

# Digital Technologies

Inspiring STEAM Learning

## Marble Run

Use materials from around the house (loo rolls, playdough, toothpicks, cardboard etc) to build a marble run. Your goal: The marble has to run through in 20 seconds, no more, no less!

**Materials:** 1 Marble, and anything else to help you build the most epic marble run! From paper cups to modelling clay!



## Toothpick Lolly Tower



**Challenge 1:** Build the tallest tower you can using a set number of toothpicks (10) and gumdrops (20).

**Challenge 2:** Build an innovative structure with the toothpicks and gumdrops. Think about adding levels and what it may be used for (i.e. Hotel).

**Materials:** Gumdrops/

# STEAM Challenge Board

Looking for some engaging and fun learning activities?

Our STEAM specialists have pulled together some favourites. They're easy to set up and most can be done with items from around the house.

## Cup Stacking

...but no touching!



As a group, build a pyramid out of paper cups. 3 on the bottom, 2 in the middle and 1 on the top. You can't touch the cups with your hands or any other part of your body, even if a cup falls onto the floor! Each person holds on to strings attached to a rubber band to pick up and deposit the cups.

**Materials:** 3m of string, 5 rubber bands, 6 cups

## Design Challenge Mystery Bag

Give your kids a bag of "mystery materials" and challenge them to build something with them.

**Ideas:** Pet hotel, suspension bridge, trampoline, vehicle, piece of playground equipment.

**Materials:** A mix of anything you can lay your hands on! Paper plates, straws, string, glue, paper rolls, cardboard, modelling clay, egg cartons, pipe cleaners etc



## LEGO® Balance Scale



Build a LEGO Balance



Here's what you need to build a LEGO® Balance Scale:

- 12 1x6 bricks
- 6 1x4 bricks
- 4 1x2 bricks
- 1 6x12 plate
- 9 2x4 bricks
- 2 2x4 plates
- 1 2x2 brick with pin on each side

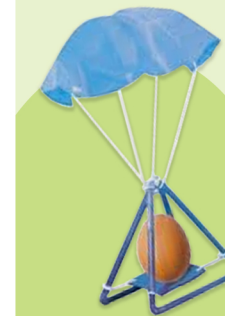
Now use your LEGO® balance scale to try some experiments. Can you balance a set of rocks and marbles? What happens when you move the fulcrum from the middle of the scale to one of the sides? Now can you change your design based on your new knowledge to build a catapult?

## Egg Drop Challenge

This challenge is for kids to design a contraption using various materials (usually recyclables) to protect a raw egg dropped from a height of 2 metres.

**Not allowed:** boxes or battery-powered items.

**Materials:** Anything! Popsicle sticks, paper, toilet rolls, tissues, paper cups, modelling clay, dish sponges, sticky tape etc.



For more information please contact your OfficeMax Account Manager

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