

# Loop-the-Loop

Try designing your own rollercoaster with loops and spirals!

## Materials

- Marbles
- Tubing
- Chairs and/or tables

## Questions to Answer

1. Do you think the marble will make it all the way?
2. Where do you think it might get stuck? What can you fix so that it won't be stuck anymore?
3. Do you think it matters how high it starts?
4. How big can you make a loop and not get the marble stuck?

## Experiment

1. Take your tubing and make a rollercoaster out of it! Bend it and twist it. Make big loops or little loops! Try anything you want!
2. You need to secure the tubing to chairs or tables so that your rollercoaster won't fall down. What would you like to use to secure your coaster? Do you think tape is strong enough? What about twist ties from a garbage, or maybe pipe cleaners?
3. You also need something to catch the marble when it gets to the end of the rollercoaster. What would you like to use? See what works best, but be careful not to use anything that might break, like glass.
4. Once your rollercoaster is ready, put a marble at the top, and let the ride begin!