

# STEM Challenges

Learn the basics of sewing! Watch Red Ted Art sewing tutorials on YouTube. See if you can master some of the basic stitching techniques!



Make some pizza toast! All you need is bread, cheese, tomato purée & the ingredients you'd like to put on your pizza.



Show off your cooking skills by creating a food tutorial video – Joe Wicks style! Use your camera / Clips / iMovie to share your recipe with others!



Or create your own recipe book using PicCollage!



Starbucks and Costa are trying to create the best Spring / Summer smoothie! Choose the company you want to work for. Can you create a delicious smoothie that they'll want to sell in their stores?

Get arty with your food! Cut food in different ways to create animals / scenes. You could even paint your own rainbow bread using sugar and food colouring!



Make ice cubes or ice lollies from various liquids and time how long it takes for each to freeze. Which one do you expect to freeze first / last? Why?



Float or sink experiment! Using the fruits and vegetables you have at home, predict which ones you think will float / sink – giving reasons why. What will happen if you half it or take off the skin? Do you notice anything about the items that float / sink?

Track your scores / coins in a game using a line graph. It can be any game (Times Table Rockstars, Sumdog or a game of your choice!)

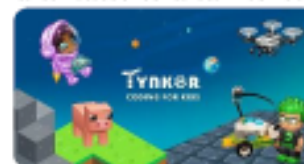


In class we've been learning a lot about coding. Here is an example of Morse code. Can you write or use light / sound to send a message in Morse code? Can you create your own code & write a message?

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O	P	Q	R
S	T	U	V	W	X
Y	Z	0	1	2	3
4	5	6	7	8	9

If – Then Coding Game! Play this with your family! One person is the 'Programmer' & everyone else is a 'Computer'. The Programmer gives the Computers a command. If I \_\_\_\_ (do this...), THEN you \_\_\_\_ (must do this...) If a Computer is too slow or doesn't do the correct command, they are out!

Get coding on the Tynker website. Click play and choose your coding level. You can create games, skins, animations and more!



There's something wrong with the code on my map! Can you tell what it is?



Move East →

Move East →

Move North ↑

Visit <https://royalsociety.org/topics-policy/education-skills/teacher-resources-and-opportunities/brian-cox-experiments/> for some STEMtacular science experiments created by The Royal Society and Brian Cox! Take a photo or a video of your science in action!



Take photos of symmetry in the environment around you. It could be natural (plants / animals) or man-made (fences / windows / tiles). You could even print a photo, cut it in half and see if you can draw the other side using symmetry.

Outdoor maths! Explore your outside space and collect...anything! Leaves, flowers, stones, sticks, feathers etc. Think of how you would like to sort / organise them. Create a tally chart and graph to show what you have found.



Create your own more advanced code map (or game) and give instructions on how to get to the treasure / finish line.

Easy – Just use arrows.

Challenge – Use compass points.