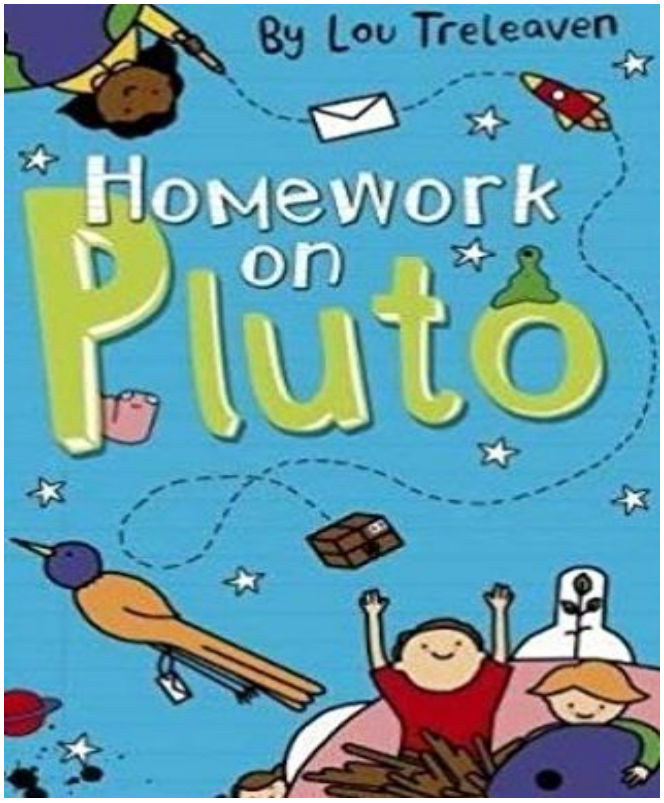
Homework on Pluto

By Lou Treleaven



<u>Lower Key Stage 2 Spring Term 1 Curriculum Plan</u>

	Week One	Week Two	Week Three	Week Four	Week Five	Week 6
English	To identify key features of a letter. To plan a letter. To create a first draft of my letter. To edit and improve my letter. To create a final draft of my letter. *SPaG objectives to be chosen by class teacher based on year group and AfL.* **Final outcome: To write a letter to Antartica.** What role does technology play in letter writing? Do we need to write letters in modern Britain?			To identify key features of a newspaper report. To plan a newspaper report. To create a first draft of my newspaper report. To edit and improve my newspaper report.To create a final draft of my newspaper report. *SPaG objectives to be chosen by class teacher based on year group and AfL.* **Final outcome: To write a newspaper report.** What role does technology play in newspaper reports? Do we need to use paper newspapers?		
	Number: Multiplication and Division			**Statistics**	**Measurement: Money**	
Mathematics (3)	LO: To compare statements. LO: To relate calculations. LO: To multiply 2 digits by 1 digit.	LO: To multiply 2 digits by 1 digit. LO: To divide 2 digits by 1 digit. LO: To divide 2 digits by 1 digit.	LO: To be able to scale. LO: To use different combinations. **End of Block Test**	LO: To understand pictograms. LO: To understand bar charts. LO: To understand tables. **End of Block Test**	LO: To understand pounds and pence. LO: To convert pounds and pence. LO: To add money. Will money be still available in the next 50 years?	LO: To subtract money. LO: To calculate giving change **End of Block Test**
	Number: Multiplication and Division			**Measurement: Area**	**Number: Fractions**	
Mathematics (4)	LO: To understand my 11 and 12 times tables. LO: To multiply 3 numbers. LO: To understand factor pairs. LO: To use efficient multiplication.	LO: To use written methods. LO: To multiply two digits by 1 digit. LO: To divide 2 digits by 1 digit. LO: To divide 2 digits by 1 digit.	LO: To divide 3 digits by 1 digit. LO: To solve correspondence problems. **End of Block Test**	LO: To understand what area is. LO: To calculate the area counting squares. LO: To make different shapes using area. LO: To compare different areas. **End of Block Test**	LO: To understand what a fraction is. LO: To understand equivalent fractions. LO: To understand equivalent fractions. LO: To understand fractions greater than 1.	LO: To count in fractions. LO To add two or more fractions. LO: To subtract 2 fractions.
Science Plants (Year 3) **Fat Question:** How could you ensure a plant could survive on Pluto?	LO: To identify and describe the functions of a flowering plant. How might different faiths use plants and flowers as part of their religion.	LO: To set up an investigation to find out what plants need to grow well. Explain what do you think the impact of no sunlight would have on us?	LO: To record and present my observations. How can our mood be affected by the seasons?	LO: To compare the requirements of different plants. What are the benefits and disadvantages of mass producing liquorice?	LO: To investigate how water is transported in plants. Are Genetically modified (GM) crops safe?	***'Stop Week' for consolidation***
History **Fat Question:** Would life be different today if	LO: To research and create a timeline of Ernest Shackleton's life.		LO: To devise historically valid questions about Ernest Shackleton.		LO: To write the significance of what Ernest Shackleton achieved.	

Ernest Shackleton did not join the merchant navy?	How does Shackleton's life compare to Mary Secoles?				If Shackleton was alive toady, how might his journeys differ?	
Geography **Fat Question:** How could you contribute to the prevention of global warming?		LO: To understand human and physical geography of Antarctica.		LO: To understand the impact of global warming on Antartica. How will the raising sea level effect me?		
Art **Fat Question:** Why was George Marston an important part of the Endurance expedition?	LO: To evaluate a piece of art by George Marston. How are colours significant to different faiths?		LO: To plan and sketch and an Antarctic landscape.		LO: To use oil pastels to complete my final piece. How do colour schemes change your mood? .	
D+T **Fat Question:** How could you design a piece of equipment to support diverse plant growth within the Antartica?		LO: To design an area for sunflowers to grow in Antartica.		LO: To evaluate their design against their own criteria and peer feedback. How could your design be adapted to be used on Pluto?		
Music **Fat Question:** How could you tell a story with music?		LO: To start to recognise simple musical notations. How is music significant to different faiths?		LO: To write a simple piece of music using simple musical notations.		
RE **Fat Questions:** Why are festivals important to religious communities?	LO: To identify the importance of religious festivals. How do celebrations improve the mental health and physical health of an individual or group?		LO: To understand why and how Hindus celebrate Diwali. How many photos capture moments of celebration?		LO: To identify why and how Muslims celebrate the end of Ramadan.	
Computing Fat Question: How would the world work without algorithms?	LO: To use basic commands on Turtle Logo.		LO: To use pen tool commands on Turtle Logo.		LO: To use algorithms to create regular shapes on Turtle Logo. How might algorithms look in space?	
MFL **Year 3 Spanish** **Year 4 French**	.	LO: To understand seasons.		LO: To understand different types of weather.		
PE *Get Set 4 PE*	**Dodgeball** LO: To learn the rules of dodgeball through a mini game	**Dodgeball**	**Dodgeball** LO: To use jumps, dodges and ducks to avoid being hit.	**Dodgeball**	**Dodgeball** LO: To be able to apply all the rules to a tournament	**Dodgeball** LO: To be able to apply all the rules to a tournament

	Tag Rugby LO: To develop ball handling skills demonstrating increasing control and accuracy.	LO: To develop throwing skills at a stationary and moving target **Tag Rugby** LO: To play games using tagging rules including forward pass and offside rule.	**Tag Rugby** LO: To be able to support a teammate when attacking and dodge a defender.	LO: To develop catching a dodgeball at different heights and using your whole body. **Tag Rugby** LO: To be able to defend an opponent	**Tag Rugby** LO: To be able to apply all the rules to a tournament	**Tag Rugby** LO: To be able to apply all the rules to a tournament.
PSHE **Fat Questions:** Is it possible to function without being within a community?	LO: To understand what it means to be part of a community. What impact does a community have on us?		LO: To appreciate difference and diversity (people living in the UK). Is diversity important for a community to function?		LO: To understand values and customs of other cultures. How have communities developed over time?	
	Links to the themes: • The World Beyond Us • Modern Britain • Healthy Bodies & Healthy Minds • The World Around Us • Culture • Technology in Action **Trips, visits and inspirational visitors** Farmer Copley visit - GM crops/liquorice					

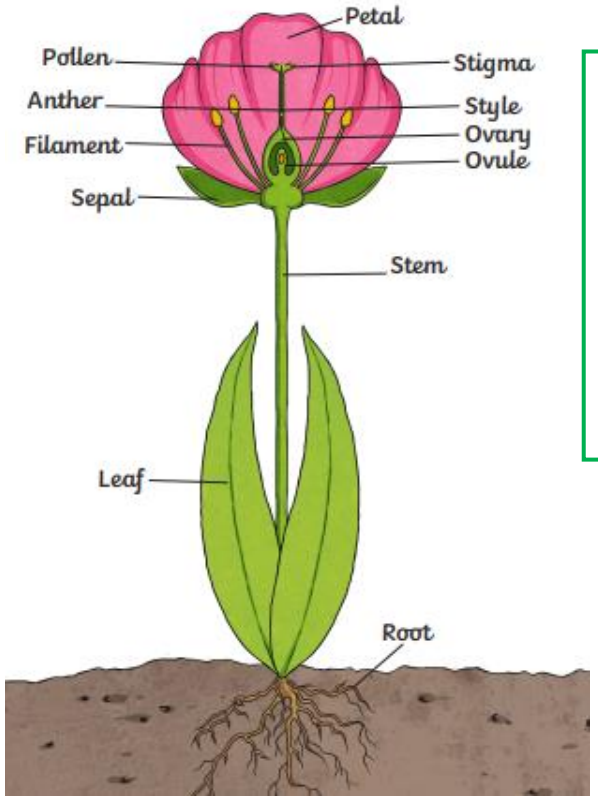
Key Vocabulary

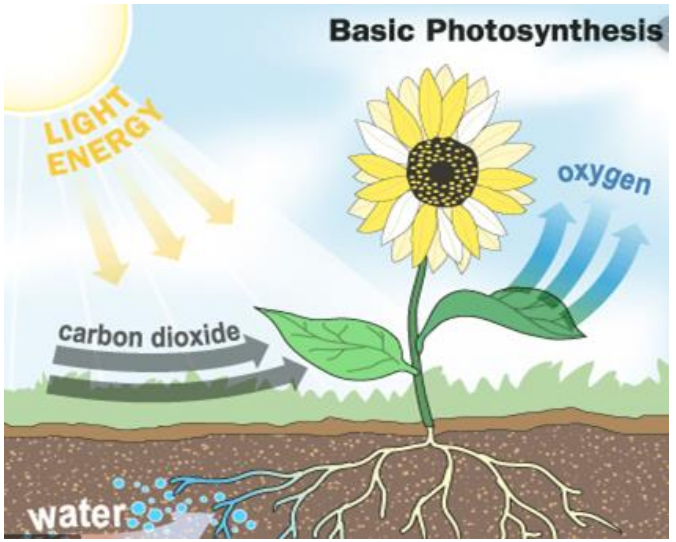
Roots - Anchor the plant in the ground and absorb water and nutrients from the soil.
Stem - Transports water and nutrients to different parts of the plant.
Leaves - The place where photosynthesis takes place.
Petal - The separate leaves that form the outside part of a flower head and usually attract insects.
Flower - The part of a plant which allows it to reproduce.
Seed - Produced the fertilisation ovule, seeds allow plant to reproduce.
Pollen - The product of the male part of a plant which allows it to produce seeds.
Ovule - The egg cell which joins with pollen to produce seeds and allows plants to reproduce.
Stamen - The male part of a plant. Consists of the anther (produces pollen) and the filament (which holds the anther up).
Pistil - The female part of a plant. Made up of the stigma, style and ovary (which contains the egg cells called ovules).
Nutrient - A substance that provides nourishment for growth.
Pollination - The process by which pollen is transferred to the female parts of the plant which means the plants can make seeds and reproduce.
Fertilisation - When the pollen joins with the ovule (egg) a new seed is created.
Seed dispersal - The movement of seeds away from parent plant.
Photosynthesis - The process by which green plants use the sun's energy from sunlight along with water and carbon dioxide to produce their own food in the form of glucose (sugar).
Germination - the growth of a seed into a young plant
Chlorophyll - green substance found inside leaves which is responsible for absorbing light.

Characteristics of Living Things

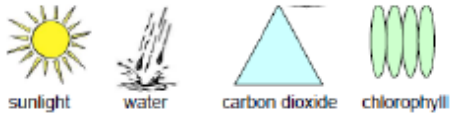
- **M**ovement
- **R**espiration
- **S**ensitivity
- **G**rowth
- **R**eproduction
- **E**xcretion
- **N**utrition

Parts of a Plant

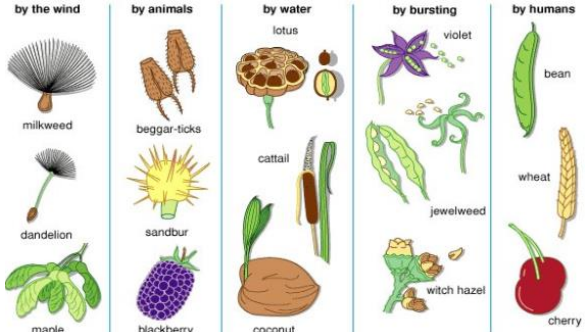




The requirements for photosynthesis:



Seed dispersal



PONTEFRACT ACADEMIES TRUST

The Flowering Plant Life Cycle

1. Germiination - The seed starts to grow when conditions are suitable.

2. Roots - Roots usually grow underground.

3. Leaves - A steam and leaves form and the plant make its own food (photosynthesis).

4. Flowering - The pollen in the flowers is used to make seeds.

5. Seed dispersal - Seeds are spread out so they can grow where they are not fighting for space with the parent plant.

Types of Trees

Deciduous - These trees lose all of their leaves for part of the year. In cold climates, this happens during autumn so that the trees are bare throughout the winter. In hot and dry climates, deciduous trees usually lose their leaves during the dry season.

Evergreen - These trees do not lose all of their leaves at the same time - they always have some foliage (leaves). They do lose their leaves a little at a time with new ones growing in to replace the old but a healthy everygreen tree is never completely without leaves.

Key Vocabulary

Physical geography - geography linked to natural features e.g. rivers, mountains.
Climate change - a change in the climate over a prolonged amount of time changing the worlds atmosphere.
Global warming - a gradual rise in the overall temperature of the earth's atmosphere.
Natural disaster - a natural event such as flood, earthquake or hurricane that causes great damage.
Flood - an overflow of a large amount of water beyond its normal limits especially when over dry land.
Water level - the height reached by the water in a resevior, river or similar.
Sea level - the level of the sea's surface.
Antarctica - one of the seven continents.
Continent - a large expanses of land which has countries within it.
Southern Ocean - also known as the Antarctic Ocean or Austral Ocean and is in the southernmost waters.
Landmass - a continent or other large body of land.
Environment - the surroundings or conditions in which a person, animal or plant lives.
Rainfall - the quantity of rain falling.
Island - a pieve of land surrounded by water.
Temperature - the degree or intensity of heat present in a place.
Weather - the state of the atmosphere at a particular place and times as regards to heat, cloudness, sunshine, wind, rain etc.
Season - four divisions (spring, summer, autumn, winter) marked by particular weather patterns and daylight hours.
Atmosphere - the envelope of gases surrounding the earth or another planet.
Locality - an area or neighbourhood.
Vegetation - plants found in a particular area or habitat.

Antarctica

- Southern most continent on Earth.
- There are no polar bears in Antarctica, there are lots of different species of penguins, seals and whales.
- It is surrounded by the Southern Ocean.
- Because it experiences such little rain, Antarctica is a considered a desert.
- 98% of Antarctica is covered by ice.
- It is made up of a large continent landmass and several large and small island. Some islands are permenantly linked to the mainland by ice.

Natural vegetation

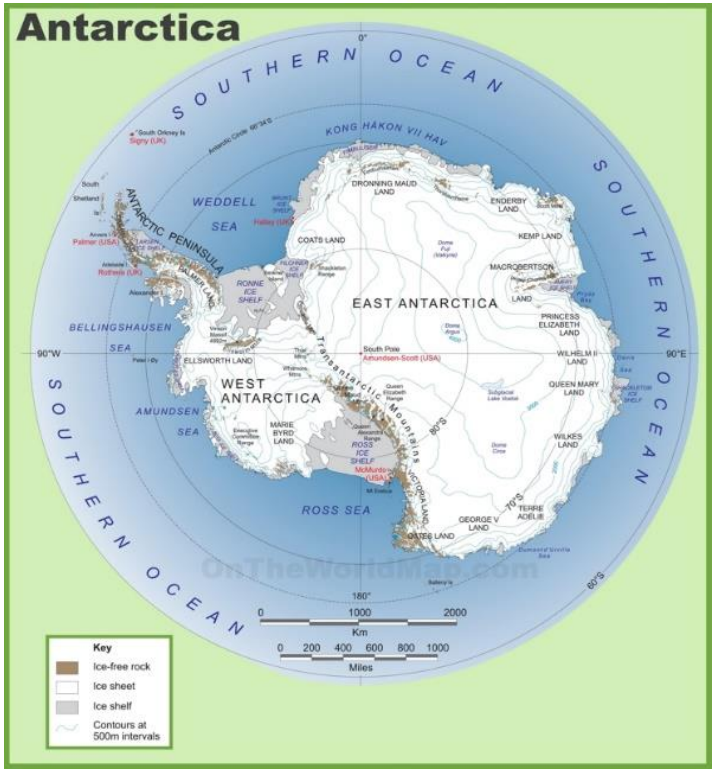
- Most plants have shallow roots because of the thin soil.
- During the short summer, the soil may be waterlogged, so plants must adapt to survive.
- Plants reproduce by growing runners and bulbs, rather than seeds. This is due to the high winds and short growing season.

What Is Climate Change?

Climate change is a change in the usual weather found in a place. This could be a change in how much rain a place usually gets in a year. Or it could be a change in a place's usual temperature for a month or season.

Climate change is also a change in Earth's climate. This could be a change in Earth's usual temperature. Or it could be a change in where rain and snow usually fall on Earth.

Weather can change in just a few hours. Climate takes hundreds or even millions of years to change.



Natural disasters

In November 2019, the Yorkshire and the Humber, struck by serious river and surface water flooding. On 14 November floodwater caused major disruption to train services. On 15 November the Environment Agency issued 147 flood warnings in England after further heavy rainfall raised river levels.

Local areas affected: Sheffield, Rotherham, Doncaster, Barnsley, Hull, Leeds.

"It is in our nature to explore, to reach out into the unknown. The only true failure would be not to explore at all."

Ernest Shackleton Facts

- Born in Ireland on the 15th February 1874.
- Second oldest of 10 children and raised in London from 10 years old.
- His father was a doctor and originally from Yorkshire.
- He joined the merchant navy when he was 16 and by the time he was 25 he was a certified master mariner.
- He was a polar explorer who led British expeditions to the Antarctic with a particular interest in exploring the South Pole.
- He wanted to be the first person to reach the South Pole but had two failed attempted before a Norweigian explorer made it first in 1911.
- He was married with three children.
- Shackleton was buried in South Georgia.
- There is a statue of Sir Ernest Shackleton outside the London headquarters of the Royal Geographical Society.

Key Vocabulary

Merchant navy - a country's commercial shipping as opposed to that involved in military activity.
Expedition - a journey undertaken by a group of people with a particular purpose.
First mate - the office second in command to the master of a merchant ship.
Mariner - someone who can navigate or drive a ship and find his way.
Ice-locked - surrounded by ice; unable to move because of the ice
Polar explorer - an exploration of the polar regions.

Endurance Ship

Adventure timeline

1874 - born on the 15th February in Kikea, Ireland.
1890 - Shackleton joined the merchant navy.
1892 - progressed to the rank of first mate.
1898 - at 24, he had progressed to the rank of certified master mariner.
1901 - joined Scott the British National Antarctic (discovery) Expedition.
1903 - returned home on the Morning supply ship due to illness.
1907 - The British Antarctic (Nimrod) Expedition set sail.
1909 - Returned to England after being forced to turn back.
1911 - Roald Amundsen reaches South Pole.
1914 - King George V presented Shackleton with the Union flag which encouraged him to bring home safely.
1914 - Endurance departs London for the South Pole just days after WW1 broke out.
1915 - Endurance becomes trapped in ice where it drifts for 10 months before sinking.
1916 - Shackleton returns to reunite with his crew before returning to England.
1921 - The Quest departs England on the Shackleton -Rowett Antarctic Expedition.
1922 - Shackleton suffers a fatal heart attack on the 5th January.

PONTEFRACT ACADEMIES TRUST

Computing

Children will start to understand and use programming through 'Turtle Logo'. They will be able to explain how an algorithm works and use basic alogrithms to create a shape.

Design & Technology

Children will use their georgraphical and scientific learning to design an area for a sunflower to grow in Antarctica. Once completed, they will evaluate their designs and their peers.

R.E

Children will identify different religious festivals that are celebrated and the importance of them. They will look at festivals: Diwali,Eid-ul-Fitr, Easter and Pesach

MFL

Children will learn the language to describe and talk about the weather and seasons.

Music

Children will build on their prior knowledge of musical vocabulary by regonising musical notations.

PSHE

Children will learn about the importance of community and the support they can provide. The children will appreciate the diversity of different cultures, showing tolerance and respect of other cultures and beliefs.

Homework on Pluto

History

Children will look into the life of Ernest Shackleton and create a timeline of his adventures. They will work as historians to ask valid questions which will support their writing of his significance in British history.

Art

Children will look at the artist on board the Endurance expedition and evaluate his paintings. Using his style, they will plan, sketch and paint their own Antartica landscape.

Science

Children will be introduced to the relationship between structure an function and that every part has a job to do. They will understand the importance flowers have on our lives. The children will work scientifically to understand the role of roots and stem in nutrition and support, leaves for nutrition and flowers for reproduction.

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Geography

Children will look at the human and physical geography of Antartica and compare it to their prior learning of Pontefract. They will also look at the impact global warming is having on Antartica and how that impacts us.

Year 3/4 - Assessment Calendar 2019/20 (Cycle A)

	Maths		English		Science
	Arithmetic	Reasoning	Reading	SpaG	
Autumn 1	White Rose Maths Hub 2018	White Rose Maths Hub 2018	Cornerstones Autumn 2018	Twinkl Autumn 1 2019	Twinkl end of topic –Animals and humans (year 3 & 4)
Autumn 2	White Rose Maths Hub 2019	White Rose Maths Hub 2019	Cornerstones Autumn 2019	Twinkl Autumn 2 2019	Twinkl end of topic – Electricity (year 4)
Spring 1	White Rose Maths Hub 2018	White Rose Maths Hub 2018	Cornerstones Spring 2018	Twinkl Spring 1 2020	Twinkl end of topic –Plants (year 3)
Spring 2	White Rose Maths Hub 2019	White Rose Maths Hub 2019	Cornerstones Spring 2019	Twinkl Spring 2 2020	Twinkl end of topic –States of matter (year 4)
Summer 1	White Rose Maths Hub 2018	White Rose Maths Hub 2018	Cornerstones Summer 2018	Twinkl Summer 1 2020	Twinkl end of topic –Sound (year 4)
Summer 2	White Rose Maths Hub 2019	White Rose Maths Hub 2019	Cornerstones Summer 2019	Twinkl Summer 2 2020	Twinkl end of topic – Living things (year 4)