Year 3
Science
w/c 6.07.20

Overview

This half of term our theme for Science is LIGHT. You will be learning about different sources of light, the dangers of looking directly at the sun, how shadows are created and how they can change and finally conducting your own experiment.

We hope you will enjoy it all.

Science – Lesson 5 – How my shadow changes over the day

LEARNING INTENTION:

- To know how shadows are formed
- To know that a shadow changes during the course of the day

SUCCESS CRITERIA:

- I know that my shadow is longer at the beginning and end of the day.
- I know my shadow is shortest in the middle of the day when we are directly underneath the sun.
- I can explain why shadows move.

Science – Lesson 5 – How my shadow changes over the day

- Today you are going to be going outside at different times of the day to see how your shadow changes throughout the day.
- Can you explain to your partner/an adult how shadows are made?
- Can you explain where the sun would be in this photo and how you know?

Measure your shadow 1

On a sunny day, go outside and find a place which you know is clear of shadows of trees, fences, walls etc.

You will also need a piece of chalk, a tape measure or metre stick and your recording sheet.

Measure your shadow 2

1. Decide where you will stand and in what position.
2. Get your partner to draw around your feet with a piece of chalk (*so you remember where to stand next time*).
3. Next get your partner to draw around your shadow.
4. Now measure the length of your shadow from your feet to your head.
5. Record your findings on your worksheet.
6. Repeat at different times of the day (early in the morning, late morning, at lunchtime, early afternoon, late afternoon/evening).

Look at your results and answer these questions

1. What did you notice happen to your shadow over the day?
2. What happened to the **length** of your shadow over the day?
3. What time was it **shortest**?
4. What time was it **longest**?
5. Did your shadow **change position**? Can you explain how it **moved**?

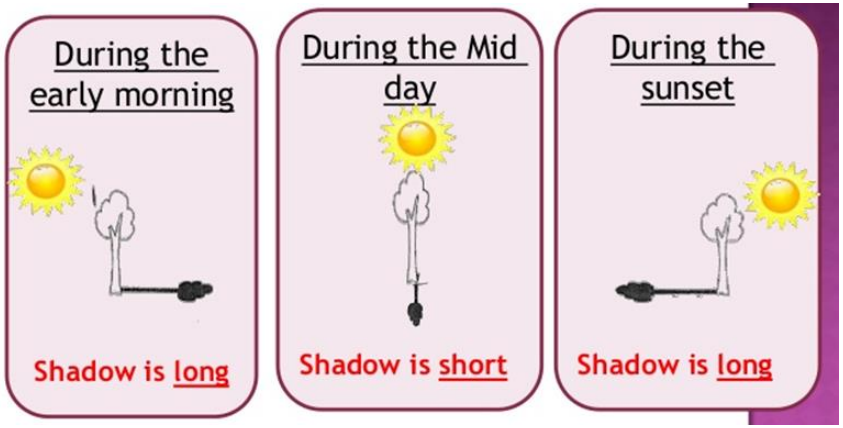
Conclusion

Watch this time lapse video which is similar to your shadow experiment: https://youtu.be/3B7KLstUZbI

Now watch this video:

https://www.bbc.co.uk/bitesize/clips/z9fpyrd

Can you explain what causes shadows to change over the day?



Plenary

- **Remember** the earth moves around the sun NOT the sun around the earth.
- During the day the sun is seen in different positions in the sky. It moves from east to west.
- In the morning, when the sun is low in the sky, shadows are longer.
- In the middle of the day, when the sun is high in the sky, shadows are shorter.
- At the end of the day, shadows grow longer as the sun goes lower in the sky.