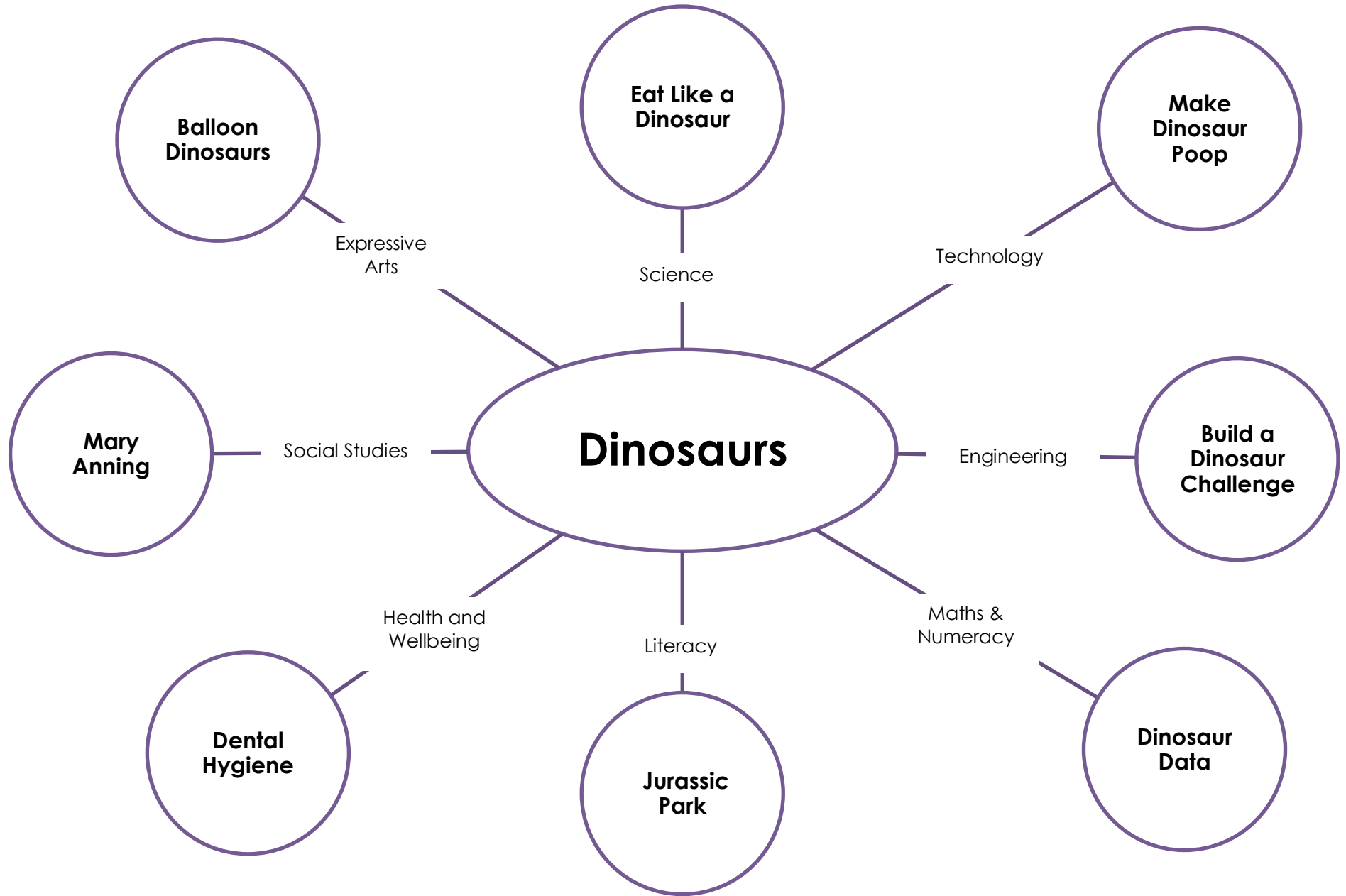


Learning from Home



Science Challenge



Eat Like a Dinosaur

Adult Supervision Required

Why would a plant eating dinosaur (**herbivore**) swallow stones? Try this simple experiment to find out.

You will need:

- 2 rounded stones or pebbles
- Leaves
- Plastic bowl
- Scissors
- Water and a teaspoon (tsp)

Be careful gathering leaves as some could be dangerous to touch. **Ask an adult for help.** You may need to wear protective gloves.



Instructions:

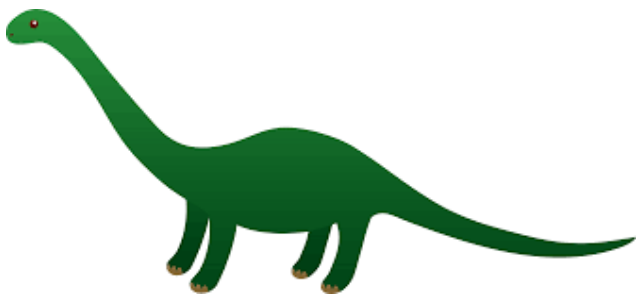
1. Write down and / or discuss with an adult, a reason why the stones may have helped the dinosaur when it ate leaves.
2. Put 6 small leaves in a plastic bowl
3. Use the scissors to cut up the leaves – be very careful
4. Add ¼ tsp of water.
5. Hold the stones and grind the leaves between them.
6. Observe (watch) what happens.

⚠ Never put stones or pebbles in your mouth. This could be very dangerous. ⚠



The Science

You should see that the water turns green. This is what happened in a dinosaur's stomach. A dinosaur swallowed stones called '**gastroliths**' to help it eat and digest (break down) leaves. As the stones released the edible parts of the leaf, bacteria and acid in the dinosaur's stomach rotted the food. This helped the dinosaur to digest its food.



Images from www.clipart-library.com

Technology Challenge



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Make Dinosaur Poop

Paleontologists are scientists who study fossils, and they can tell where dinosaurs lived by studying their fossilised poops (**coprolites**) and finding out what they hunted and ate.

1. Dinosaurs that ate plants and seeds are called **herbivores**. Examples include the Triceratops and Apatosaurus.
2. Dinosaurs that ate meat are called **carnivores**. An example is the Tyrannosaurus Rex.
3. Dinosaurs that ate plants and meat are called **omnivores**. Examples include the Oviraptor.
4. Dinosaurs that ate fish are called **piscivores**. The Plesiosaur was a piscivore.

Task: Today you are going to make some herbivore dinosaur poop!



You Will Need:

Ingredients: 2 cups flour, 1 cup salt, 1 tbsp of vegetable oil, $\frac{3}{4}$ cup **warm** water, beef stock cube, squirt of brown paint, handful of leaves

Equipment: lolly sticks, paper plates, large mixing bowl, jug

Not to be eaten!

Method

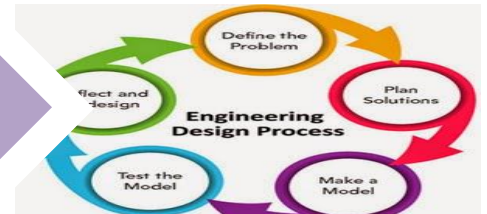
1. In a large bowl, mix the salt, flour and vegetable oil together.
2. In a jug, mix together the warm water, beef stock cube and brown paint, until it looks like brown water.
3. Carefully, pour the brown water mixture into the large bowl containing the flour mix.
4. Stir the mixture, then start to use your hands to make a doughy lump.
5. Take small pieces of the dough and roll them into large sausage shapes.
6. Tear up the leaves and poke them into the sausage shapes. These are the bits that tell **paleontologists** (fossil experts) what the dinosaurs ate millions of years ago.
7. Ask someone at home to use the lolly sticks to '**excavate**' the poos and find out what the dinosaurs used to eat.

*You may wish to bake these slowly in an oven at 180°C / Gas Mark 4, until they are hard, to turn your 'poo' into a **coprolite**.*

Activity from TES Images from <https://en.wikipedia.org/>



Engineering Challenge



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Build a Dinosaur Challenge

Today's challenge is to use straws, marshmallows, playdough and toothpicks to create a free-standing dinosaur.

You will need:

- bendable straws
- large marshmallows
- playdough / plasticine
- toothpicks
- rolling pin
- dinosaur toys or models or pictures



Use a model/toy dinosaur or a picture of one from a book or the internet to guide your build.

Building Tips

You could use the toothpick to cut the marshmallow or playdough into small building pieces.

A rolling pin can be used to create flat building pieces. You could also use your hand to flatten the marshmallows.



Share Your Dinosaur Creation

When you are finished creating your dinosaur, show it to a grown up.

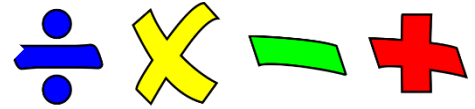
How does it look compared to the model or picture of a real one?

Can you add any extra features or change anything to make it look more realistic?

Which building materials would you change next time to make your model stronger/easier to build and what would you use instead?

Activity and image from <https://jdaniel4smom.com/>




Maths & Numeracy Challenge



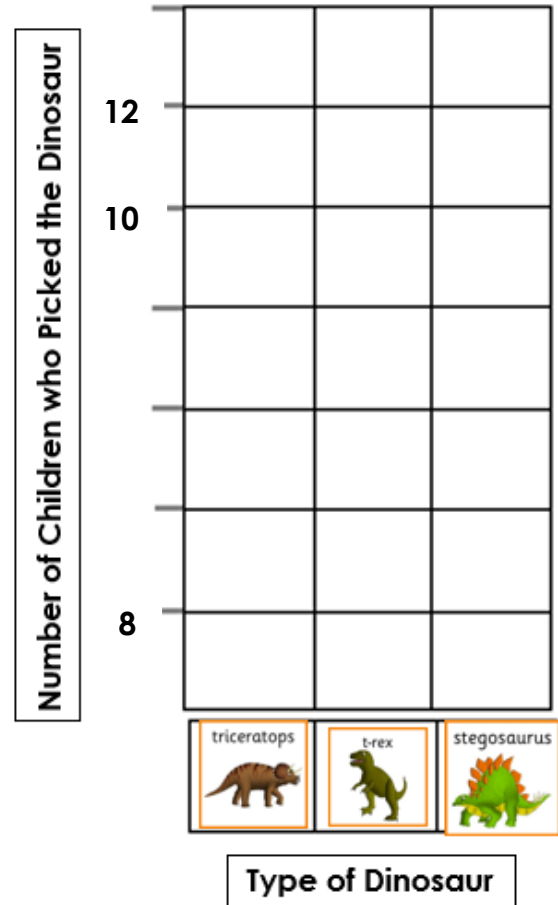
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Dinosaur Data

1. Some children were asked to choose their favourite dinosaur. The results are in the table below. Complete the last column.

Dinosaur	Tally	Total (number)
triceratops 	I	
t-rex 		
stegosaurus 		

2. Now complete the numbers on the vertical axis (going up) and add the information from the Tally table (shading the appropriate number of boxes) to complete the bar chart below.



3. Each child was given their favourite dinosaur as a toy. Use the information in the table to work out the following:

- If 6 children had a triceratops model, how many dinosaur legs would there be altogether?
- How many children favoured the T-Rex? How many T-Rex legs would that be?
- How many dinosaur legs were there altogether?
- Which combination of the 3 dinosaurs might give you 42 legs? Is there more than 1 answer?

Activity adapted from and images from TES

Literacy Challenge



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Jurassic Park

'Jurassic Park' was one of the most popular films back in 1993 and it won three Oscars. The American director, Steven Spielberg, made the film.



'Jurassic Park' is based on a book by a writer called Michael Crichton, and it is about a scientific experiment which brings dinosaurs back to life. The dinosaurs live in a special park, but the experiment goes wrong and the dinosaurs escape. They are very dangerous, and they attack humans!

The film became very famous because it had incredible special effects. Modern computers created the dinosaurs and their actions. For the sound of the dinosaurs, the technical experts used the sounds of elephants, crocodiles, penguins, tigers and dogs.

The film was very popular and there was a dinosaur exhibition also called 'Jurassic Park' in a museum in New York. Four thousand people visited the exhibition every day. This was the start of 'Dinomania' and we now have dinosaur toys, dinosaur models, dinosaur posters, pyjamas and even dinosaur sweets in the shops.

Questions:

1. Who wrote 'Jurassic Park'?
2. Why was the film so popular?
3. What did they use to make the sounds of the dinosaurs?
4. Where was the dinosaur exhibition?
5. Were the dinosaurs friendly in the film?



True or False?

6. 'Jurassic Park' was a film which won two Oscars.
7. Steven Spielberg didn't make the film 'Jurassic Park'
8. The dinosaurs were dangerous.
9. Every day, forty thousand people visited the exhibition.



Images from www.clipart-library.com

Now write a question of your own and a statement of your own that could be True or False. Ask a grown up if they know the answers.



Health & Wellbeing Challenge

Dental Hygiene

Which physical features do you think about when you think of dinosaurs?

You might think of them as being really big – many were, although there were also small dinosaurs too. You might think of scaly, rough skin or feathers. You might also think about their big, long jagged claws but we also think about their teeth.

There were 3 types of dinosaurs: **carnivores**, which ate meat, **herbivores** which ate plants and **omnivores** which ate meat and plants.

There were no shops millions of years ago when dinosaurs were alive, so they had to hunt or scavenge for their food. There were no other options...and there were also no processed foods or sweets, which is a good job because if a dinosaur lost its teeth then it would have died as it wouldn't have been able to eat anything.

Humans are also omnivores as we can choose to eat both plants and meat. Not many of us hunt or scavenge for our food nowadays as we have shops...and processed foods, including sugar. We need to brush our teeth to keep them clean and healthy. We wouldn't die if our teeth fell out, but it would limit what we could eat, and it also wouldn't make us look so good. Plus, having toothache is really painful!

Click on the link to watch a short video about the importance of brushing our teeth

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

Do you make sure you brush your teeth twice a day? If you don't then try to from now on.

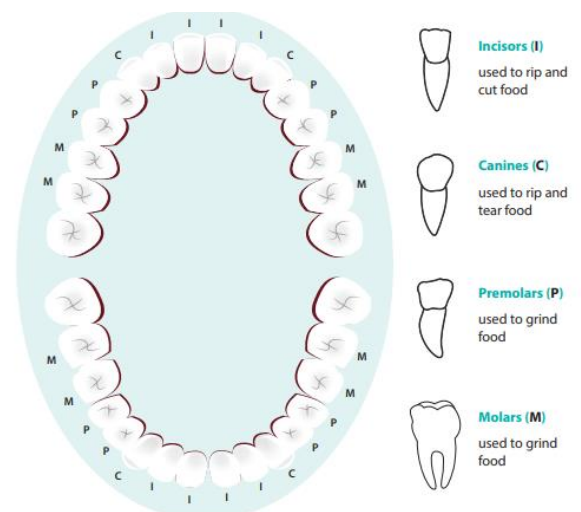
Over our lifetime, we get 2 sets of teeth. We start to get our first teeth, or 'milk teeth', from about 6 months old. These start to fall out from about 6 years old as our adult teeth start to grow in.

We have 20 milk teeth and there are 32 teeth in a full adult set. Have a look at the picture which

shows you an adult mouth. Did you know that different types of teeth do different jobs? We have teeth for ripping and tearing meat (like a T Rex), but we also have teeth for grinding down vegetables and plants. (Like a diplodocus)

Count your teeth by feeling them with the tip of your tongue, how many do you have?

Image from www.dentalhealth.org



Social Studies Challenge



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Mary Anning

Ask an adult to help you read the information below.

Famous Person / Significant Individual:

Mary Anning was born just over 200 years ago, in the seaside town of Lyme Regis, Dorset, UK, in 1799.

Young Mary and her brother, Joseph, would join their father, looking for fossils at the beach and selling them to tourists. After their father died, Mary and Joseph continued fossil hunting.

In 1811, they found a strange skeleton which was more than 5 metres long! Back then, people believed that this creature must have come from far away, simply swept in by the ocean, so scientists simply thought it was a crocodile. They eventually realised it was an ancient species, a dinosaur, and it was named **Ichthyosaurus** – meaning 'fish lizard'.



Mary continued to scour the beach and crumbling cliffs with her dog Trey, and in 1823 she made another important discovery – the first ever **Plesiosaur** skeleton! This long-necked sea creature looked so odd that many people thought it was fake at first! Mary made many other discoveries, such as a **Pterodactyl**, and **coprolites** – fossilised poo – which helped her work out what dinosaurs ate!

Mary died in 1847. She was well-known for her discoveries but wasn't taken seriously as a scientist back then because she was female, and she came from a poor family. Some of her findings were even stolen and claimed by some of the male scientists she worked with. Thankfully, today, Mary is recognised as a pioneer in the field of **paleontology** (the study of fossils), and she is celebrated as the greatest ever fossil hunter.

To find out more, click on this link: https://www.youtube.com/watch?v=koota_lwU_4

How Do We know about Mary Anning? We still have the fossilised dinosaur remains that Mary found. We have her drawings and writings about her discoveries. There are reports, written by others, telling us about her life and achievements.

Chat to a grown up about Mary. She didn't have much money; do you think she would have been better off spending her time doing a different job rather than spending her time hunting fossils? Why?

How do you feel about the fact that Mary wasn't taken seriously because she was female?

Information from <https://pstt.org.uk/> Images from <https://en.wikipedia.org/>

Expressive Arts Challenge



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Balloon Dinosaurs

Adult Support Required

Making dinosaurs with balloons is great fun and it's also really easy! You can use round or long balloons to make the body and then attach a head, arms and legs, facial features and other body parts like scales or a tail (which could be made from card or other craft materials).

You can make all kinds of dinosaurs, like this Stegosaurus or this Tyrannosaurus Rex

You will need:

Balloon, white and / or coloured card, colouring pens / pencils, scissors and sticky tape, other craft materials (optional)



Instructions:

1. Ask an adult to blow up and tie a balloon for you.
2. Choose which dinosaur you would like to make.
3. Either draw the outlines for the body parts yourself or click on the link below for the free templates.
4. Add further details with your colouring / craft materials then cut out your outlines and stick them onto your balloon using sticky tape.



You can click here to find out some more information about dinosaurs and to see pictures of how they might have looked:

<https://www.kids-dinosaurs.com/dinosaur-facts.html>

You can choose which dinosaur to make but here is the link for the free downloadable PDF templates for a stegosaurus and a tyrannosaurus rex if you prefer:

<https://www.teachingideas.co.uk/art/balloon-creatures>

Activity and images from www.teachingideas.co.uk