

# Science Challenge



## Make a bird feeder



Image: RSPB

Giving birds a little extra food is a simple and fun way to help them through the colder months of the year when there might be less food available to them.

### You will need:

- **Adult supervision**
- An apple
- Garden wire
- String
- Cheese
- Raisins

### What to do:

#### Step 1

Ask a grown-up to cut cubes of apple and cheese or to watch you as you carefully do this

#### Step 2

Be very careful and ask a grown-up to help you thread the apple, raisins and cheese onto the wire like a necklace (see photo above)



#### Step 3

Make a hoop with the wire and tie it to some string. Ready!

### Extension:

With an adult, use the RSPB bird identifier website to help you find out which birds you have spotted:

<https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/identify-a-bird>

Activity from CBeebies

# Technology Challenge

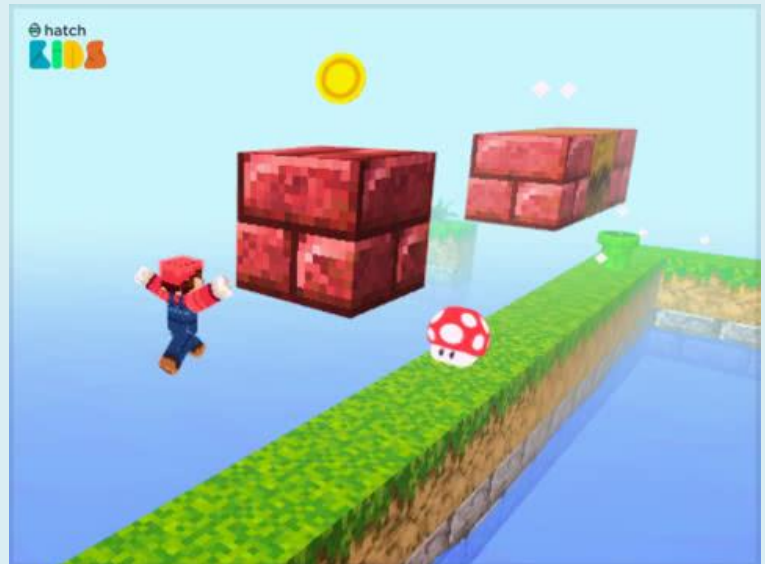


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## Mario's Secret Adventure: Build Your Own 3D Mario Game

Explore coding and computer science at home with **Mario's Secret Adventure**.

Build your very own 3D Mario game, while learning the basics of programming. Learn about the fundamentals of game development; form an understanding of motion in 3D space; learn to add score, lives and cool sound effects to your game.



Follow this link to start to access the tutorial and start playing:

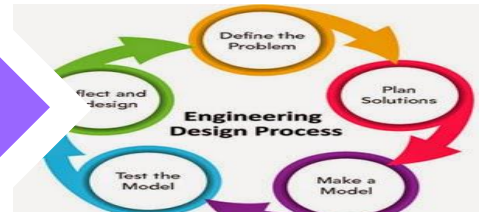
<https://code.hatchxr.com/>



Image from: <https://code.org/>

These introductory activities are **free** to access and you **don't need to sign-in**.

# Engineering Challenge



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## Autumn Fun

Have a go at these fun activities from [Science Sparks](https://www.science-sparks.com/) . What else could you measure the height of with the same method as measuring the trees? What is the highest number of leaves you can lift with the balloon? What other autumn objects can you build with your lego or bricks?

### JUMPING LEAVES



**You'll need**  
**Balloon**  
**Tissue paper, cut into leaf shapes**  
**Woolly jumper or hair**

Rub the balloon on your hair or a woolly jumper and hold over the tissue paper leaves.

They should jump up and stick to the balloon!

Experiment with different size leaves and types of paper

### HOW TALL?

Choose a tree.

Bend over and check if you can see the top of the tree through your legs.

If you can't see the top, move away until you can.

When you can first see the top of the tree is the point at which you are as far away from the tree as it is tall!



### BUILD AN AUTUMN TREE?

Use a collection of toy bricks or wooden blocks to build a tree full of colourful leaves.

Change the tree so it looks like it would in winter.



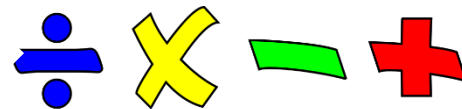
### HOW MANY COLOURS?

Create an empty frame from cardboard.

Take the frame outside and look around. How many different autumn colours can you fit into your frame?



# Maths & Numeracy Challenge



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## Funky 15

For this puzzle it is a good idea to have a set of 0-9 cards. If you haven't got any don't worry, just write down the numbers 0-9 on a piece of paper or card and cut them out like the ones below.

1	2	3	4	5
6	7	8	9	0

Use three cards to make a total of 15.

You probably found that really easy!

Your challenge is to find as many ways possible to make a total of 15 using **three cards**.

Write them down and get someone to check.

**Remember: Don't forget to use the nought/zero card!**



# Literacy Challenge



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## The Runaway Iceberg

### Activity 1 – Listen to the story

This story follows two emperor penguins on a very big adventure! When the ice breaks and sees them floating away alone at sea, Gaspar and Rossi will need some very special animal friends to help them get home! Set in Antarctica, this fun storybook will introduce you to some familiar (and some less familiar) **Antarctic animals**.

- Follow this link to watch and listen:

<https://www.youtube.com/watch?v=AR6BsTddboc>



Image from: <https://pixabay.com/images/id-56101/>

### Have a chat with an adult about these questions:

- Who are the main characters in this story?
- What is the problem in the story?
- Who helps the penguins first?
- Do you think there is a message in this story? What do you think it might be?
- What is your favourite part of the story? Why?

### Activity 2 – Noun Detective

Access the online activities from **BBC Bitesize** to find out about **nouns** using this link:

<https://www.bbc.co.uk/bitesize/topics/zrqqtfr/articles/zpd8ng8>

**Now go back and listen to the story. Can you list 20 nouns found in the book?**



# Health & Wellbeing Challenge

## Kids' cheese and vegetable frittata

Try making a frittata in the oven - this way the kids can do all of the chopping and mixing before an adult puts it in the oven. You can make mini-frittata in muffin tins, ramekins or small pie dishes. Cold frittata is lovely for picnics or lunch boxes.

**Note: Adult supervision is needed for all of this activity!**

### Ingredients:

2 tsp olive, sunflower or vegetable oil, for greasing  
 4 large free-range eggs  
 50ml/2fl oz milk or cream  
 handful grated cheddar or crumbled feta  
 freshly ground black pepper  
 1 tbsp chopped fresh herbs such as parsley or chives (optional)  
 10 cherry tomatoes (can be left whole or halved)  
 1 red pepper, chopped  
 handful frozen peas, defrosted  
 50g/1¾oz broccoli, chopped into small florets



Activity from: BBC Food

### Method:

1. **Adult's job:** preheat the oven to 180C/350F/Gas 4.
2. Kid's job: Rub the oil over the inside of a 20cm/8in square oven-proof dish or 6-hole muffin tin with a bit of kitchen roll or a pastry brush.
3. Kid's job: Break the eggs one by one into a small bowl so you can check if there is any egg shell in the bowl. If there is you can fish it out with a spoon. Tip each egg into a big bowl when you have checked for shell. Wash your hands after handling eggs.
4. Kid's job: Add the milk or cream to the eggs. Whisk the eggs with a fork or metal whisk until it is light and fluffy.
5. Kid's job: Add half of the grated cheese and a little ground black pepper. You can also add herbs if you like.
6. Kid's job: Put the vegetables you want to use into the oven proof dish. If you are using a muffin tin you can choose which vegetables go in each of the holes. Pour the egg and cheese mixture onto the vegetables and sprinkle the rest of the cheese on top.
7. **Adult's job:** Place the tin or dish in the oven for 20 minutes so that the frittata is golden-brown and set. Check that it is cooked in the middle by poking in a sharp knife. If it is still loose return the dish to the oven until set. Leave to cool a little before removing from the tin with a heatproof spatula. You can eat it warm or cold.

# Social Studies Challenge



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## Autumn

### [All about the seasons](#)

Click on the link above to watch a short video all about the seasons.

Our year is split into four different seasons. We have Spring, Summer, Autumn and Winter. There are lots of differences and changes between the seasons. Right now, we are in Autumn. From watching the video and what you already know, think about...

1. What happens in Autumn to the plants and trees?
2. What jobs do the farmers have to do in Autumn?
3. What special thing do some animals do in Autumn to get ready for Winter?
4. What is the weather like in Autumn?

### Your Task:

Can you collect, draw, paint or take pictures of as many different things that we see happen in Autumn?

When you have all of your ideas and thoughts collected, can you put them together to make an Autumn collage? Look at the picture here to get an idea of some of the things you might want to include.

Image from [pinterest.com](https://www.pinterest.com)



# Expressive Arts Challenge



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## Bark Art

### You will need:

- Glue
- Card (use an old cereal packet)
- Pens/pencils/paint
- Bark from fallen sticks or logs
- Leaves



1. From your garden or whilst you are out on a walk, collect bark from any fallen sticks, branches or logs. You can also collect leaves in as many different colours as you can find.
2. Using the card from your cereal box, you can glue and place the bark into the shape of a tree trunk and branches.
3. Next, add the leaves that you have collected to make your tree look fully autumnal.
4. If you prefer, you can draw your own leaves and colour them in autumnal shades.
5. Leave time for the glue on your tree to dry.
6. Once the picture has dried, can you draw the background for your tree? Think about what the scene would look like in autumn. If you are drawing people, what clothes might they be wearing?

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