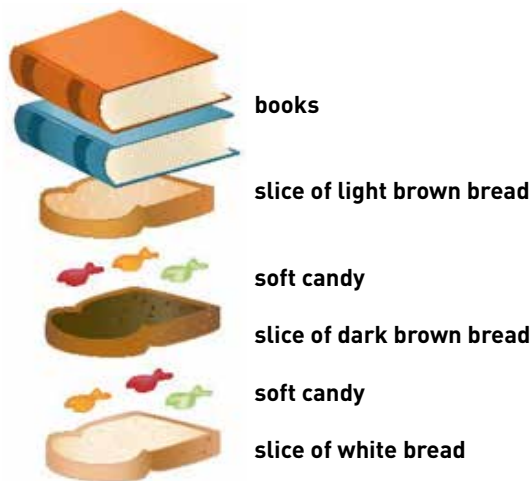
Photos (clockwise, from top left): HEART TO HEART/Shutterstock; TATIANA POPOVA/Shutterstock; SUMIRE8/Shutterstock; BRITTNY/Shutterstock

# Fossil Fun

See how pressure can turn sediment into rock and living organisms into fossils.

## You Need:

- paper towels
- a slice of white bread
- a slice of light brown bread
- a slice of dark brown bread
- a butter knife
- gummy candy, a few pieces
- heavy books
- clear drinking straws



## To Do:

1. Place on a table a paper towel, 5 or 6 pieces of candy, a slice of white bread, a slice of light brown bread, and a slice of dark brown bread.
2. Use the knife to cut the crusts off the bread.
3. Place a slice of white bread on the paper towel. The white bread represents the sea floor.
4. Place a couple of candies on the bread. They represent dead organisms that are on the sea floor.
5. Place a slice of dark brown bread on top of the white bread and candy. The dark brown bread represents sediments that have fallen on the sea floor, covering the dead organisms.
6. Place some candy on the dark brown bread. And then put the slice of light brown bread on top. The light brown bread represents more sediments that have covered the sea floor.
7. Fold the paper towel to cover the layers of bread and candy.
8. Place the books on top of the folded paper towel and layers of bread and candy. Leave the books there for a day or two.
9. After a couple of days, push a clear straw straight down into the bread and pull it back up. You will have taken a core sample.

## What Happens:

Look at the core sample. How many layers do you see? (*Three.*) Which layer is the oldest? (*The bottom layer is the oldest.*) Can you see any indications that fossils are present? (*You may see a cast or mould impression. You may also see residue from the candy.*) You can take other core samples to see if you can find more fossils. It is worth noting that it takes millions of years for layers of rock to form.



Photo: ERMES/Shutterstock

# Making Waves

Waves roll across the ocean. They can carry litter.  
Explore what makes waves.

## You Need:

- a large, flat baking pan, about 10–12 cm deep
- a variable-speed table fan
- a large jug of water
- a measuring rule
- 5 marbles

## To Do:

1. Place the pan on a table.
2. Fill the pan with 4–9 cm of water.
3. Place the fan about 18 cm from the pan and turn it on low speed.
4. Record what you observe. Measure the distance between each wave.
5. Increase the speed and record what you see. Repeat as many times as you can. Make sure the water does not slosh out of the pan. You can also change the force of the wind by moving the fan closer and farther away from the pan.
6. Place 4 marbles on the table in a line so that they are touching. Roll the fifth marble at one end of the line of marbles. Observe what happens.

## You Observed:

1. As you increase the fan's speed, do the number of waves change? If so, how?

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2. As you increase the fan's speed, does the distance between waves change? If so, how?

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3. As you increase the fan's speed, does the height of the waves change? If so, how?

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4. Before rolling the fifth marble, predict what will happen. \_\_\_\_\_

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5. What happened when you rolled the fifth marble? \_\_\_\_\_

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