

STEM *starts now*

Build a Race Track

Recommended Age: 31–36 Months

STEM concepts: Science (gravity, ramps), Math (angles), Engineering (building, design process)

Materials: Toilet paper tubes, paper towel tubes, toy cars, small ball, tape, a blank wall (*if you do not want any scuff marks on the wall, you can use a poster board)

What to do: Show your child the various cardboard tubes you collected. Show that with just a few pieces of tape, you can tape the tubes onto the wall or poster board to create a race track. Have her experiment with sending a toy car or a small ball from the top to the bottom of a tube. Once she's gotten the hang of it, introduce another tube and say that the two of you are going to make a longer race track. Lining up the cardboard tubes may take some trial and error, but that is all part of the engineering process. Use as many cardboard tubes as she wants and see how long of a track you can make together!

Language and Communication: Because it can be difficult at first to line up the cardboard tubes correctly when creating the race track, it is important to tell your child that engineers have to solve problems like this all the time. When something doesn't work, that just means we have to problem solve to figure out a better way.

Expand the Activity: An expansion of this activity would be to try rolling various different objects down the race track. This can begin a great discussion on how different shapes roll faster or slower, which is why we have circular wheels instead of square wheels on cars. You could also have your child take pictures of the ramp and the building process it took to make it. This is a great way to introduce documentation, which is a fundamental aspect of science.

