

# STEAM

## Coin Spinner Experiment Kit

### Learning Opportunities Include:

- measuring with a ruler
- learning through the scientific process
- the definition of diameter—a straight line passing from side to side through the center of a body or figure, especially a circle or sphere.
- color-watch what happens when colors spin.
- understanding the differences between three coins (use what is available...penny, nickel, dime, quarter)

### Supplies per child:

- 3- 3.5 inch circles from light cardboard-like a cereal box or mac & cheese box
- scissors and xacto cutting tool (for adult)
- markers
- 3 different coins
- cup to trace around
- a timer on phone
- ruler (a paper one is provided here)

## CREATE



FIND A CUP THAT HAS ABOUT A 3.5 INCH DIAMETER. TRACE 3 CIRCLES AND CUT THEM OUT.



COLOR THE THREE CIRCLES. HAVE AN ADULT CUT THE SLITS FOR THE COINS. EACH SLIT WILL BE A DIFFERENT SIZE. YOU WILL HAVE TO ESTIMATE AND CUT TO SIZE.



INSERT A DIFFERENT SIZE COIN IN EACH CIRCLE.

### Extension Ideas:

- Research the details and history of coins.
- Play a heads or tails game or make a tally sheet and figure out whether coins land more on one side or the other.
- Build with coins. Check out all the different bridges you can make as an Engineering Extension.
- Draw a coin.



WE'LL MAKE THREE OF THESE- EACH WILL HAVE A DIFFERENT TYPE OF COIN. HERE ARE THE SUPPLIES...

## THE EXPERIMENT

### 1. PURPOSE - WHAT ARE WE TRYING TO FIGURE OUT?

*Which coin creates the best spinner if all spinner platforms are the same size?*

### 2. RESEARCH/OBSERVE - LET'S LOOK AT THE COINS!

*Compare size, thickness, texture on edge of coins.*

### 3. HYPOTHESIS - WHAT IS YOUR GUESS?

*Which spinner will spin the longest. Why?*

### 4. EXPERIMENT- FOLLOW THE DIRECTIONS.

*(do a little practice spinning first)*

*a. Get your timer ready. Start the timer and spin your*

*1st spinner & see how long it spins. Repeat AT LEAST three times and record on paper.*

*b. Get your timer ready. Start the timer and spin your*

*2nd spinner & see how long it spins. Repeat AT LEAST three times and record on paper.*

*c. Get your timer ready. Start the timer and spin your*

*1st spinner & see how long it spins. Repeat AT LEAST three times and record on paper.*

### 5. ANALYZE - LOOK AT THE TIMES YOU RECORDED.

*Compare the times to each other. Do you see similarities or vast differences?*

### 6. CONCLUSION - WHICH SPINNER SPUN THE LONGEST?

*Discuss why you think one worked better than another.*

*Or maybe times were too close & you need to test more?*

### IMPORTANT

Hypothesize before you spin your spinners!



For Kids and Adults of All Ages

