Topic journey overview Y6

Y6 science topics:

Living things and their habitats

Electricity

Animals including humans

Light

Evolution and Inheritance

CURIOUS ABOUT THE WORLD AROUND THEM

Collecting leaves and using a diagram to identify tree type

Working in groups to build a food chain

REFLECTIVE AND IMAGINATIVE THINKER

Watching yeast inflate a balloon

Finding out what affects the rising time of dough

MOTIVATED TO LEARN AND RESILIENT WHEN CHALLENGED

Pupils design a beak to take part in a challenge linked to Darwin's finches in the Galapogos Islands

LITERATE, NUMERATE AND DIGITAL

Describe the impact of Charles Darwins theory

Compare sizes of living things and convert units of measurements

Take photos of minibeasts/leaves

Measure time and record As 24 hour clock

A COMMUNICATOR AND COLLABORATOR

Working in pairs to sort picture cards into kingdoms

Working in groups to build a food chain

RESPECTFUL AND CARES

To take care when collecting from the natural environment so as not to cause damage to plants and insects

A KNOWLEDGE SEEKER AND KEEPER

Take photos, samples and use to classify into groups.

Find out what the largest/ smallest vertebrate and invertebrate

Y6

Living things and their habitats

Year 6: Living Things and their Habitats

Subject Specific Vocabulary

micro-organism	Micro-organisms are tiny. They are so small they can only be seen with a microscope.
vertebrates	A vertebrate animal is one that has a backbone.
invertebrates	An Invertebrate animal does not have a backbone and 97% of creatures belong to this group.
species	This is the grouping together of similar species of plant, animal and other organisms.
fungi	Fungi are a group of living organisms which are classified in their own kingdom. This means they are not animals, plants, or bacteria.
monera	The whole organism is made up of just one cell. The cell is more basic than cells of other organisms.
bacteria	Bacteria are tiny little organisms that are everywhere around us.
protista	Protists are not animals, plants, fungi, or bacteria. Many protists are so small that people can see them only through a microscope.
algae	Is a single or multi-cellular organism that has no roots, stems or leaves and is often found in water.
Carl Linnaeus	Carl Linnaeus is famous for his work in Taxonomy, the science of identifying, naming and classifying organisms (plants, animals, bacteria, fungi, etc.).
Charles Darwin	Theory of Evolution Visit to Galapagos – the study of the finches beaks

Interesting Books

Important facts to know by the end of the classification of animals topic:

- Be able to classify living things into broad groups according to observable characteristics and based on similarities and differences.
- know how living things have been classified.
- give reasons for classifying plants and animals based on specific characteristics.

Sticky Knowledge about Classification of animals

- ☐ The largest vertebrate is the blue whale, which can grow to over 100 feet long and 400,000 pounds.
- ☐ The smallest vertebrate is thought to be a tiny frog called the Paedophryne amauensis. It only grows to about 0.3 inches long.
- ☐ Vertebrates tend to be much more intelligent than invertebrates.
- ☐ Vertebrate animals can be either warm or cold-blooded. A cold-blooded animal cannot maintain a constant body temperature. The temperature of their body is determined by the outside surroundings.
- ☐ An invertebrate is an animal that does not have a backbone. 97% of all animal species are invertebrates.
- ☐ Frogs can breathe through their skin.
- ☐ There are a wide variety of interesting ocean animals that are invertebrates. These include sponges, corals, jellyfish, anemones, and starfish.
- ☐ Charles Darwin and the theory of evolution/natural selection

Science topic – Living things and their habitats

Lesson 1: Invertebrates

(WOW moment- videoclip Youtube Classifying vertebrates Big Phil TV Marine invertebrates in close up)
Pupils : minibeast hunt, take photos, samples and use to classify into groups.
Kids Corner game
(Classification and Investigation)

Lesson 2: The 5 Kingdoms

(WOW moment- Youtube The 5 Kingdoms of Life Song: Five Kingdoms Are you sleeping)
Pupils: Sorting picture cards into kingdoms/playing corners

Lesson 3: Micro Organisms

(WOW moment- watching yeast inflate a balloon)
Pupils: What affects the rising time of dough? (fair testing/observation over time)
What affects the temperature of a compost bin? (fair testing and pattern seeking)

Lesson 4 :Classification Keys

(WOW moment- Guess Zoo headbanz game)
Watch Widscreen Arkive
Pupils: Pupils design a beak to take part in a challenge linked to Darwin's finches in the Galapogos Islands
(Classification and Identification)

Lesson 5: Classifying plants

(WOW moment- Eating a liquorice sweet and then revealing the plant which produced the flavour)
STEM science investigation on using leaves to identify tree type

Lesson 6: Food Chains

(WOW moment- lesson starters www. teachers tv: comic video of hedgehog/fox
Pupils: Working in groups to build a food chain and play the foxes and rabbits game
STEM science resources

Stand alone investigations:

What factors affect the speed of decay in food?
(Observation over time)

Keys, glorious keys 1

Use the key to work out which invertebrate group these animals belong to. Then go outside and see how many of each you can find!

START: Does it have any legs?

- **No** → Does it have a long, tube-like body with rings around it?
  - **Yes** → e.g. earthworms ✓ → **ANNELID**
  - **No** → e.g slugs and snails ✓ → **GASTROPOD**
- **Yes** → Does it have 6 legs in total?
  - **Yes** → e.g. beetles, ants, flies, bees (and more!) ✓ → **INSECT**
  - **No** → Does it have 8 legs in total?
    - **Yes** → e.g. spiders and scorpions ✓ → **ARACHNID**
    - **No** → Does it have a grey, oval-shaped body?
      - **Yes** → e.g. woodlice ✓ → **CRUSTACEAN**
      - **No** → e.g. centipedes and millipedes ✓ → **MYRIAPOD**

Wednesday 31st January

LO: To identify and classify invertebrates.

Invertebrates	Body Type	Number of Segments	Number of Pairs of Legs	Examples:
Arachnids	Hard bodies ✓	two ✓	four ✓	Black Widow ✓ House Spider ✓ Tarantula ✓
Crustaceans	Hard bodies ✓	many ✓	many ✓	Lobster ✓ Crab ✓ Shrimp ✓
Insects	Hard bodies ✓	three ✓	three ✓	Ant ✓ House Fly ✓ Dragonfly ✓ Stag Beetle ✓ Ear wig ✓ Butterfly ✓
Myriapods	Hard bodies ✓	many ✓	many ✓	M.llipede ✓ Centipede ✓
Molluscs	Soft bodies ✓	one ✓	none ✓	Snail ✓ Slug ✓
Worms	Cylindrical ✓	many ✓	none ✓	Earthworm ✓ Tapeworm ✓

CURIOUS ABOUT THE WORLD AROUND THEM

Why are there different wires when using electricity? How does the length, colour, thickness, shape etc... change the speed of a motor?

How do we use the environment produce electricity?

REFLECTIVE AND IMAGINATIVE THINKER

Chn design and build their own Beat the Wire game which includes a buzzer ,light and switch using the knowledge they have gained

Evaluate their game

MOTIVATED TO LEARN AND RESILIENT WHEN CHALLENGED

Chn given a simple circuit which does not work – who is the first to find the problem and solve it? Chn given a set of circuits to build/ predict then see if they work. Can they fix them?

LITERATE, NUMERATE AND DIGITAL

Planning investigations using post it method

Report of their investigations

Instructions of how to build a Beat the Wire Game

Measuring using stop watches

Electricity travels at the speed of light- 186,000 miles per second!

A bolt of lightning can measure up to 3,000,000 volts, and it lasts less than one second!

A COMMUNICATOR AND COLLABORATOR

Plan a fair test investigation in a group

Present Wire game to class and explain process

RESPECTFUL AND CARES

Sharing roles equally when planning and carrying out investigations

A KNOWLEDGE SEEKER AND KEEPER

Changing the voltage and seeing if it affects the brightness of a bulb

To find out what hydropower is

Y6

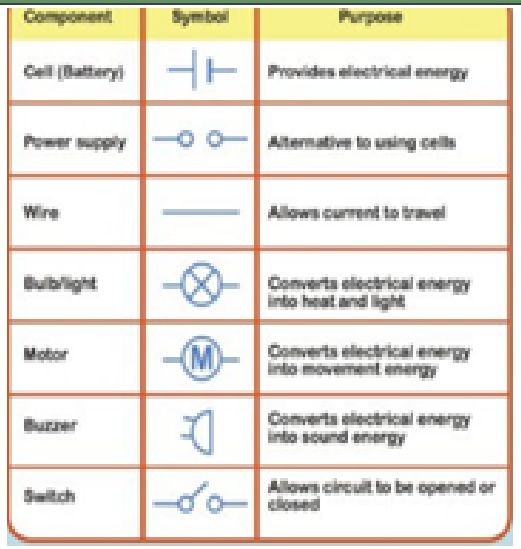
Electricity

Year 6: Electricity Knowledge Mat

Subject Specific Vocabulary

conductor	Some materials let electricity pass through them easily. These materials are known as electrical conductors.
insulator	Plastic, wood, glass and rubber are good electrical insulators.
socket	A socket is a safe device to plug your electrical items into at home. Almost every room at home will have at least one socket.
series circuits	A series circuit is one that has more than one resistor, but only one path through which the electricity (electrons) flows.
cells	An electrical cell is a device that is used to generate electricity, or one that is used to make chemical reactions possible by applying electricity.
volts	Voltage is an electrical potential difference, the difference in electric potential between two places.
generator	A machine that converts energy into electricity.
Dimmer switch	Dimmers are devices connected to a light fixture and used to lower the brightness of light.
fuses	These are safety devices. A fuse is a strip of wire that melts and breaks an electric circuit if it goes over a safe level.
Thomas Edison	He was a great inventor that came up with a way of making the electric light bulb accessible for homes, industry and outside in the streets.

Electrical symbols



Component	Symbol	Purpose
Cell (Battery)		Provides electrical energy
Power supply		Alternative to using cells
Wire		Allows current to travel
Bulb/light		Converts electrical energy into heat and light
Motor	M	Converts electrical energy into movement energy
Buzzer		Converts electrical energy into sound energy
Switch		Allows circuit to be opened or closed

Important facts to know by the end of the electricity topic:

- Know that the brightness of a bulb is associated with the voltage.
- Compare and give reasons for variations in how components function.
- Use recognised symbols when representing a simple circuit in a diagram.
- Construct simple series circuits.
- Be able to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors.

Sticky Knowledge about Electricity

- ❑ Electricity travels at the speed of light. That's more than 186,000 miles per second!
- ❑ Electricity comes from the power station, the wind, the sun, water and even an animal's poo!
- ❑ Electricity is a type of energy that build up in one place (static), or flow from one place to another (current electricity).
- ❑ Coal is the biggest source of energy for producing electricity. Coal is burned in furnaces that boils water and creates steam.
- ❑ A popular way of generating electricity is through hydropower. This is a process where electricity is made by water which spins turbines attached to generators.
- ❑ A bolt of lightning can measure up to 3,000,000 volts, and it lasts less than one second!
- ❑ Electric fields work in a similar way to gravity. Whereas gravity always attracts, electric fields can either attract or repulse.

Science topic – Electricity

Lesson 1:
(WOW moment- Demonstration of a lemon battery)
Pupils : Chn given a simple circuit which does not work – who is the first to find the problem and solve it? Chn given a set of circuits to build/ predict then see if they work. Can they fix them?
(prediction)

Lesson 2:
(*WOW moment- video clip of an electrical storm)*
Pupils: Revision of electrical symbols/ Bingo game
Investigation: How does voltage affect a bulb?
(fair testing)

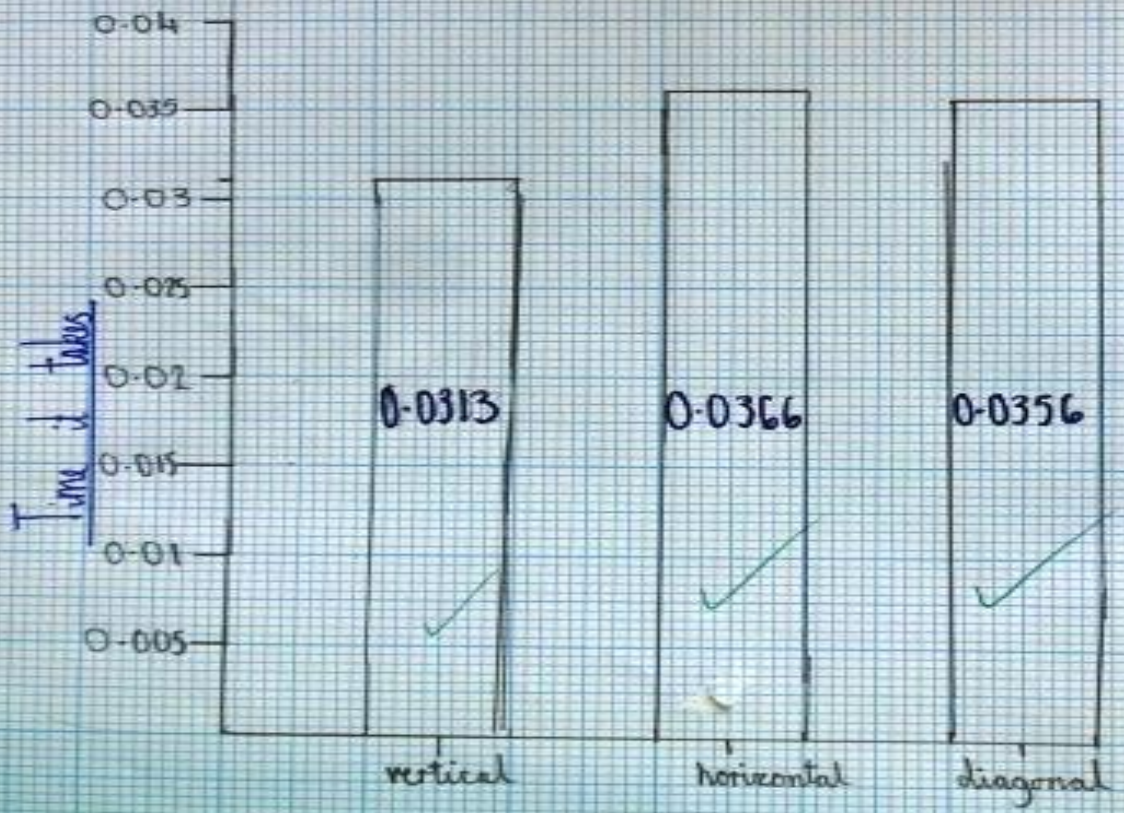
Lesson 3 and 4:
(WOW moment- Demo of energy balls)
Pupils: How does the wire affect the speed of a motor?
(fair testing)

Lesson 4 :
(WOW moment- Playing the Beat the Wire game)

Pupils: Chn design and build their own Beat the Wire game which includes a buzzer ,light or both. Introduce the idea of a switch.

Lesson 5:
(WOW moment-)
Pupils: Chn work in groups to make a dimmer switch. Using a pencil. Investigation. Do different pencil leads affect brightness?
(fair testing)

Will the position of the wire effect the time it takes to reach maximum speed ?



CURIOUS ABOUT THE WORLD AROUND THEM

Chn investigate what effect smoking has on other parts of the body and find a way of showing this on their lung model

REFLECTIVE AND IMAGINATIVE THINKER

Does height determine the amount of blood which circulates around your body – design a pattern seeking investigation

Pretend they are an alien teacher telling their class about the human body. Write up dialogue in a humorus style

MOTIVATED TO LEARN AND RESILIENT WHEN CHALLENGED

Listen to and watch ns of blood. Chn make od using cheerios, marshmallows, oats and food colouring . Challenge children to design their own blood using their knowledge of properties

Challenge children to design and make a model of the lungs

LITERATE, NUMERATE AND DIGITAL

Make a piechart of the components of blood

Calculate how much blood is pumped around your body

Line graph to show height and pulse rate

Measuring pulse rate

Writing task: A comical journey through the human body using the picture book

A COMMUNICATOR AND COLLABORATOR

In groups make a model lung using a jar, straws, balloon and red water.Link parts of heart to the model.

Present blood/ lungs to class and explain process

RESPECTFUL AND CARES

Care for their own body and making right choices to keep healthy

A KNOWLEDGE SEEKER AND KEEPER

Classroom set out as the system. Children take parts and act out the circulatory system.

Y6

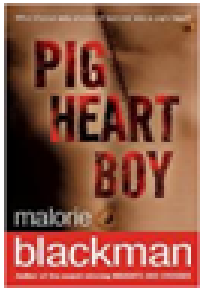
The Circulatory System

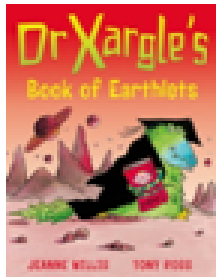
Year 6: Circulatory System Knowledge Mat

Subject Specific Vocabulary

blood vessels	Blood vessels are a series of tubes inside your body. They move blood to and from your heart.
drugs	A drug is a chemical that is not food and that affects your body. Some drugs are given to people by doctors to make them healthy.
atriums	The atriums are the two upper most chambers of the heart. Blood is pushed from the atriums to the ventricles.
William Harvey	Was the first person to accurately describe the function of the heart and the circulation of blood around the body.
Cardiovascular	The blood circulatory system (cardiovascular system) delivers nutrients and oxygen to all cells in the body.
ultrasound	An ultrasound machine uses sound waves to take pictures of the inside of the body.
cardiologists	A cardiologist is a doctor with special training and skill in finding, treating and preventing diseases of the heart and blood vessels.
capillaries	Capillaries are very thin blood vessels. They bring nutrients and oxygen to tissues and remove waste products.
pulse	Your heart has to push so much blood through your body that you can feel a little thump in your arteries each time the heart beats
ventricles	The ventricles are the two lower chambers in the heart.
muscle	The heart is a muscle that acts as a pump.

Interesting Book





Important facts to know by the end of the circulatory system topic:

- Identify and name the main parts of the human circulatory system.
- Know the function of the heart, blood vessels and blood.
- know the impact of diet, exercise, drugs and life style on health.
- Know the ways in which nutrients and water are transported in animals, including humans.
- Know who William Harvey was.

Sticky Knowledge about the circulatory system

- ☐ Your heart will beat about 115,000 times each day. Your heart pumps about 2,000 gallons of blood every day.
- ☐ The entire trip around your body only takes blood about 20 seconds in total. Blood is what is used to transport oxygen, waste, nutrients, and more throughout the body.
- ☐ The circulatory system includes the heart, blood vessels and blood, and is vital for fighting diseases and maintaining proper temperature.
- ☐ Because your heart is crucial to your survival, it's important to keep it healthy with a well-balanced diet and exercise, and avoid things that can damage it, like smoking.
- ☐ Your heart affects every part of your body. That also means that diet, lifestyle, and your emotional well-being can affect your heart.

Science topic – Animals including humans

Lesson 1: The Heart

(WOW moment- 3D tour of the heart http://www.abpischools.org.uk/res/coResourceImport/resources04/heart/heartAnim3.cfm http://www.pbs.org/wgbh/nova/heart/heartmap.html. ***)***

Pupils : Make a model lung using a jar, straws, balloon and red water. Explain the heart is a muscle but acts as a pump. Link parts of heart to the model. Listen to heartbeat using kitchen tube rolls and use online stethoscope (Identification)

Lesson 2: The Blood

(*WOW moment- Pretend blood ingredients on desks ready to make their own blood*

Pupils: Listen to and watch functions of blood. Chn choose ingredient and make up blood using cheerios, marshmallows, oats and food colouring . Make a piechart of components . Children design their own blood using their knowledge of properties (classification)

Lesson 3: The Circulatory system

(WOW moment- Look at model of system made from plastic bottles – take turns)

Pupils: *classroom set out as the system. Children take parts and act out the circulatory system. Habits of the heart investigation: Calculate how much blood is pumped around your body*

(Investigation) Does height determine the amount of blood which circulates around your body (fair testing)

Lesson 4 : Effects of exercise

(WOW moment- Video clip of lungs working. Chn work in groups to make a lung model Habits of the heart)

Pupils: Conduct an open ended pulse rate investigation. Chn work in groups to find a pattern between exercise and pulse rate.

(fair testing pattern seeking)

Lesson 5: Impact of Smoking

(WOW moment- before and after pictures of a healthy /unhealthy heart, lungs and teeth)

Pupils: Children use their lung model from previous lesson and block the valve to see effects of smoking. Chn investigate what effect smoking has on other parts of the body .

Lesson 6: Impact of drugs and alcohol

(WOW moment-)

Pupils: Children match up labels to the correct organ on diagram of the human body.

Writing task: A comical journey through the human body using the picture book:

CURIOUS ABOUT THE WORLD AROUND THEM

Chn predict then explain each refraction

Using a prism to refract light)

Pupils: Recreating Issac Newton's prism experiment.

REFLECTIVE AND IMAGINATIVE THINKER

Role play the parts of and functions of an eye

Children given periscope and think about how it may work.

MOTIVATED TO LEARN AND RESILIENT WHEN CHALLENGED

Making own periscopes and having a submarine battle. Chn using periscopes to see around corners.

Challenge chn to invent own refraction activity

LITERATE, NUMERATE AND DIGITAL

Chn writing an explanation of how a periscope works.

Orally explain how other instruments which use light work

Measure the length of shadows

Draw a line graph to show correlation between size of shadow and distance of object

A COMMUNICATOR AND COLLABORATOR

Work in groups to predict then explain each refraction activity

Using a prism to refract light, recreating Issac Newton's prism experiment.

RESPECTFUL AND CARES

Listen attentively to others during presentations

To appreciate our eye is a delicate organ and needs protecting and looking after

A KNOWLEDGE SEEKER AND KEEPER

Find out how a pinhole camera works

Light travels in straight lines

To understand and describe how we see

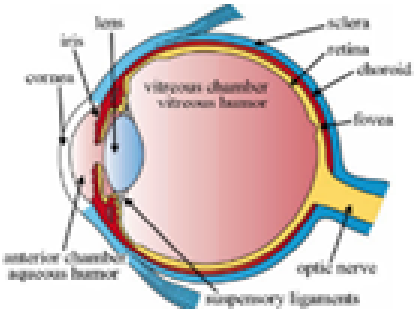
Y6

Light

Year 6: Light Knowledge Mat

Subject Specific Vocabulary

light wave	One of the characteristics of light is that it behaves like a wave. Light can be defined by its wavelength and frequency. The frequency is how fast the wave vibrate up and down.
light source	Light, or illumination, is a form of energy that travels in waves, like sound. You can find different sources of light, such as a candle or the Sun.
concave	It is a lens that curves inwards and reflects light differently as a result.
convex	It is a lens that curves outwards and reflects light differently as a result.
refraction	Refraction[1] is the bending of light as it passes from one transparent[2] substance into another
lens	A lens is a curved piece of glass or plastic designed to refract light in a specific way.
retina	The retina is at the back of your eye and it has light-sensitive cells called rods and cones.
cornea	The cornea is thin, clear and covers your eye. It's important because it helps you see by focusing light as it enters the eye
iris	By opening and closing the pupil, the iris can control the amount of light that enters the eye.
pupil	The pupil can be compared with the shutter of a camera.
Issac Newton	Our modern understanding of light and color begins with Isaac Newton (1642-1726) and a series of experiments that he publishes in 1672.



Important facts to know by the end of the light topic:

- Know that light travels in straight lines.
- Understand that because light travels in straight lines then objects are seen because they give out or reflect light into the eye.
- Know that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.
- Know that light travels in straight lines and therefore shadows have the same shape as the objects that cast them.

Sticky Knowledge about Light

- ☐ Light will travel in a completely straight line until it hits an object that will bend it. The light that is in a straight line are called 'light waves'.
- ☐ Space does not have any light. We can see things in space due to light bouncing off of the objects in space.
- ☐ Light doesn't travel as fast when it has to pass through mediums that are different, such as air, water or glass.
- ☐ Light that we see from the sun actually left the sun ten minutes before we see it.
- ☐ Light can be controlled and produced in so many ways. A camera can control the amount of light that comes into the camera lens. We also use light in televisions, medical systems, copy machines, telescopes and satellites.
- ☐ Light is used by plants to convert the light into energy as their 'food'. The process is called 'photosynthesis' and converts carbon dioxide through the energy of the light.

Science topic – Light

Lesson 1: HOW WE SEE

(WOW moment- Blackout siren chn hide under tables followed by discussion of The Blackout)
Pupils : Using yellow wool to make a human model of how we see. Looking at a model of an eye. Role play the parts of and functions of an eye

Lesson 2: Reflection

(WOW moment- Secret messages using a mirror- link to ambulance lettering)
Pupils: Explanation of reflection followed by chn making own periscopes and having a submarine battle. Chn using periscopes to see around corners
Chn writing an explanation of how a periscope works.

(observation)

Lesson 3:

(WOW moment- Amazing shadow show Youtube*)*
Pupils: Investigation: What affects the size of a shadow?
(fair testing/ pattern seeking)

Lesson 4 :

(WOW moment- Optical Illusions)

Pupils: Demonstrate refraction using a glass of water and straw.
6 Carousel refraction activities – chn predict then explain each one. Can the children think of their own?
(Using conclusions to predict further)

Lesson 5:

(WOW moment- Using a prism to refract light)
Pupils: Recreating Issac Newton's prism experiment.
(observation)

Lesson 6:

(WOW moment- Playing taboo game using light vocabulary)
Pupils: Chn working in pairs to make a pin hole camera. Can they explain how it works? Can they explain how other instruments which use light work?
(observation)

(F)

Distance between torch and tipex	Length of Shadow Test	Length of Shadow Test 2
1 cm	10cm	10cm
2 cm	14cm	14cm
3cm	18cm	18cm
4cm	19cm	19cm
5cm	21cm	21cm
6cm	22cm	22cm
7cm	24cm	24cm
8cm	26 cm	27cm
9cm	28cm	29cm
10cm	30cm	31cm

What we found out

We found out that when we moved the tipex further away from the torch, the shadow grew longer.

Conclusion

If an object is nearer to a light source, the shadow will be shorter.
If an object is further away from a light source, the shadow will be longer.

Monday 9th October

L.O: To design a fair test.

(F)

PLAN

Primarily Science

We are investigating what changes the size of a shadow.

The **variables** we could change

- angle of the object
- ~~distance of torch from object~~
- size of the object
- amount of light in the room
- brightness of the torch
- shape of the object

The **variables** we could **measure/observe**

- ~~length of the shadow~~
- width of shadow
- length of object
- size/design of object
- darkness of shadow
- width of object

We **will** change: distance of torch from object

We **will** measure/observe: measure length of the shadow

Our **question** is...

If we change the distance of the ~~shadow~~ torch from the object what will happen to the length of the shadow ?

To make it a **fair test** we will keep these **variables** the same

- angle of object
- size of object
- same distance object
- amount of light
- brightness of the torch
- shape of object

Our **predictions** are...

- If the torch is near the bigger the object
- If the futher the torch the shadow would be smaller
- the closer the torch it would be bigger the shadow
- The futher the torch the smaller the shadow will be

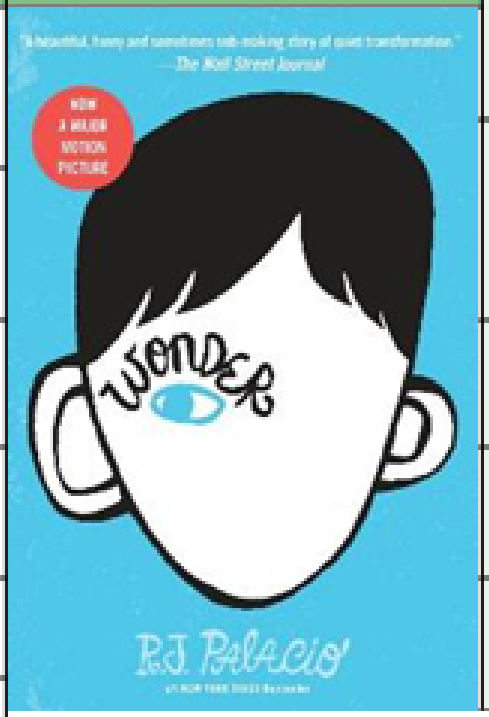
CURIOUS ABOUT THE WORLD AROUND THEM Chn work in groups to investigate a threat to animals. Sort picture cards to see if any animals face more than one threat. Look at food chains and the impact this will have on others 	**REFLECTIVE AND IMAGINATIVE THINKER** Design a Species – using the ARKive website pupils design their own species showing how it is adapted considering features such as movement, communication, feeding preferences 	**MOTIVATED TO LEARN AND RESILIENT WHEN CHALLENGED** To use biscuits to model inheritance. Can the children think of other ways to demonstrate inheritance? 	**LITERATE, NUMERATE AND DIGITAL**
A COMMUNICATOR AND COLLABORATOR 	**RESPECTFUL AND CARES** 	**A KNOWLEDGE SEEKER AND KEEPER** Pupils become palentologists by making excavate fossils and identify animal. 	**Y6** **Evolution and Inheritance**

Year 6: Evolution & Inheritance Knowledge Mat

Subject Specific Vocabulary

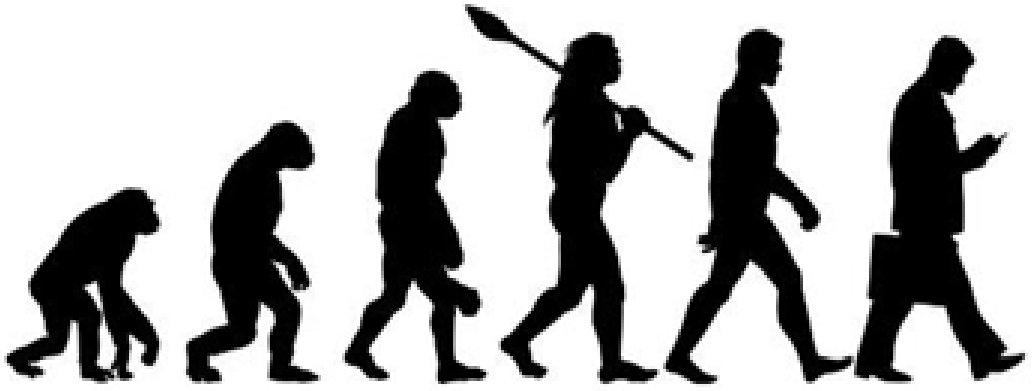
off-spring	When living things reproduce they pass on characteristics to their offspring. All living things produce offspring of the same kind, but normally offspring are not identical to their parents
adaptation	Adaptation is the process by which animals, plants and other living things have changed so that they better suit their habitat.
evolution	Evolution is the theory that all the kinds of living things that exist today developed from earlier types.
inheritance	When living things reproduce they pass on characteristics to their offspring. This is known as inheritance.
palaeontologist	A palaeontologist is someone studying the life of past geological periods as known from fossil remains
Charles Darwin	Charles Darwin was an English scientist who studied nature. He is known for his theory of evolution
genes	Genes that are passed on to you determine many of your traits, such as your hair colour and skin colour.
chromosomes	Chromosomes are tiny structures inside cells made from DNA and protein.
predators	an animal that naturally preys on others.
excavating	remove earth carefully from (an area) in order to find buried remains

Interesting Book



Sticky Knowledge about evolution & inheritance

- ❑ Evolution is a scientific theory used by biologists. It explains how living things change over a long time, and how they have come to be the way they are
- ❑ We know that living things have changed over time, because we can see their remains in the rocks.
- ❑ We know that the animals and plants of today are different from those of long ago.
- ❑ Evolutionary questions are still being actively researched by biologists.



Science topic – Evolution and Inheritance

Lesson 1: Fossils

(WOW moment- Guess the fossil game)

Pupils : Pupils become palentologists by making and excavating their own fossils.

(identification)

Lesson 2 AND 3: Animal Adaptation

(*WOW moment- Youtube of a camel adaptation rap)*

Pupils: Adaptation: Design a Species – using the ARKive website pupils design their own species showing how it is adapted considering features such as movement, communication, feeding preferences (hunting prey or escaping predators) and camouflage

(identification)

Lesson 4: Inhertance traits

(WOW moment- Spot the breed dog quiz)

Pupils: To model inheritance, give groups of children a variety of different biscuits (round, rectangular, with layers, with chocolate, with wavy edges, with ridges, etc). Choose one biscuit as a female and the other representing a male species. The children identify the key features of each biscuit and then select another from the collection (to be the 'offspring' of the 'parent' biscuits.

Play survival of the fittest game- British Council

( )classification, identification)

Lesson 5 :Plant Adaptation

(WOW moment- Plant adaptations BBC clips)

Pupils: Chn collect leaves from around school grounds Variety of plants/ leaves on tables. Chn use check list to identify characteristics which help a plant survive.

Chn produce a classification tree from results.

(classification)

Lesson 6:

(WOW moment- Plight of the Panda clip)

Pupils: Chn work in groups to investigate a threat to animals. Sort picture cards to see if any animals face more than one threat. Look at food chains and the impact this will have on others

(identification)