JR-SCIENTISTS

PENCIL IN A BAG

Sometimes science can appear a bit magical! Try our leakproof pencil bag science experiment and see if you can actually pull it off without getting soaked.

SUPPLIES:

Sharpened Pencils
Zip Top Plastic Gallon Bag
Water

INSTRUCTIONS

STEP 1: Start with freshly sharpened pencils.

STEP 2: Fill your plastic bag with water and seal tightly.

STEP 3: Take a sharpened pencil and poke through the bag! Don't hesitate or you may find it will leak a bit.

STEP 4: Try it again! How many pencils can you put through the bag? Make a guess and see what happens.

THE SCIENCE

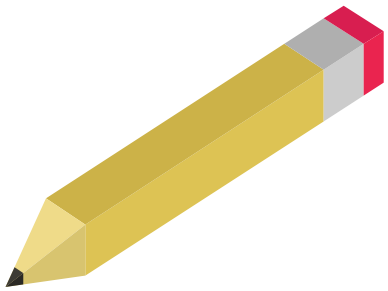
This leakproof pencil bag science experiment may look a lot like magic, but it's also cool chemistry! What's going on between the water, the plastic bag, and the sharpened pencils.

The plastic bag is made up of polymers which are long strands or chains of molecules. When the sharpened pencil pushes through the plastic bag, it's actually pushing through the polymer chains.

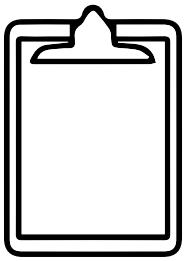
The chains or strands are pushed aside by the pointy pencil but then re-seal themselves around the pencil preventing water from leaking out. See what happens when you try to push a dull or unsharpened pencil through!

Pencil in a Bag Observations

Use this worksheet to process and evaluate your work.



Do you think you could put a hole in a bag of water without spilling?



RECORD

What did you observe?

Why did the water stay in the bag?

What did you learn?