

Science Challenge



Ice Fishing:

Learn how to use salt and a piece of string to catch ice in this fun and easy science activity: <https://www.youtube.com/watch?v=JQGVA9sY6AI>

Materials:

- Small paper cups, bowl or an ice cube tray
- Glass of water
- String (yarn or kite sting works great)
- Small stick
- Salt



Image from: <https://pixabay.com/images/id-404966/>

Instructions:

1. Fill the cup or tray up with water and place it in the freezer – to make ice cubes. *You can also use ice cubes from your freezer and skip this step.*
2. When the water is frozen, remove the ice from the cup or tray.
3. Put the ice in the glass or bowl of water. The cube will bob up and down in the water and then float on the top.
4. Place one end of the string from the fishing pole on top of the ice cube and sprinkle salt on the ice where the string is touching. Watch as the water melts slightly and refreezes.
5. After about 10 seconds, carefully lift the ice cube out of the water with the fishing pole. You caught a fish (ice)!

Ordinary water freezes at 0° C. When you add salt to water, it lowers the water's freezing temperature-it has to get colder than 0° C to freeze.

How much colder depends on how much salt is mixed in with the water. The salt you sprinkle on the ice cube lowers its freezing temperature and, since the ice cube can't get any colder than it already is, it starts to melt. A little pool of water forms on top of the ice cube and the string sinks into it. As the ice cube melts, it dilutes the salt/water mixture in the little pool; the freezing point starts to go back up again. The ice refreezes, trapping the string. As soon as the ice cube hardens, you can raise it by lifting the string. All this happens very quickly, of course.

❄️Think of this in terms of Gritters putting salt out on the roads in winter❄️

Activity from: sciencefun.org



Technology Challenge



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Safely Searching the Internet

The Internet is full of wonderful things. It's an amazing invention! People all over the world put things on the Internet to share with others. Because of this, we need to make sure we stay safe online.

One way of keeping ourselves safe is using special child-friendly sites to search the internet. These include:

- www.safesearchkids.com
- www.swiggle.org.uk
- www.kiddle.co



With an adult can you use the internet to research some facts about polar bears?

You might want to think about:

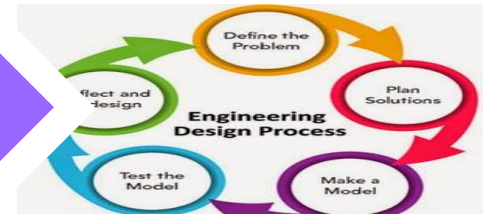
- Where are they found?
- What do they eat and how do they hunt?
- How big are they?
- **How is climate change affecting them?**
- Can you find some good pictures of polar bears?

Create a factsheet or poster all about polar bears using the facts you have found online!



Image from: <https://unsplash.com/photos/SVmUgfl-Fjg>

Engineering Challenge

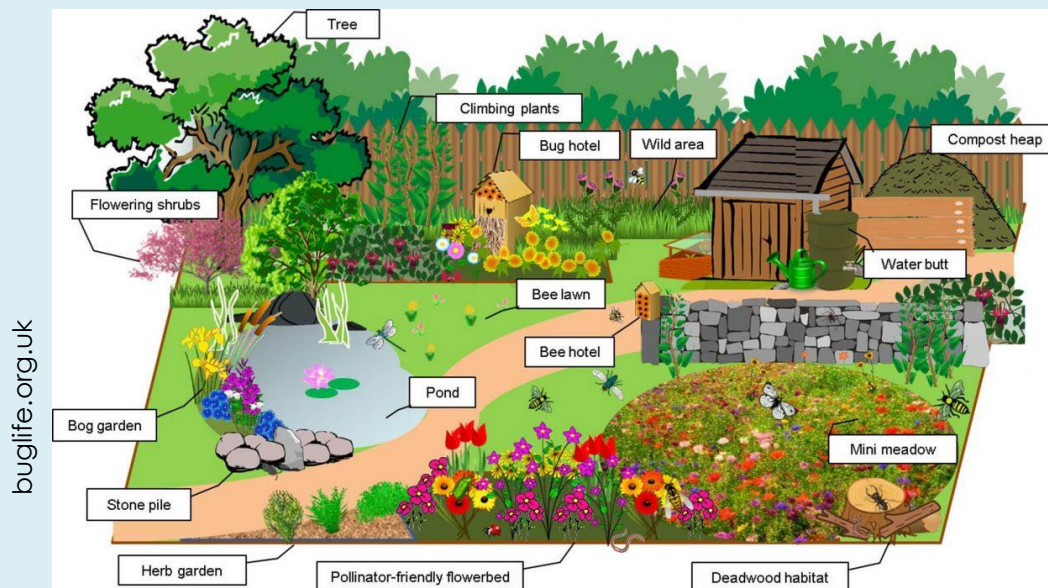


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Climate Change and Animals

Climate change is affecting all living things on earth. We can make changes to the way we live and the way we use the earth's resources. But what do animals do when the world around them changes? Watch the video in the link below...

[Climate Change and Animals](#)



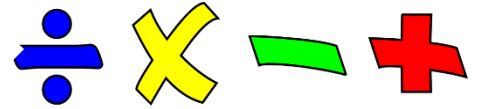
What can we do to help? Firstly, we can look after the wildlife that live in our own environment. In the diagram there are lots of ideas of things that we can do to help insects in our gardens.

Your task:

Look at the diagram and choose some of the bug helping ideas that you can try in your own space. You collect stones for a stone pile or build a deadwood habitat. Could you be a little more adventurous and build a bug hotel??

Check on your work regularly to see what bugs you are helping.

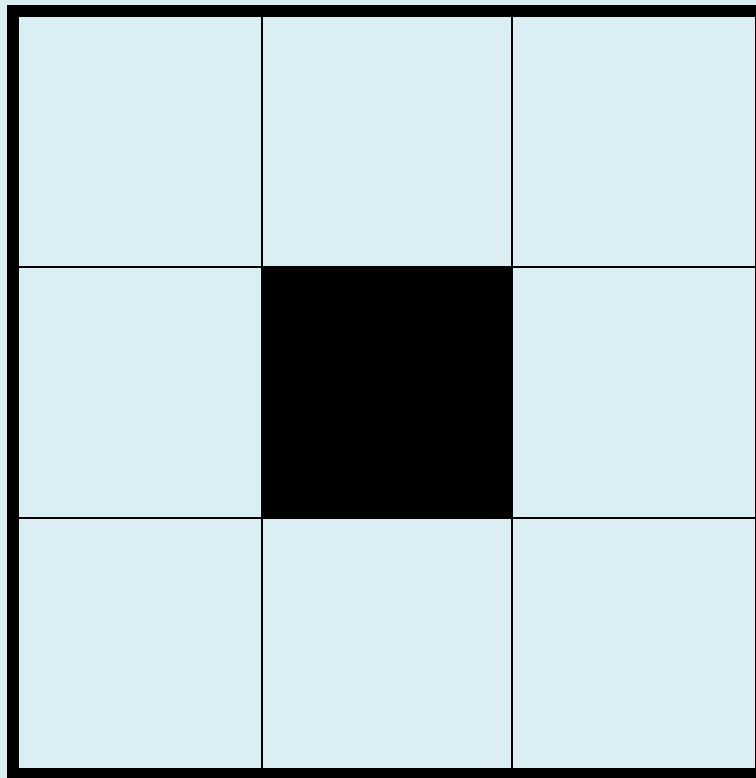
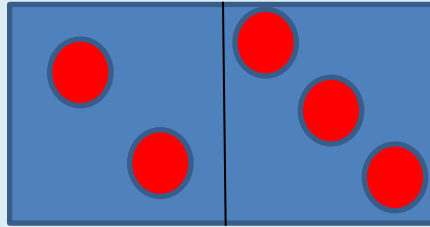
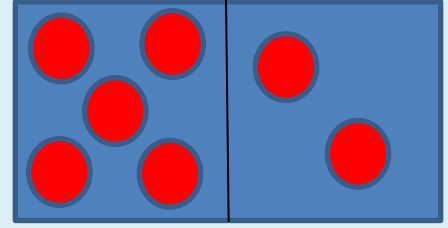
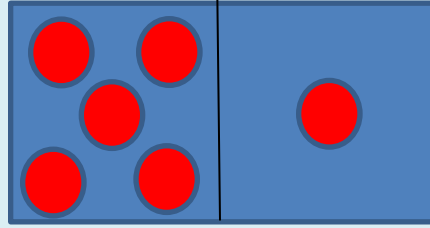
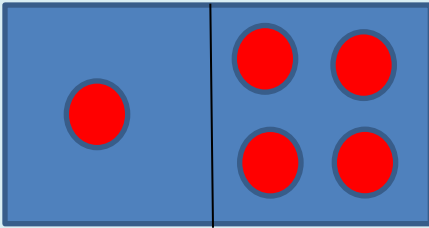
Maths & Numeracy Challenge



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Adding Dominoes

Can you use the dominoes to fill the grid so that each side adds up to 10?



Literacy Challenge



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Winston of Churchill – One Bear’s Battle Against Global Warming

Activity 1 – Listen to the story

Winston the bear lives in Churchill, Manitoba, the polar bear capital of the world. Much like a certain other famous Winston, when Winston the bear speaks, others listen. He rallies the polar bear community together, and urges them to join his campaign against global warming.

- Follow this link to watch and listen: **(Please have an adult check this first)**
https://www.youtube.com/watch?v=2_p7iY1cdf0
- **Have a chat with an adult about these questions:**
- Can you remember what happened in the story?
- What was the problem Winston and the polar bears had?
- What does Winston want us to do?
- Can you think how we can help Winston?
- What will happen if we do this?
- What could happen if we don't?

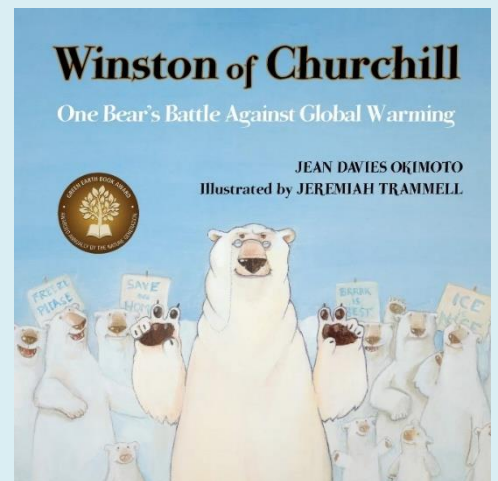


Image from: amazon.co.uk

Activity 2 – Create a Storyboard

Make a Storyboard for Winston of Churchill by drawing pictures and writing a few sentences about your favourite parts of the story. **Remember to use capital letters and full stops!**

An adult could help by drawing boxes and lines on a piece of paper like in this picture.

A **downloadable** blank storyboard like this can also be found [here](#).



Health & Wellbeing Challenge

Food miles and the environment

What are Food Miles?

All food makes a journey from where it is grown or produced to your plate. How far food has travelled is known as its food miles. We should be aiming for as few miles as possible.

Choosing foods with fewer food miles helps reduce pollution and protect our planet.

Find out more:

Access the video and activities on BBC Bitesize website using this link to find out more:

<https://www.bbc.co.uk/bitesize/topics/zjr8mp3/articles/zjnxwnb>

Challenge:

With the help of an adult, can you investigate where some of the food in your house has come from?

- The labels on packets of fruit and vegetable are a good place to start.
- Which food has travelled the furthest?
- Can you find out more about the countries where the food has come from?



Image from: BBC Bitesize

Social Studies Challenge



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Pollution In Our Oceans

Our oceans are filling up with rubbish that we throw away from our homes. Some of the items are man-made, which means that someone has had to design it and make it out of other things, like the plastic lego you can see below. Other things are natural, which means they occur without any human help. The cat's fur in the picture is an example of this. Man-made things often take a long time to break down and disappear, so they float around in our oceans and cause lots of problems for marine life and birds. Watch this video to see how big a problem this is in the world... [Plastic Oceans](#)



Your Task:

Can you look at each of the pictures and decide if they are man-made or natural? Put them into two separate groups. Which ones do you think will cause most pollution in our oceans? Why?

Pictures from twinkl.com

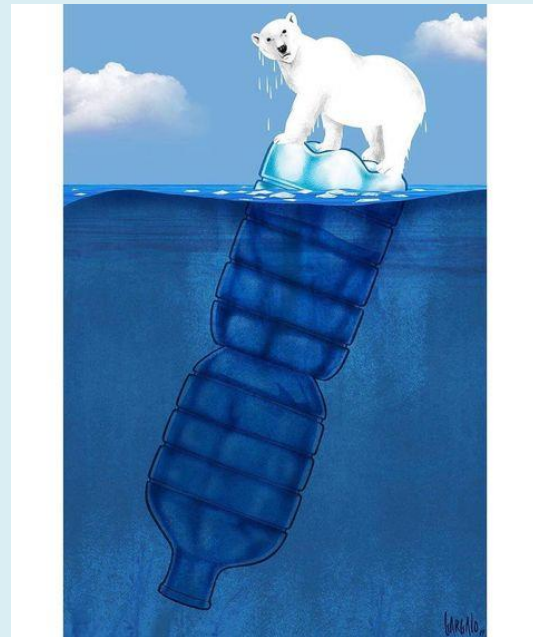
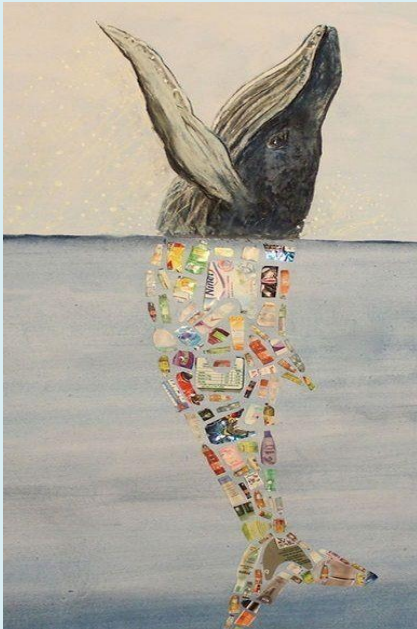
Expressive Arts Challenge



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Rubbish Wildlife Pictures

Art can be used to make people sit up and take notice of problems that we face in the world. These following pieces of art are highlighting the plight of animals which are affected by climate change and pollution in our oceans.



Your task:

Think about the animals that we have in our local environment. These could even be your pets like cats and dogs. But there are also rabbits, deer, birds, badgers, insects and loads more!

Can you create your own version of the above pieces of art by selecting an animal from your local environment?

Think about how our rubbish and pollution might be affecting them.