A Slice of Science

Issue 4

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

Careers in Science

Food scientist

Alternative titles for this job include: Food technologist. Food scientists and food technologists develop food and drink products making sure they are safe to consume.
You can get into this job through a university course or an apprenticeship.
University: You'll usually need a foundation degree, higher national diploma or degree in: food science, food studies or food technology.
Employers may also accept other subjects like chemistry or nutrition. Experience of working in a food science or food development environment, for example through an industrial placement, may improve your career prospects.

You'll need:

- knowledge of chemistry including the safe use and disposal of chemicals
- maths knowledge
- knowledge of biology
- knowledge of food production methods
- to be thorough and pay attention to detail
- analytical thinking skills
- excellent verbal communication skills
- to be able to use a computer and the main software packages competently

Day-to-day tasks

As a food scientist, you'll:

- provide accurate nutritional information for food labelling
- investigate ways to keep food fresh, safe and attractive
- find ways to save time and money in food making
- test the safety and quality of food

As a food technologist, you'll:

- blend new ingredients to invent and modify recipes
- conduct experiments and produce sample products
- design production processes and machinery
- source, cost and select raw materials

STEM PERSON OF THE WEEK

Emma Hancock

Software Engineering Apprentice

Emma is learning new skills in lots of different areas of computing. She writes code, builds websites and fixes computers that have stopped working. Emma is **hard-working** and **curious**, which allows her to solve computing challenges successfully. She is **collaborative**, working in teams with others on different projects.

Hard-working

Hard-working people put all of their effort into finishing things.

Collaborative

Collaborative people work together to do things.

Curious

If you are curious, you want to learn new things.

STEM PERSON OF THE WEEK

Ninad Pattalwar

Accelerator Technician

Ninad works as a technician in a laboratory. His job involves the design, assembly and testing of parts for particle accelerators and satellites. He has to be **self-motivated** to ensure his machines work. Some satellites he helped make are now in space! Ninad has to be **creative** and **open-minded** to solve problems.

Creative

Creative people make new things and have original ideas.

Self-motivated

Self-motivated people like to do things for themselves without being told how to do them.

Open-minded

Open-minded people are willing to listen to new ideas and respect new or different views and opinions.

Science in the News

How Do Dogs See the World?

How can we know if an animal sees something the same way we do?

Life Science

Dogs don't always see the world the same way we do. For one thing, they don't see as many colors as people do. They also see much better in the dark than we can.

A team of researchers in Australia tested how dogs see *optical illusions*. Optical illusions are images that trick our brain. They work on people because of how our brain makes sense of what our eyes see.

The researchers trained each dog to look at two circles and tap its nose on the larger one. The team then showed each dog a drawing that had two circles of the same size (see diagram below). The blue circles look different to people because the black circles around them create an optical illusion.

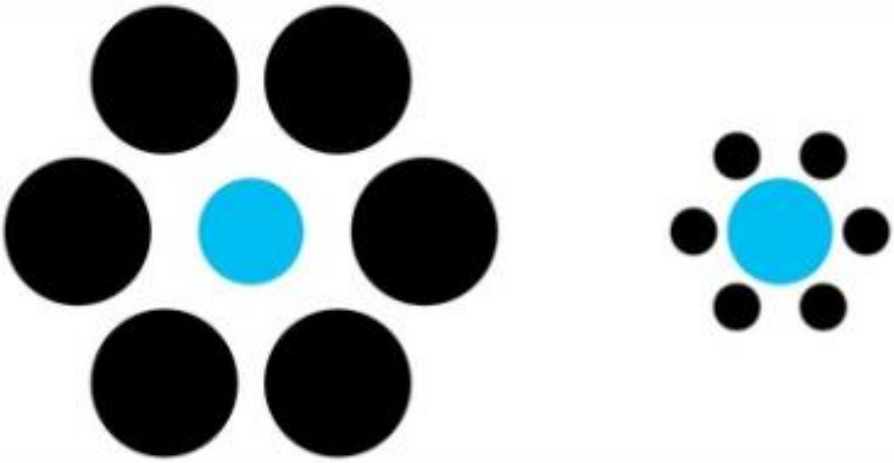
The dogs regularly chose one of the two blue circles as the larger one. This shows that the illusion probably did change how they saw the circles. However, the circle that the dogs chose as larger is the one that people think is smaller. The experiment suggests that dogs understand things differently from people because their brain works differently.

The researchers want to learn more about how dogs see the world. You can help them! Look online to find out more about the What the Fluff Challenge. It's a science project to test what dogs do when they see a "magic trick."

You can take a video of yourself doing this trick at home with your dog. Hold a blanket in front of yourself. Move the blanket up and down so your dog sees you behind the blanket. Then drop the blanket and quickly run behind a wall. Does the dog act as though you have disappeared? Or does it know you're behind the wall? The researchers will try and answer these questions by studying videos that people send. Stay tuned!

AN OPTICAL ILLUSION

The blue circles in this optical illusion are the same size. The one on the right looks larger to people because the circles around it are smaller. However, an experiment showed that dogs think the blue circle on the *left* is larger!



DISSECT A FLOWER

Dissect a flower and label the different parts!

OPENING FLOWERS

Cut out a flower shape from paper. Fold up the petals and place in a tray of water.

Watch as the flower opens up.

Challenge - which type of paper works best?

BUILD A SHELTER OR UMBRELLA

Build a shelter or an umbrella to keep a toy figure dry in the rain.

Use recycled materials such as kitchen foil, paper and straws.

MAKE A SUNDIAL

Using a stick in sand, a straw in plastcine or even an upright piece of chalk, create your own sundial!

You'll need a sunny day for this one.

Science Jokes

1. What kind of tree can fit into your hand?
2. What's worse than finding a worm in your apple?
3. How do we know that Saturn was married more than once?

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

- Your brain contains around 100 billion nerve cells!
- The smallest bone in the human body is present in the middle part of the ear. It's called the stirrup and is only 2.8 mm (millimetres) long.
- An adult elephant needs to drink more than 200 litres of water each day!
- Hummingbirds are the only birds that can fly backwards.
- Octopuses have three hearts, nine brains, and have blue blood!
- If all the DNA in the human body is uncoiled and put together, it would be about twice the diameter of our whole solar system.

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, please speak to your class teacher, Miss Alladice or Miss Egan.

Joke Answers

1. A palm tree!
2. Finding half a worm!
3. Because she has lots of rings!