DIY ACTIVITY

WATERPROOF SHOE

GRADeS K-2

SUMMARY

• Make a shoe waterproof using an idea from nature!
• Time Required: 15-20 minutes
• Difficulty: Easy
• Cost: $0-5

PROCEDURE

1. Rub the candle back and forth all over the surface of one shoe.
2. Have an adult help you use a hairdryer to melt the candle wax into the shoe.
3. For best results repeat this process one or two more times.
4. Hold the treated shoe over a shallow container and pour water gently on it.
5. Next take the untreated shoe and pour water on it to see the difference.

WHAT IS GOING ON HERE?

The treated shoe has a special coating of wax that protects the shoe from getting wet. This is similar to the nasturtium plant in the video or the feathers on a duck. When you poured water on the treated shoe, the water just slid off. The untreated shoe got wet when you poured water on it. Being inspired by nature to solve a problem is called biomimicry.

MATERIALS NEEDED

• Old pair of canvas shoes (adults permission required)
• Candle
• Hairdryer
• Pitcher of water
• Large plastic tub

AS A CLASS, WATCH THE GENERATION GENIUS INSPIRED BY NATURE (BIOMIMICRY) VIDEO.