



**We're big believers in the power of play — and it's never been more necessary than it is now.**

We're sharing these three activities from our new book, *The Nature of Play*: A handbook of nature-based activities for all seasons, as free printable activities to explore at home. And whether you're remaining indoors or not, they offer a chance to slow down, connect once more with the world outside, and lose yourself in your imagination.

Like all the activities in *The Nature of Play*, they're simple, seasonal, require little more than curiosity, and provide a precious few minutes of calm enjoyment for children (and brief respite for adults!).

Please enjoy, share — and show us your wonderful creations on Instagram (@fannyandalexander).

For a year of making, exploring and wondering, purchase the full book here: <http://fannyandalexander.co.uk/book>

—  
1.5 hours  
All seasons  
Indoors  
Adult assistance required ••

# Build your own marble run

Rig up an obstacle course and balls away!

## GATHER TOGETHER

- . A big cardboard box
- . Cardboard tubes (from inside wrapping paper, kitchen roll, cling film etc)
- . Scrap cardboard (cereal boxes and that kind of thing)
- . Newspaper to roll into tubes
- . Plastic bottles
- . Sticky tape
- . Glue
- . Blu Tack
- . Scissors
- . Paper cup
- . Marbles
- . Any extra 'features' you'd like to add, like funnels, old pinwheel toys, or things to decorate with



WHOSE MARBLE IS FASTEST?  
DO DIFFERENT-SIZED MARBLES  
GO FASTER OR SLOWER?  
CAN YOU MAKE IT EVEN MORE  
COMPLICATED?



### LET'S GO!

**Step 1.** Cut out your frame. Cut one side off the biggest cardboard box you can find (Fig. 1). This will become the frame for your marble run so you want as much room as possible to work with.

**Step 2.** Make an opening. With your box on its end and the open side facing outwards, cut a small hole in the top where you'll drop in your marble (Fig. 2).

**Step 3.** Build your run. Create the course your marble will run along using the items you've plundered from your recycling box. You want it to have as many twists and turns as possible. Generally, you'll use tubes to carry your marble across each level, and holes, funnels or bends to turn corners and drop down to the next level.

Starting below your hole, tape or glue a cardboard tube across your box (angled downwards so that gravity helps your marble along), making sure there's a hole in the tube below your entry point. At the end of your first tube, create a connection (cut a hole in the bottom at the end of the tube, or tape rolled-up newspaper or curved cardboard to the end of your tube) so the marble can drop down to the tube below (Fig. 3).

**Step 4.** Add extras. Cut the top off a plastic bottle and use it upside down to drop a marble down a level. Cut holes along the bottom of a tube – will the marble drop out at a different point if it's going faster or slower? Experiment and see. Use plenty of tape or glue as you go.

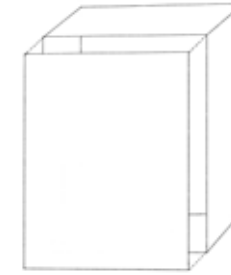


Fig. 1

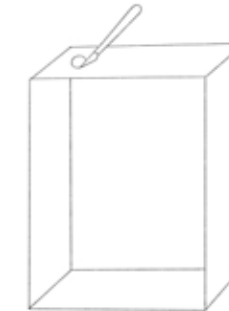


Fig. 2

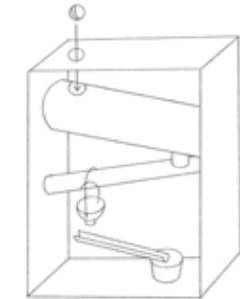


Fig. 3

**Step 5.** Keep building until you reach the bottom. Test your run occasionally as you add to it – if you want your marble to go faster, angle the tubes downwards. If you want to slow it down, tilt the tubes up, or add obstacles to your course. Make it as complicated as you like.

**Step 6.** Add a small cup at the very end of your run to catch your marbles in.

**Step 7.** Ready, steady, go! Drop a marble through your hole at the top to send it down your run. Whose marble is fastest? Do different-sized marbles go faster or slower? Can you make it even more complicated? (Advanced marble-runners can create several different tube endings for the marble to go down, with points for which tube it finally comes out of.)

### FROM THE ARCHIVES

Can you imagine how much fun a mega marble run would be? That's just what a team in Flumserberg, Switzerland created when they built the world's longest marble run, measuring an incredible 2,858.9 metres long! If you train to become a marble run maestro, you might one day snatch that record yourself...

FOR BUDDING ENGINEERS, A  
MARBLE RUN IS THE ULTIMATE  
PLAYGROUND.

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#### DEAR GROWN-UPS

For budding engineers, a marble run is the ultimate playground. As an open-ended activity it presents plenty of scope for creativity and ingenuity to direct the outcome, and the three-dimensional nature of the task gently develops understandings of gravity, momentum and spatial reasoning. It's not an easy activity, nor one that offers instant gratification, so there's an opportunity to foster patience and problem-solving in tackling this one, too.