

## WHAT ARE WE INVESTIGATING?

Can you build a water slide that your figurine can slide down and land in water?

## MATERIALS:

- Toilet Paper/Paper Towel Rolls
- Aluminum Foil
- Straws
- Popsicle Sticks
- Toothpicks
- Plastic Wrap
- Tape
- Scissors
- Bowl of Water
- Figurine
- Strive Academy's Engineering Design Process Handout (found at [www.striveacademy.org](http://www.striveacademy.org))
- Pencil or Pen

## EXTENSION:

- \* Add some math - measure the height and length of your slide.
- \* Try this variable - test out your water slide with different figurines and see if there are any differences.
- \* Check out this video: "What Makes A Great Water Slide?":  
<https://www.pbslearningmedia.org/resource/8f6eed11-e8b7-4298-b5bc-b20dee10880e/water-slides/>

## DIRECTIONS:

1. Gather all of your materials. Our materials are just suggestions - feel free to add other things too!
2. On your handout (found at [www.striveacademy.org](http://www.striveacademy.org)), fill in the title of your experiment (Build A Water Slide).
3. On your handout, fill in your hypothesis. You want to answer the question: How can I build a water slide for my figurine?
4. On your handout, sketch a design of your experimental setup. You will be building a water slide for your figurine to slide down. Feel free to use color and label the materials that you will be using!
5. Use your materials to build your water slide. Your structure must be free standing (it must stand on its own). Your water slide should include:
  - a ladder for your figurine to climb up
  - a water slide that both water and your figurine can go down
  - a “pool” of water for your figurine to land in (can be a bowl or tupperware)
6. Under “Data Collection/Observation”, draw a picture of what your water slide looks like once it is finished. Feel free to use color!
7. When you are ready, carefully pour some water down your water slide to get it wet. Also put some water in the “pool” at the bottom. Send your figurine down the water slide and see what happens! Under “Results”, write or draw what happened.
8. Make any necessary changes and repeat Step 7 again. For example, if your cardboard waterslide got wet and mushy, how could you fix that?
9. Answer the “Analysis” questions on your handout:
  - What problems did you run into while building your water slide? How did you fix them?
  - Which material helped the most when building your water slide? Why?
  - Did you find it was best to have a steep water slide or a non-steep water slide? Why?

**\*\* Try the extension activities on the first page for more fun! \*\***