Science Newsletter

Timbertree Academy

Autumn 2023

QUESTIONS OF THE TERM

How do flies walk on the ceiling?

How far away is the sun from Earth? 39,000,000 miles or 93,000,000 miles?

(answer at the bottom of the next page)

SCIENCE IN THE NEWS

Follow the links to read about the latest science news:

Learn more about electric vehicles

Learn about the endangered black rhino

Learn about young children who have arthritis

Learn how to send your name into space

SCIENCE FACTS— DID YOU KNOW THAT… .

- It would only take one hour to drive to space if you could go straight up in the air.
- The Solar System formed about 4.6 billion years ago.
- Our average body temperature declines as we age.
- Mars has lower gravity than Earth. That means a person that weighs 200 pounds on Earth would only weigh 76 pounds on Mars.
- While most of us think the Earth is shaped like a large sphere, it actually looks more like a "squished ball" that bulges out at the equator. We can thank gravity for that!
- About 75% of your brain is made of water..

SCIENCE SELFIES

Over the next few weeks and the Christmas holiday, please take a photo of you using science or investigating science at home.. It could be: recreating an investigation that you have done in school; using a new science related gift; investigating what happened to something over a period of time to food; trying out this month's Science at Home activity; planting seeds; making slime; looking at the effects of exercise on your body; baking… use your imagination! Be creative— we can't wait to see them! We would like you to take a photograph and then, in one sentence, explain how it is science! Send them to Mrs Smith on Class Dojo or send a paper copy back into school by Thursday 11th January We will be displaying all of your entries in school.

SCIENCE AT HOME

Crystal Sun Catchers

Materials

Epsom Salt Water

Clear Recycled Plastic Lids- use the clearest you can find

Empty Jar Bowl or glass measuring cup

Fork Microwave (optional)

Tray String Pin

Instructions

1. You will be using a ratio of 1:1 water to Epsom Salt for this project. Add 1 cup of Epsom salt to an empty glass jar.
2. Add 1 cup of water to a microwave safe bowl. Heat the water in the microwave for 45 seconds. Alternatively use very hot tap water and skip the microwave.
3. Pour the water into the jar with the salt. Do this quickly so that the water is warm. Stir the salt and water for 1-2 minutes to dissolve the salt.
4. Place several plastic lids on a flat-bottomed tray in a sunny location where they can remain undisturbed.
5. Pour off some of the excess liquid from your jar/crystal garden into the recycled plastic lids. Use just enough to cover the bottom of the lid. DON'T OVERFILL!
6. Place your lids in sunny location. Depending on how much liquid has been added it will take a few hours or a day to start crystallizing. I know it will look like lids full of water at first but be patient!
7. When the liquid has completely evaporated your crystal sun catcher is ready! You will be able to see lovely crystal structures from both side of the lid.
8. VERY carefully poke a small hole in the edge of the lid and thread a piece of string through the hole.
9. Tie in a knot and hang your sun catcher up!

AUTUMN TERM SCIENCE AT TIMBERTREE

At Timbertree we are learning about the following topics this half term.

Biology
Chemistry
Physics

RECEPTION will be learning about seasonal changes

YEAR 1 will be learning about:

- Seasonal changes and daily weather -What happens when the seasons change?
- Plants – (trees) - What makes a tree?
- Animals, including humans - How do I know if it's an animal?

YEAR 2 will be learning about:

- Living things and their habitats - What do living things need to survive?
- Animals, including humans - What do animals need to survive and grow?

YEAR 3 will be learning about:

- Rocks - What makes a rock? How are rocks formed and what types are there? How can rocks change? How are fossils formed?
- Animals, including humans - How does my body move?

YEAR 4 will be learning about:

- Living things and their habitats - How can animals be grouped?
- States of matter - What are solids, liquids and gases?

YEAR 5 will be learning about:

- Properties and changes of materials - Is this change reversible?
- Animals, including humans - How do we change as we grow older?

YEAR 6 will be learning about:

- Electricity - How do the number of components in an electrical circuit affect how it works?
- Animals including humans - What is the circulatory system and how does it work?

Answer to the question of the teem

- Flies can walk upside down! They can do this because of their sticky feet. A fly has foot pads that are covered in tacky glue. To unstick their feet so they can walk anywhere, the fly uses tiny foot claws to push or twist themselves away.

- The sun is 93 million miles away from the earth. Even light, which travels so quickly that we cannot even see it move, takes eight minutes to get from the sun to earth. In a jet traveling 550 miles per hour, it would still take 19 years to reach the sun. In a car traveling 60 mph, it would take about 177 years.

STEM CAREERS
MECHANIC

Mechanics maintain, repair, and service mechanical equipment – which often means dismantling and rebuilding it. They work in any field that relies on mechanical equipment and it is there job to diagnose problems and repair them. They often work in difficult conditions fixing dangerous machines.

Science Technology Engineering Mathematics

SCIENTIST OF THE MONTH – EDWARD JENNER
1749– 1823
VACCINATIONS

Edward Jenner heard that milkmaids who caught cowpox from their cows could not contract smallpox. He decided to test this theory on his gardener's son.

He rubbed material from some pocks (of a cowpox infected person) into some scratches on the boy's arm. As Jenner predicted the boy contracted cowpox, but he was well again after a week.

Jenner then wanted to test the boy's immunity to smallpox and so he inoculated the boy with the virus and found that he did not contract the smallpox disease.

This breakthrough proved that the cowpox virus could give people immunity to smallpox. Jenner went on to make the cowpox virus easily accessible for other physicians to vaccinate their patients.

His discovery eventually led to the eradication of smallpox from the entire planet. Not only did Jenner cure the world of smallpox, but he also invented a new technique for preventing disease, which we know today as vaccination.