

A Slice of Science

Issue 6

Welcome to your fortnightly science newsletter: 'A Slice of Science!' Here you will find fun experiments that you can try at home, science jokes and interesting science facts. You will also learn about a scientist and about some careers/jobs that involve science.

Careers in Science

Botanist.



A Botanist study all forms of plant life and have may different job roles in many different areas.

To be a Botanist, you would need a University Degree in one of these area's;

- Botany
- Ecology
- Environmental Science
- Plant Biology
- Plant Science

You would also need Master's Degree or PhD, in teaching or research posts.

Botanist's can specialise in many different areas such as;

- The study of specific plant groups
- Molecular biology
- Genetics
- Ecology
- Marine Botany
- Taxonomy - the identification and classification of plants

For work experience, you would need to volunteer for relevant organisations such as; The Royal Horticultural Society, The field Studies Council or the Botanical Society of Britain and Ireland. With experience in industry, you could move into plant science, investigating biodiversity, crop production and plant diseases.



STEM PERSON
OF THE
WEEK

Scott Lawrie Physicist

Scott is in charge of the ion source at the start of a particle accelerator. He has to be **hard-working** and **creative** to keep the machine running and to improve it over time. Scott is **imaginative** and spends his time thinking of interesting ways to measure plasma (the pink light in the middle of the picture).

Hard-working, creative and imaginative



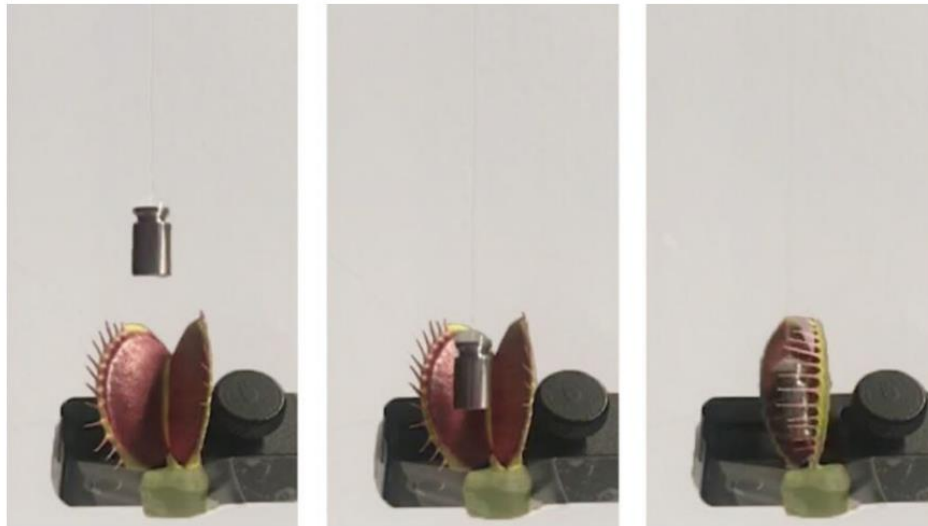
STEM PERSON
OF THE
WEEK

Sabrina Gaertner Instrument Scientist

Sabrina is an instrument scientist who works with particle accelerators. She is **collaborative** and has to work with different people in her team. She is a **committed** scientist responsible for operating a machine that allows her to look at the structure of liquid and glass to learn about their structure. Sabrina has to be **patient** when analysing her results.

Committed, patient and collaborative

A robot arm toting a Venus flytrap can grab delicate objects.



A new robotic grabber is ripped straight from the plant world. The device, made with a Venus flytrap, can grasp tiny, delicate objects.

Normally, the Venus Fly trap gets a meal when unsuspecting prey touches delicate hairs on one of the plant's jaw-like leaves, triggering the trap to snap shut. But, by sticking electrodes to the leaves and applying a small electric voltage, researchers designed a method to force Venus flytraps to close. Even when cut from the plant, the leaves retained the ability to shut upon command for up to a day, say materials scientist Wenlong Li and colleagues at Nanyang Technological University in Singapore.

Integrating soft, flexible plant material into robotics could aid in picking up fragile objects that would otherwise be damaged by clunky, rigid graspers. So, Li's team attached a piece of a flytrap to a robotic arm and used a smartphone app to control the trap. In experiments, the robotic grabber clutched a piece of wire one-half of a millimetre in diameter. And when not strapped to the robotic arm, the dismembered plant also caught a slowly moving 1-gram weight.

MUMMIFIED APPLE!

To make a mummified apple you only need a few simple ingredients to create a desiccant (a substance that pulls out moisture) and some time.

Materials:

Apple

Apple peeler

Salt

Baking soda

Plastic container



Steps:

Step 1: Peel an apple.

Step 2: Carve a face from the apple.

Step 3: Combine salt and baking soda in a 1 to 1 ratio.

Step 4: Place apple in the container and add the mixture until you completely cover the apple with a couple inches of the mixture.

Step 5: Wait 1 week and then pull the apple out and it will be a preserved apple.

The desiccant mixture pulls all of the moisture out of the apple, preserving it.

Make Your Own Quick Sand

Quick sand is a fascinating substance, make some of your own and experiment on a safe scale. Amaze your friends by demonstrating how it works.

What you'll need:

- 1 cup of maize cornflour
- Half a cup of water
- A large plastic container
- A spoon



Instructions:

1. This one is simple, just mix the cornflour and water thoroughly in the container to make your own instant quick sand.
2. When showing other people how it works, stir slowly and drip the quick sand to show it is a liquid.
3. Stirring it quickly will make it hard and allow you to punch or poke it quickly (this works better if you do it fast rather than hard).
4. Remember that quick sand is messy, try to play with it outside and don't forget to stir just before you use it.
5. Always stir instant quicksand just before you use it!

What's happening?

If you add just the right amount of water to cornflour it becomes very thick when you stir it quickly. This happens because the cornflour grains are mixed up and can't slide over each other due to the lack of water between them. Stirring slowly allows more water between the cornflour grains, letting them slide over each other much easier.

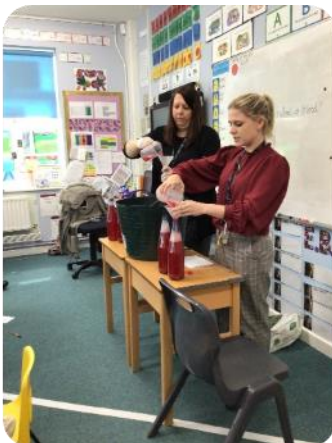
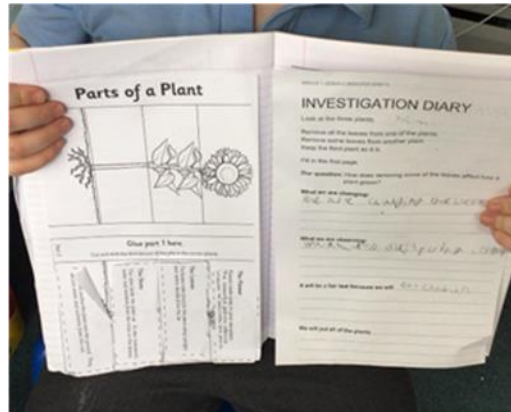
Poking it quickly has the same effect, making the substance very hard. If you poke it slowly it doesn't mix up the mixture in the same way, leaving it runny. It works in much the same way as real quick sand.

Science Jokes

1. What do you call a fly in your butter?
2. Why did Micky Mouse go to space?
3. What can run but cannot walk?

Super Scientists Gallery

If you would like to be featured in our gallery, please send a photo/s of yourself completing a science experiment or a science related activity to your class teacher via Class Dojo or Tapestry.



Fun Science facts

1. **Bamboo is a fast growing plant. Some types of plants can grow almost one metre a day.**
2. **We usually call the sharp Spikes on a stem of a rose 'thorns' when in actual fact the correct term is 'Prickles'.**
3. **Rabbits and parrots can see behind themselves without moving their heads.**
4. **Humans are a little taller in Space because there is no gravity pulling them down.**

Thank you for reading A Slice of Science!

If you have any ideas for what you would like to see in this newsletter, or if you would like to be involved in some way, then please speak to your class teacher, Miss Alladice or Miss Egan.

Joke Answers

1. A butterfly!
2. To see Pluto!
3. Water!