Roller Ball!

Your challenge is to make the longest roller ball run you can, using only the materials you can collect from around your school! This challenge is best completed outside. Please remember to keep 2m away from other people (even if your ball doesn't!)

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

SECOND Choose a starting point at least 30cm above the ground, or higher if you want a harder challenge! (A window ledge? A chair? On top of a wall?)

THIRD What will the ball drop into when it reaches the finish line? (A bucket? An upside down cone? A flower pot!)

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!

MATERIALS

Look around you, ask your teacher if you can use items in the PE cupboard, and think about what is cylinder shaped? That's items like poster tubes or kitchen roll inners. Are there things you can roll up like foam mats, or paper? Or tie up into a tube, like bin bags or parachutes? Or long items to guide the ball down a track like hockey sticks or metre rulers?

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?

5 IMPORTANT RULES

You aren't 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.

You aren't 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!

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

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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 you 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!

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