

Roller Ball!



Your challenge is to make the longest roller ball run you can!
Using only the materials you can collect from around your home.
You can build it inside, outside or even from the inside to the outside!

FIRST You need to find a small ball to play with! (A marble? Pingpong ball? Golf ball?)

SECOND Choose a starting point at least 30cm above the ground, or higher if you want a harder challenge! (On a step? A garden wall? The edge of your bed?)

MATERIALS

Think about what is tube-shaped, like toilet roll or kitchen roll tubes? Poster or wrapping paper tubes?

Or things that you can roll up, like paper or an exercise mat?

Or tie into a tube, like a tea towel or blanket?

Or items that are long & level, like race track?

When you've finished, remember to wash your hands!

THIRD What will the ball drop into when it reaches the finish line? (A bucket, or a washing up bowl? A beaker, or a tupperware?)

FOURTH Now the course is set, you need to collect materials together to make your roller ball run with.

FIFTH Now you have everything, it's time to build your roller ball run!

5 IMPORTANT RULES

Nobody is allowed **to touch** the ball while it's rolling.

If the ball falls while it's rolling and touches **the ground** then it must be returned to the start.

The ball has to **drop 30cms** vertically (in mid air) on its journey from the starting point to the finish line.

Nobody is allowed to touch the materials making up the roller ball run while the ball is **rolling on them**. If your ball is stuck, you can move other bits - above or below - to try and get it moving again, but not where it's stuck.

The ball has to keep moving in the **same direction** the whole time, no turning back!

TOP TIP

Imagine your ball is like a droplet of water running right down a plant from a leaf, all the way down its stem, to the ground. Where might the water run away off course? Or fall during its journey? Do you want the droplet to run slower or faster? Do you want it to fall in a straight line or to bend? What would work best, to help it on its way?

Check with an adult which materials you can use to fix the run together and hold it in place!

Ready, Steady, Go!

Here are some examples of roller ball runs that children (and instructors) have enjoyed making...

BONUS CHALLENGE

The instructor team have been wondering... **how long** you can make your roller ball run? Once yours is working, have a go at **measuring the distance** that the ball rolls from start to finish, using a ruler or a piece of string. How far does it travel in total? Can you **add an extension** to make the distance any longer?



Good luck!

