Avalanche!

Use the materials to create a small box or barrier.

Place in the cat in the box in a tub at the end of the ramp.

Roll the balls and snow down the ramp on to the box.
What happens to the box?
What happens to the cat?

Iterate!

Change your box design and try the experiment again!

Does anything change?
What have you learned?
Don’t forget your stamp!

The Science

With the avalanche, you are experimenting with **Impact Testing.** Impact testing is a way of measuring how much energy a material can absorb before it breaks when hit by a sudden force. Although in a real test the environment is more controlled, you can still learn a lot about how different materials will hold up to an impact, or under pressure. Which pieces are stronger? Where does your box break or bend, if it breaks at all?

Charpy Impact Test:

A thin sliver of test material is held secure in a block while a hammer swings along a pendulum.

The amount of energy it takes to break the material can be recorded by how far the hammer travels **after** it breaks the test object. Having a controlled, measurable environment makes for good material science!

What are some of the **variables** (things that might change per test) in your avalanche?