

## WHAT ARE WE INVESTIGATING?

What can you build from your mystery STEAM bag?

## MATERIALS:

- Paper Bag or Grocery Bag
- Paper
- Toilet Paper Rolls
- Straws
- Toothpicks
- Popsicle Sticks
- Scissors
- Tape
- Strive Academy's Engineering Design Process Handout (found at [www.striveacademy.org](http://www.striveacademy.org))
- Pencil or Pen

## EXTENSION:

- \* Try this variable - build the same project again but with different materials.
- \* Have each person in your family make a mystery bag. Then trade them with each other. Make a building challenge and see who can build the best project with their materials.



# Mystery STEAM Bag Challenge



## 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 (Mystery Bag STEAM Challenge).
3. On your handout, fill in your hypothesis. You want to answer the question: What can I build from my mystery STEAM bag?
4. On your handout, sketch a design of what you are going to build. Feel free to use color and label the materials that you will be using!
5. Dump out your bag and build! Be as creative as you want! Add more materials as you go if you need something to help create your project.
6. Under "Data Collection/Observation", draw a picture of your final project.
7. Under "Results", describe what you made. What does it do? How does it work?
8. Answer the "Analysis" questions on your handout:
  - What did you like best about building your own creation?
  - What was the most difficult about building your own creation?
  - What would you do differently if you were going to build again with the same materials?

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