

# A SPIN ON THE MYSTERY BOX CHALLENGE

## Big Idea

Take an empty film canister and fill it up with a few cents worth of materials (ex. A cotton ball, penny, paper clip, toothpick, marble, etc). If you don't have a film canister, use a PlayDoh container. Seal it with some tape. Now, you have a mystery box. The challenge for students is to figure out what's inside without opening the box.

Most students will shake it, bang it, toss it gently, and roll it in their hands to feel the weight and hear the contents of the mystery box. But, what if there's another way we can have students figure out what's on the inside?

In our spin of the mystery box challenge, we have students find out what's inside the mystery boxes by making and testing models.

## Instructions

Step 1: Hand out mystery boxes (or film canisters) to students. My film canisters are filled with a penny, a paper clip, and a cotton ball. However, feel free to fill them with whatever you like.

Step 2: Provide students with empty boxes (or film canisters) and materials that can go inside the film canisters - including the items that are in the canisters. Have students fill the empty canisters with materials and test them against the mystery film canisters. Repeat.

Step 3: When students feel that they have the right combination of materials in their models, have them write a CER statement regarding what they believe is in their mystery film canisters.

Step 4: Open up the mystery film canisters for the reveal!

NOTE: do not tell students how many items are in the mystery film canisters. This allows more variation (ie. some models will have 2 or 3 items, while others may have more). This makes for better discussion.