

Science Progression Pathways









Chemistry

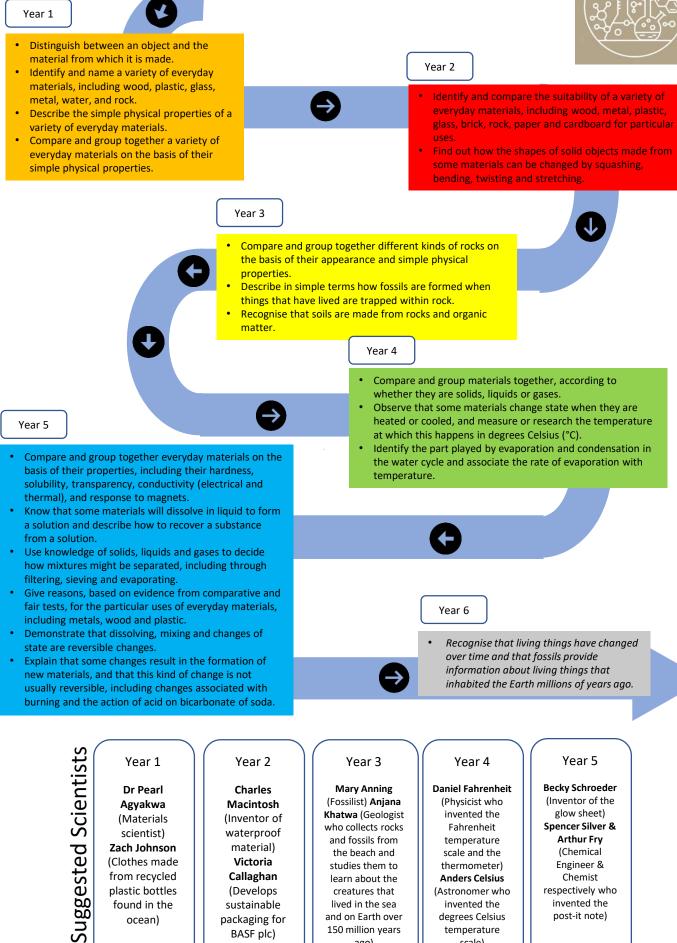
Physics

Biology

Working Scientificall y

Chemistry....





and on Farth over

150 million years

ago)

packaging for

BASF plc)

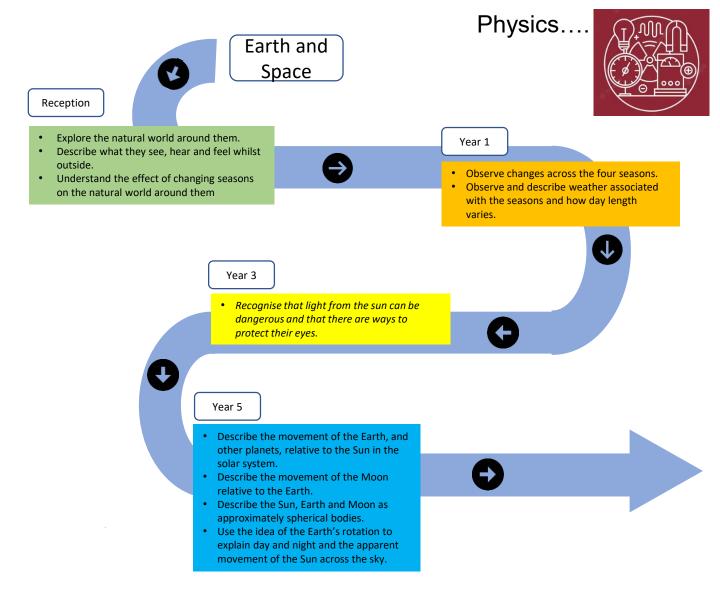
ocean)

degrees Celsius

temperature

scale)

post-it note)



Suggested Scientists

John Dalton

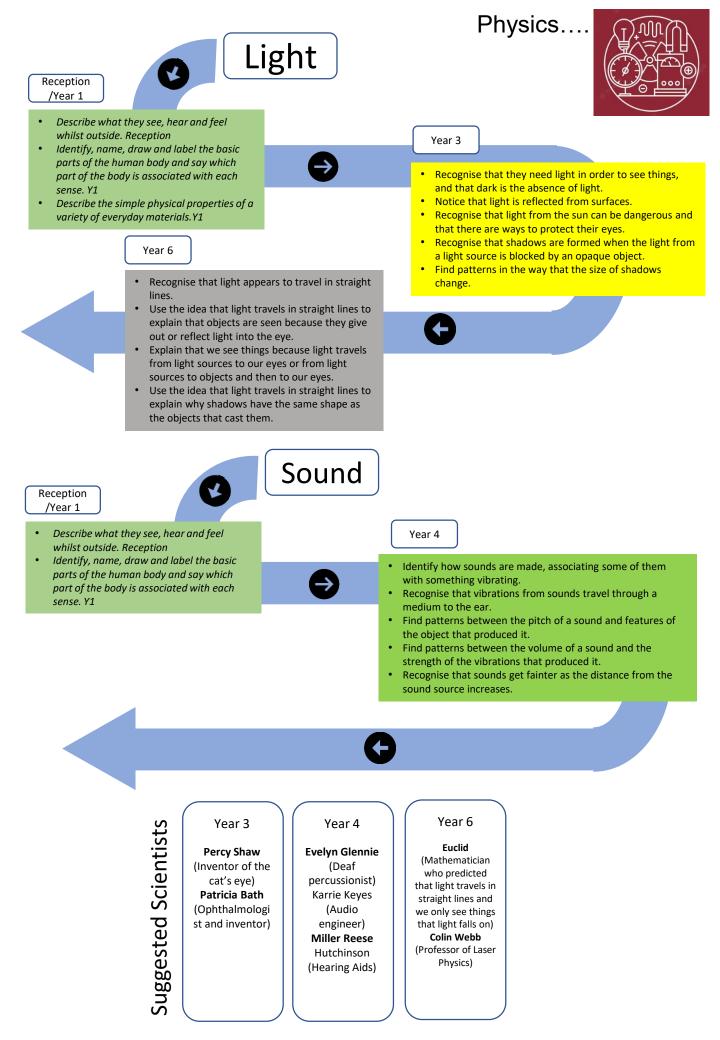
Year 1

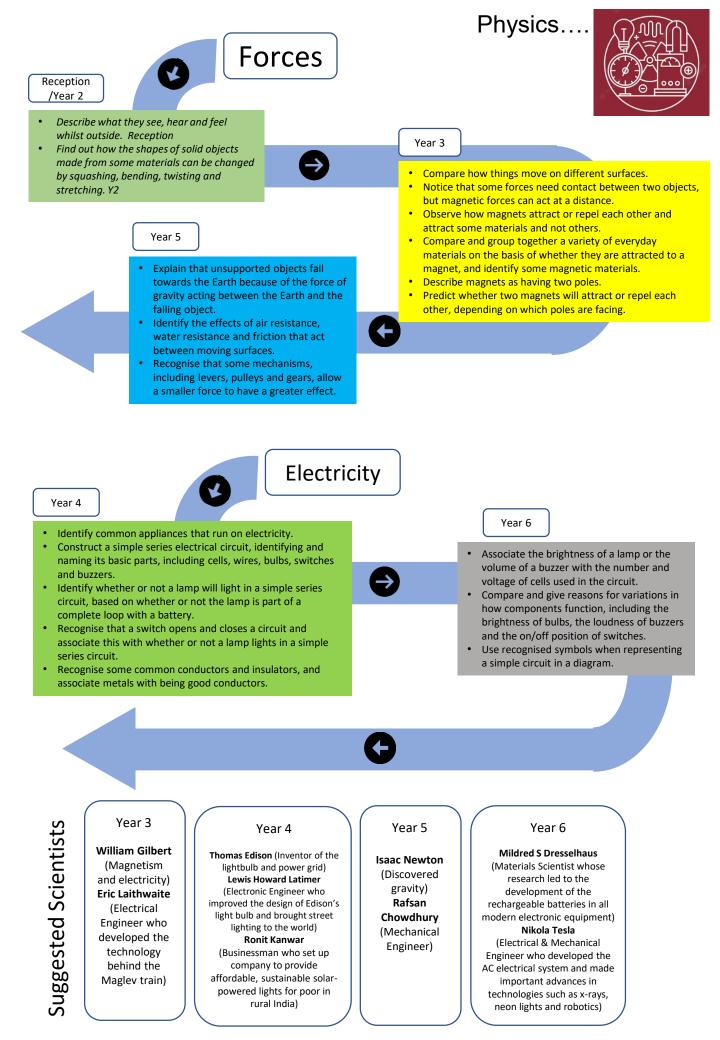
(British Weather

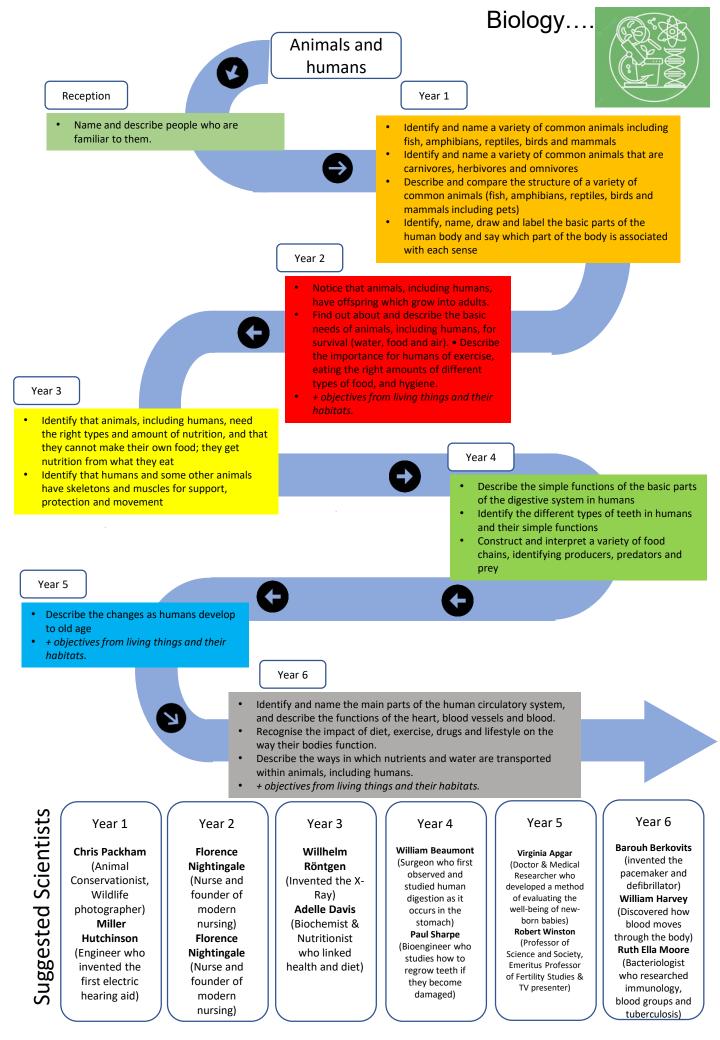
pioneer) Jim Cantore (Meteorologist and storm tracker)

Year 5

Galileo Galilei (Astronomer, Mathematician & Physicist who made the first telescope and discovered Neptune and the rings of Saturn) Mai Jemison (Astronaut) Johannes Kepler (Mathematician, Astronomer and Astrologer who developed the theory that the planets moved on oval paths around the sun.







		Biology
	Living things and their	
Year 1	habitats	
 Identify and name a variety of common wild and garden plants, including deciduous and evergreen 		— <u>—</u> ———
trees. Identify and describe the basic structure of a 		
variety of common flowering plants, including trees.	\rightarrow	
 Identify and name a variety of common animals including fish, amphibians, reptiles, birds and 		Year 2
mammals. • Identify and name a variety of common animals		 Explore and compare the differences between things that are living, dead, and things that have never been
 that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of 	· · · · · · · · · · · · · · · · · · ·	alive Identify that most living things live in habitats to which
common animals (fish, amphibians, reptiles, birds and mammals, including pets)	· · · · · · · · · · · · · · · · · · ·	they are suited and describe how different habitats provide for the basic needs of different kinds of animals
 Observe changes across the four seasons. 		 and plants, and how they depend on each other Identify and name a variety of plants and animals in
		 Identify and name a variety of plants and annuals in their habitats, including micro-habitats Describe how animals obtain their food from plants and
		other animals, using the idea of a simple food chain,
Year 4	1	and identify and name different sources of food
Tedi 4	-	
 Recognise that living things can be grouped in a variety of ways. 		Year 5
 Explore and use classification keys to help group, identify and name a variety of living 		Describe the differences in the life cycles
 things in their local and wider environment. Recognise that environments can change and 	Ð	of a mammal, an amphibian, an insect and a bird.
that this can sometimes pose dangers to living		 Describe the life process of reproduction in some plants and animals.
things.		in some plants and animals.
G		
Year 6		
	v living things are classified ir common observable charact	
similarities an	nd differences, including mic	
	for classifying plants and ani	imals based on specific
characteristic	s.	
م (Year 2	Year 4	Year 5 Year 6
Still Prem Singh Gill (Polar Scientist who studies where Antarctic seals live, breed and feed, so we can know more about where they	Rachel Carson Ro	oger Arliner Carl Linneus
(Polar Scientist who studies	(Aquatic Biologist who wrote about (Zoo	Young (Naturalist and botanist)
Where Antarctic seals live, breed	environmental	studied (Microbiologist
and feed, so we can know more		marine and Science Communicator)
about where they		Beatrix Potter

Jane Goodall

(Wildlife

Researcher &

Conservationist

who studied

chimpanzees)

Beatrix Potter

(Mycologist, study

of fungi, and

Scientific

Illustrator)

Suggested

about where they

prefer to live)

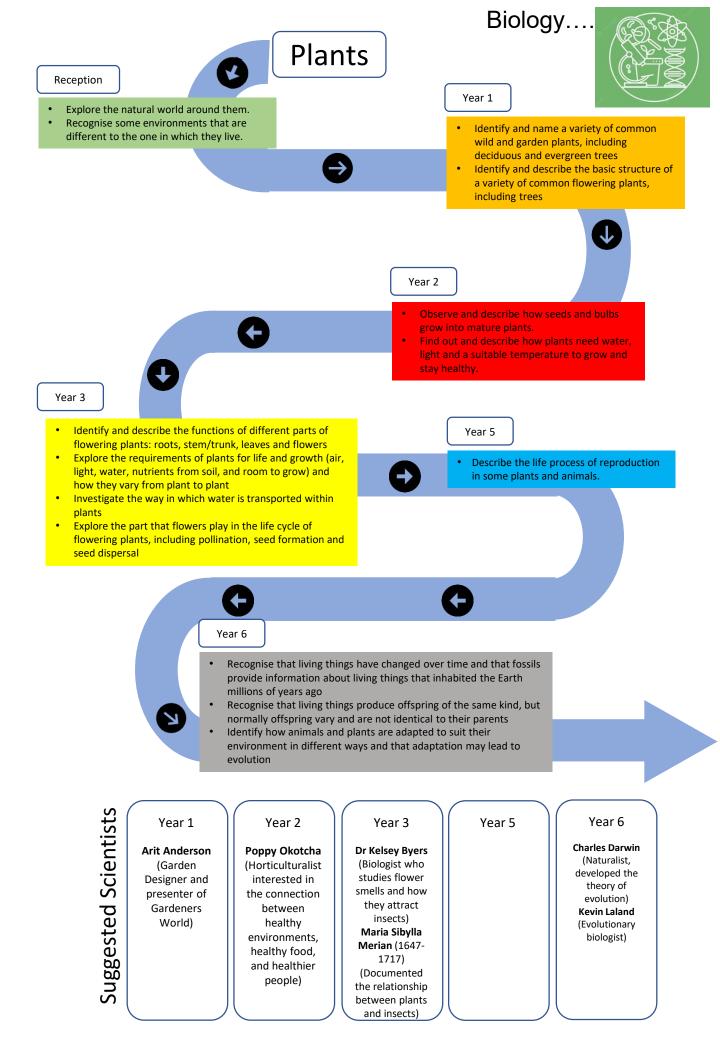
Dawood Qureshi

(Marine Biologist

who studies

wildlife in the

ocean)



Working Scientifically...

Reception

- C
- Show curiosity and ask questions.
- Make observations using their senses and simple equipment.
- Make direct comparisons.
- Use equipment to measure.Record their observations by drawing,
- taking photographs, using sorting rings or boxes and simple tick sheets.
- Use their observations to help them answer their questions.
- Talk about what they are doing and have found out.
- Identify, sort and group.



Year 1 & 2

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely using simple equipment.
- Perform simple tests.
- Identify and classify.
- Gather and record data to help in answering questions.
- Use their observations and ideas to suggest answers to questions.





- Ask relevant questions and use different types of scientific enquiries to answer them.
- Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- Set up simple practical enquiries, comparative and fair tests.
- Gather, record, classify and present data in a variety of ways to help in answering questions.
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.
- Use straightforward scientific evidence to answer questions or to support their findings.
- Identify differences, similarities or changes related to simple scientific ideas and processes.
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Year 5 & 6

- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- Identify scientific evidence that has been used to support or refute ideas or arguments.
- Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.
- Use test results to make predictions to set up further comparative and fair tests