

Science Challenge



Make a recycled bird feeder

Not only do bird feeders bring more local birds into your garden so you can see them up-close, they provide an invaluable food source, particularly during times of year when resources might be scarce.

Take care when cutting into plastic bottles. Sharp plastic can cause cuts, both for you and the birds you'll be feeding. Feathers can also get caught on jagged edges, so try to make the holes in the bottle as smooth as possible.

You will need:

- a plastic bottle (with cap)
- two sticks
- a pin
- scissors
- string

What to do:

1. Remove the cap from a clean plastic bottle. Use the pin to puncture several small drainage holes in the base of the bottle.
2. Use the pin to make two level holes on opposite sides of the bottle, near to the base. Use the scissors to widen them slightly.
3. Push a stick through the holes. There should be around 5 centimetres of stick left outside the bottle on each side for the perches.
4. Slightly above each perch, use the scissors to cut a feeding hole the size of a 5p coin.
5. Create a second set of perches and feeding holes: repeat steps 2 to 4 further up the sides of the bottle and offset by 90° from the original.
6. Use the pin to make two holes in the neck of the bottle, on opposite sides and level with each other. Widen these with scissors.
7. Thread the string through the holes, then fill the bottle with a bird food and replace the bottle cap. You may need to make a funnel with a sheet of paper to make filling the bottle easier.
8. Find a sheltered location outside to hang your feeder - tying it onto a tree branch or washing line would work well.



Image from: nhm.ac.uk

A video of these instructions can be found here: <https://youtu.be/ComKxidPfiw>

Activity from: Natural History Museum

Technology Challenge



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Blocks Jumper: Game Creation

Explore coding and computer science at home with CodeMonkey.

This activity will show you how you can create games and projects with block coding! In this short course you will learn to create a simple jumper game using basic event and function blocks.



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

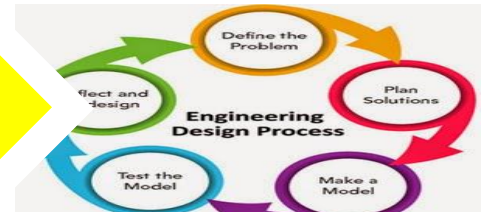
<https://app.codemonkey.com/courses/blocks-hour-of-code#1>



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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Micro:Bit

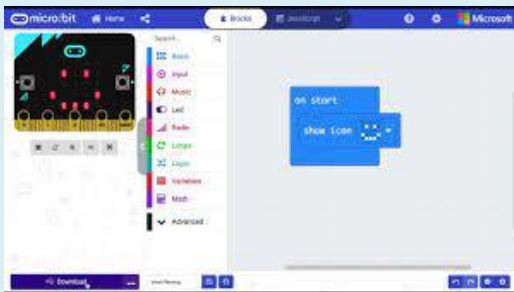
Micro:Bits are small devices which you can code and program to complete a range of different tasks. For example, you can code it to work just like a FitBit, or you could code it to work like Alexa and react to different sound commands. You can even use it to send text messages to other Micro:Bits which are in range.

Fortunately, you do not need to have a Micro:bit in your hand in order to complete the coding tasks. The website provides a simulator which will work exactly like the real thing.

[Makecode](#)

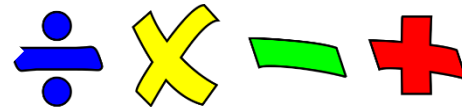
If you click on the link above, it will take you to the website where you can code your own Micro:bit.

Your task:



1. Select the code for making dice.
2. Select the option 'blocks' to code your program.
3. Follow the instructions carefully to turn your Micro:bit simulator into a dice.
4. Can you design a simple board game that will require you to use the dice to play?
5. You can design and create your game on paper or card. Or perhaps you may wish to come up with a game that you can create on the computer.
6. You could play an old game that you own but had lost the dice for!

Maths & Numeracy Challenge



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12 to 15

	12	

	13	

Can you fill in the numbers 1-8 in the boxes so that each side adds up to the number in the middle?

	14	

	15	

Literacy Challenge



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Writing a report: BBC Bitesize

Reports are informative pieces of writing that **give information** to the reader about a certain topic. For example: space, the bald eagle, Scotland, flags of the world or anything else you're interested in.

You are going to write a report all about **badgers**.



Image from: <https://pixabay.com/images/id-44202/>

Access the **BBC Bitesize Learning at Home** lesson on **Reports** and complete the activities by following this link: <https://www.bbc.co.uk/bitesize/articles/zr93p4j>

For your **report on badgers**:

- Start by making notes on a planning sheet
- Watch the clip in which wildlife expert and TV presenter Chris Packham explains how badgers live underground. Fill in the '[Badger Report Planning Sheet](#)'. (Either print the sheet out or copy the subheadings down on paper and write your notes under each one.)
- In each box write notes about what you will write in each paragraph. Notes do not have to be full sentences. Use the questions in each box to help you.

Next, write your report

Now you're ready to write your report.

Remember:

- Keep looking back at your plan as this shows you everything you want to include.
- Refer back to the Report rules at the start of the lesson. If you include all of these your writing will be very impressive!
- Make sure you write in full sentences and in paragraphs. Aim for each paragraph to be between four and six sentences long.



Health & Wellbeing Challenge

Easy no-yeast pizza

This home-made pizza is fun and easy to make on a cold November day – plus it's a healthier option than a takeaway too!

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

Ingredients:

For the sauce

- 400g tin chopped tomatoes
- 1 tsp dried mixed herbs, plus extra for topping
- 2 pinches caster sugar
- 1 garlic clove
- 200g/7oz mozzarella (or any other cheese), torn into pieces, for topping
- salt and freshly ground black pepper

For the dough

- 300g/10½oz self-raising flour, plus extra for dusting
- 1 tsp baking powder
- ½ tsp salt
- 300g/10½oz natural yoghurt



Activity from: BBC Food

Method:

Preheat the oven to 220C/200C Fan/Gas 7 and put two baking trays in to heat.

To make the sauce, put the tomatoes, mixed herbs and sugar in a saucepan. Peel and finely grate the garlic, add it to the pan and set over a medium heat. Simmer gently for 10 minutes until thickened then remove from the heat and season with salt and pepper. Leave to cool.

To make the dough, combine the flour, baking powder and salt in a bowl and make a well in the middle. Pour in the yoghurt the stir with a fork to combine. When the mixture forms a rough dough, turn out onto a lightly floured work surface and knead to form a smooth ball. Divide the dough into 4 equal pieces and roll out into thin circles.

Carefully remove the hot baking trays from the oven and lay the pizza bases on top. Bake for 3-4 minutes until beginning to rise then remove from the oven.

Turn the pizza bases over and top with the sauce. Scatter the mozzarella over the top. Season with black pepper, sprinkle over a pinch of herbs then return to the oven. Bake for 5 minutes until the bases are crisp and the cheese is bubbling.

Social Studies Challenge



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Autumn

Autumn

Watch the video in the link above about Autumn in the United Kingdom. You'll need to watch carefully as there is no narration.

Make a list of all the aspects of Autumn life that you see in the video. Put each part under different headings. Your headings could include:

- Weather
- Food – what is harvested and in season?
- Animals – what are they doing? Which ones do we see more of?
- Farming – what tasks are the farmers carrying out?
- Plants and trees – what is happening to them?
- What seasonal events are taking place?

Climate Change:

You will be aware that COP26 was held in Glasgow at the start of November. Lots of aspects surrounding our planet and global warming were discussed. One of the most important discussions was around the world warming up and the effect it will have on our day to day lives.

From what you saw in the video, what will change and what might the consequences of climate change have on our local environment? What will change with the foods we can harvest, the weather, the animals and their habitats and also farming?

You may wish to write about the consequences or you could draw a series of annotated diagrams and pictures.

Expressive Arts Challenge



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Leaf Rubbing Wreath

You will need:

- Leaves collected from outside
- Cardboard (from a cereal packet), paper
- Crayons
- Scissors
- Glue



1. Collect a range of leaves of different shapes, sizes and types.
2. On paper, take rubbings of the leaves by rubbing the crayon over the top of paper which is on top of the leaf.
3. Do rubbings in a range of autumnal colours.
4. Cut the rubbings out so that you have lots of leaves.
5. Cut a large circle out of the cardboard.
6. Now cut a smaller circle out from the inside of cardboard so that you are left with a ring.
7. Begin to arrange the cut out leaf rubbings around the cardboard ring.
8. When you are happy with the position of the leaves and the coverage over the cardboard, glue your leaves into place.

Artfulparent.com