

# From the Kodo Classroom

Lucky Penny Day is coming up on May, 23rd! Kodo's Marble Rubber Ramp is the perfect track for a penny race.

## Materials:

- Pennies
- Kodo's Marble Rubber Ramp (other items that can be used as a track such as cardboard tubes, ramps, blocks, etc.)
- Elevation Materials (overturned containers, rocks, sand bags, buckets, etc.)
- Sticky Poster Tack

Invite children to build and test a penny racer. You will need 3-4 pennies and some sticky tack. To make, take small pieces of sticky poster tack and roll into balls. Use the sticky poster tack between pennies to create a cylinder shape. Invite children to build and test a penny racer.

## Look and Listen for Learning

- Cause and Effect
- Force and Motion
- Fine Motor Skills
- Problem Solving

## Teaching Tips

- Before making penny racers, invite children to test out how the pennies roll down the track one at a time. They will quickly find out that it is very challenging to roll one penny, but when two, three, or four are stuck together, the penny racer is more stable and will roll farther.
- Once the children have had time to play with the penny racers, invite them to create a measurement tool to track how far the penny racers travel. This could turn into a wonderful and authentic data collection exploration for the children as they collect measurements from the races!
- Avoid the words, "Good job", but do point out when social skills are working. "Looks like taking turns worked well for your team!"
- Children are innate problem solvers. Sometimes they just need a jumping off point. If you notice the children have reached an impasse or are becoming frustrated with a recurring problem with their penny racer, ask them an open-ended question to spark engineering thinking.

## Questions to pose:

- What happens to the motion as you add more pennies to the penny racer?
- What have you tried so far?
- How can the track be changed to make the penny racer go all the way to the end?
- What is happening along this section of the ramp course? Why?