

Mary Anning/Dinosaur Session

Other session suggestions:

- Research life and times of Mary Anning: who she was, what she did, what her lasting impact has been.
- Make a fossil

Sharing a Story

Introductory discussion

- What do we mean when we say let's 'share a story'?
- Who likes to share a story?
- Who do you normally share stories with?
- Who writes stories?
- Do scientists ever write stories?

Scientists write stories all the time. We call these stories 'theories' or 'hypotheses', and once a scientist has come up with a theory, they then set about making it their job to prove that their theory is false. When they have, they then change their theory to be something even harder to disprove.

- Why would they do that?

Because in science you can't always prove if something right. For most theories, it will only ever seem to be right until someone proves it wrong, and you never know when that person will come along. Just one person proving something wrong, means it is wrong, but someone proving something is right, is only right until you hit the experiment where it is wrong.

Activity:

Snooker balls (or similar) in an opaque bag.

- Get someone to take one out
- Whatever colour they take out, we develop a theory about what colour all the balls left in the bag are.
- If the next ball out is the same colour as the first ball, it hasn't proved our theory, it just hasn't disproved it. If it is a different colour, we have to re-think our theory.
- The only way to really know is to check each and every ball in the bag.

Unfortunately, in the big wide world, we can't do this for every hypothesis we have, so instead, we set our sights lower, instead of proving a hypothesis, we set out to disprove it.

But, as we said, before they get that far, they have to come up with a theory. This is why you need loads and loads of imagination to be a scientist.

- What sort of theories do you think Mary Anning came up with?

She would have had to use her knowledge, but also her imagination when working out: How the bones of the fossils all fitted together.

Whether she had all the bones.

How the animal would have stood and moved about.

What they would have looked like.

Activity:

We are going to come up with a theory all together. How it will work is that I will say one of your names and then ask you a question. You then reply, with no interruptions from anyone else.

Storytelling Activity:

So, lie back on the floor with your head on your cushions.

Get comfy, settle down and shut your eyes.

Take a deep breath in... and out. In and out. Focus on your breathing, how it feels as the air goes in through your noses and into your lungs, and then back out again. Notice how your chest fills up, and then goes back down. Keep it controlled and keep it slow.

Now, I want you to imagine you are standing on a beach, at the edge of the sea. As you breathe in imagine the smell of the salty air filling you lungs.

Questions:

- Is it warm or cool?

Think about how the air tastes

- Is there anyone else around?

Look to see the light bouncing off the water like lots of tiny flickering stars.

- What can you hear?

Let your breathing go up and down as the small waves come in and out on the beach.

You are there to comb the beach for any signs of prehistoric life, just like Mary Anning. The tide has only recently gone out, and is lapping around your toes.

You walk along the sandy bit of the beach and get to the start of the rocks.

- What do the rocks look like?

- Are there any rock pools?

- What do the cliffs near by look like?

You find a small fragment of what appears to be bone. After closer inspection you realise it is part of a skull of a creature. But it is not like any creature we have now.

- What does it look like?

As you hold on to this skull, time suddenly speeds back. Before you know it you are 200,000,000 years back in time.

- What does it now look like?

- Is the beach still there?

- Does the air still smell the same?

- What is the temperature like?

- What can you hear?

- What is about you?

Looking down you suddenly notice you are standing in the middle of a very large foot print.

- What does that foot print look like?

You see a couple more prints so you follow them

- Where do they lead to?

There are some really strange smells and noises now.

- What are they?

You hear a loud screeching above.

- What is it?

- What happens next?

Steer the questions so that a story is created where we:

Get into a pickle

Get ourselves out of it

Get home.

Group Discussion

We just came up with a theory of how the world looked 200,000,000 years ago.

- What did we base our ideas on?
- How much of it do you think scientists could disprove? Which bits might be harder to disprove?
- If you read more about that time and what scientists already think they know, do you think our story would change slightly if we did that again?

So we change our theories with what we know or what we think we know.

Scientists are just really cool storytellers.

Crafts

- Colour in board game - <http://www.oum.ox.ac.uk/thezone/fossils/games.htm>
- Make a common-place book - like an autograph book, but people write nice things about each other, or poems, stories etc. - <http://www.lymeregismuseum.co.uk/related-article/mary-annings-commonplace-book/>
- Make 3D dino (<https://www.thecambridgehomeeducator.com/mary-anning-session/>)