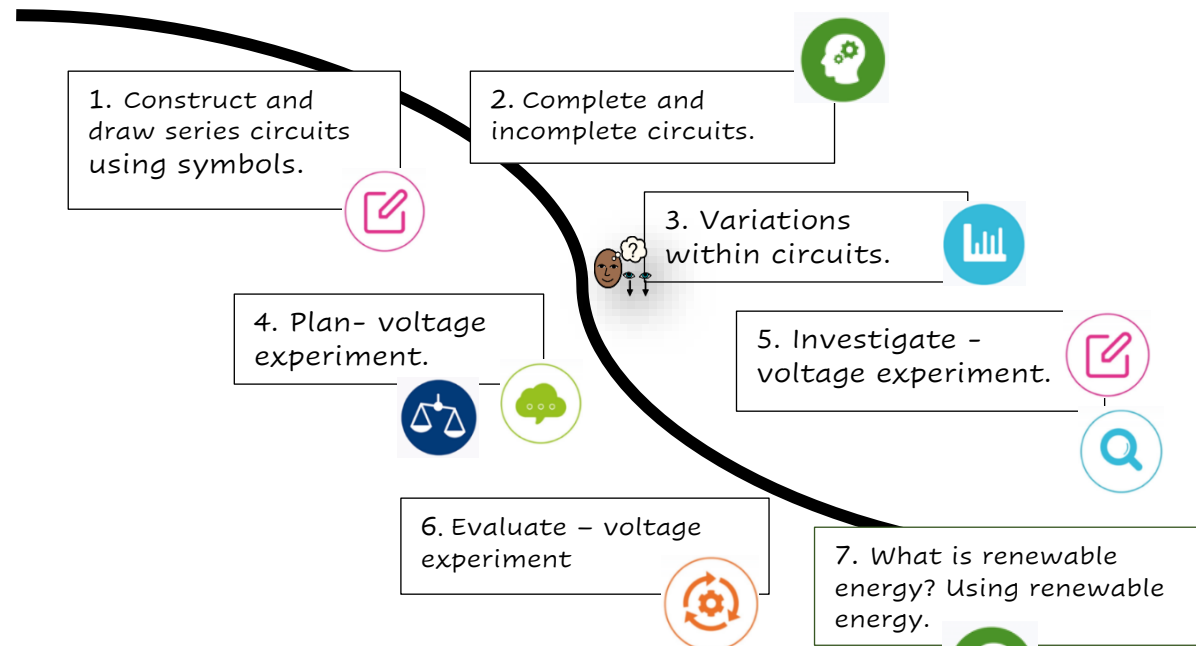


Enquiry Questions: How does the voltage in a circuit affect the brightness of a bulb and the volume of a buzzer? What is renewable energy and how can we use it to generate electricity?



Vocabulary

Voltage
Current
Complete/incomplete
Independent variable
Dependent variable
Controlled variable
Repeatability
Renewable
Fossil Fuel

What do we know?

Know how to build and draw series circuits. (Y4 Electricity)

Know common appliances that use electricity an understand the terms conductor and insulator. (Y4 Electricity)

Big Ideas

Physics & Sustainability



Forever Facts

- Know that** the voltage will affect the brightness of a bulb and the volume of a buzzer.
- Know why** scientists use comparative and fair test enquiries to answer questions.
- Know how** to construct and draw series circuits using symbols. (Working Scientifically- Skill)

Where will it go?

Showcase

- So... how to scientists design and carry out fair tests?**
- Write up a comparative and fair test with results and a suitable conclusion.
- Present a PowerPoint on what renewable energy is and how use it to generate electricity.



Question: How can we identify, group and classify plants, animals and microorganisms?

What do we know?

Know that there are different stages to the life cycles, including foetus, baby, adolescent and adult and elderly adults. **(Y5 Animals)**

Know that mammals, insects, amphibians and birds that have different life cycles and describe these. **(Y5 Animals)**

1. Conditions for Life

2. Group organisms

3. Classify animals

4. Classify plants

5. Microorganisms

6. Classify microorganisms

7. Carl Linnaeus

Vocabulary

Biology
Organism
Microorganism
Characteristics
Vertebrate
Invertebrate
Classification
Carl Linnaeus

Big Ideas

Biology & Working Scientifically



Forever Facts



Know that living things are classified according to characteristics, based on similarities and differences.



Know why we classify plants and animals based on **specific** characteristics.



Know how to use keys and information to identify, classify and describe living things and identify patterns. **(Working Scientifically- Skill)**

Where will it go?

Showcase

So... How can we identify, group and classify plants, animals and microorganisms?

Present & recall investigation & schema

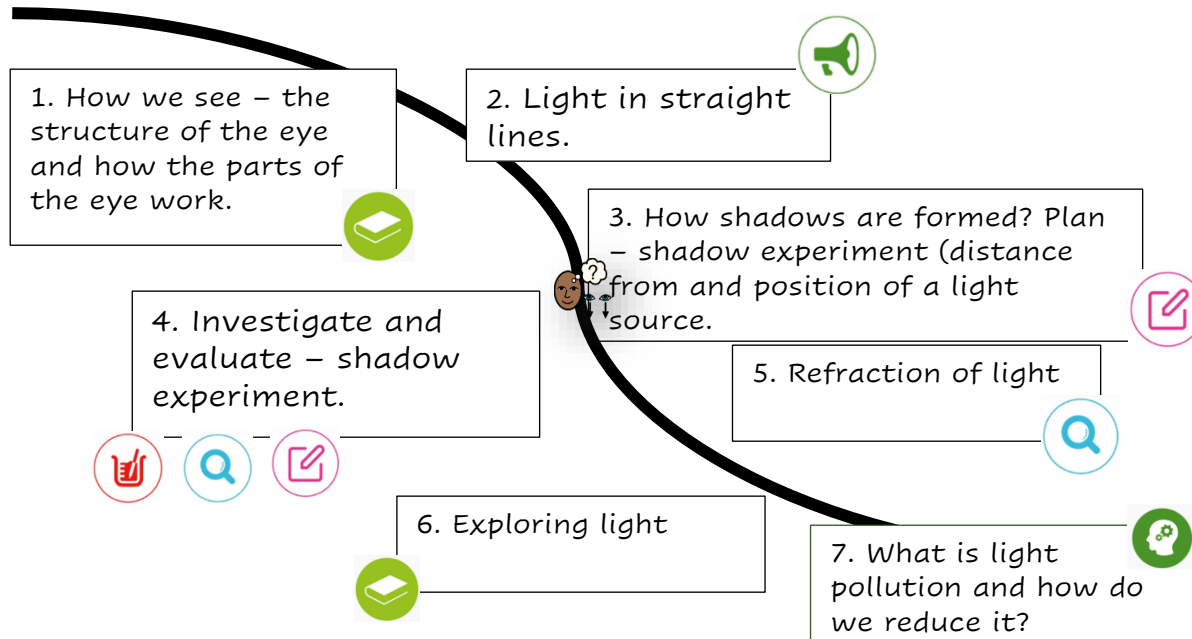
Enquiry Questions: How is a rainbow formed? What is light pollution and how can we reduce it? How do we see?

What do we know?

Know what the terms transparent, translucent and opaque mean. (Y3 Light)

Know that shadows are formed when a light source is blocked by an opaque object. (Y3 Light)

Know why the eye allows us to see. (Y3 Light)



- ### Vocabulary
- Eclipse
 - Prism
 - Refraction
 - Spectrum
 - Cornea
 - Iris
 - Lens
 - Pupil
 - Retina
 - Optic nerve

Big Ideas

Physics, Biology & Sustainability



Forever Facts

- Know that white light is composed of a mixture of colours (spectrum).
- Know why a rainbow is formed when sunlight is refracted by droplets of water.
- Know how the structure of the eye allows us to see the world around us.

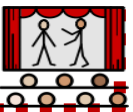
Where will it go?

Showcase

So... how is a rainbow formed?

Present an A2 poster all about rainbows and light refraction.

Scientific drawings and written explanations of the parts of an eye.



Enquiry Questions: What is the circulatory system and how does it work? How does the duration of exercise affect heart rate?

What do we know?

Know that there are different parts of the digestive system in humans and describe their function. **(Y4 The Digestive System)**

Know why animals, including humans, need the right types and amounts of nutrition. **(Y3 Nutrition and Diet)**

Know that muscles and joints are important for movement. **(Y3 Skeletons and movement)**

Big Ideas

Biology



1. The circulatory system and blood.



2. The heart, blood flow in the heart and oxygenated and deoxygenated blood.



3. Dissection of the heart.



4. Diet – What makes a balanced diet?



5. Drugs – different types and effects on the body.



6. Cigarettes and effects of smoking and vaping.



7. Plan and investigate – Heart rate investigation (exercise)



8. Evaluate – Heart rate investigation (exercise)



Forever Facts



Know that diet and drugs affect our bodies in different ways.



Know why exercise increases our heart rate.



Know how the circulatory system works and explain how the heart pumps blood around the body.

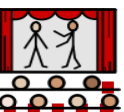
Vocabulary
 Arteries
 Veins
 Capillaries
 Plasma
 Red blood cells
 White blood cells
 Atrium
 Ventricle
 Oxygenated
 Deoxygenated
 Calorie
 Stimulant
 Depressant

Where will it go?

Showcase

How does the circulatory system work?

Voiceover of video of dissection of the heart.





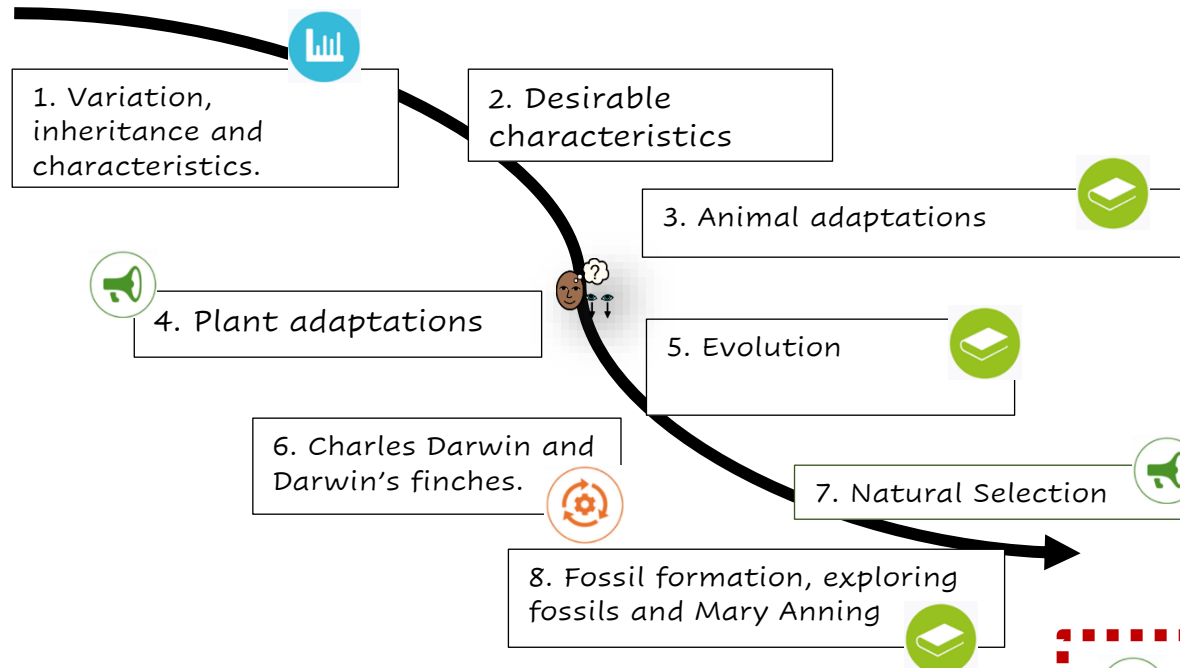
Enquiry Questions: Is the type of food a bird eats related to the shape of its beak? How have fossils changed over time and does this provide evidence for evolution?

What do we know?

Know that sexual reproduction involves two parents producing offspring. **(Y5 Reproduction)**

Know that animals live in different habitats on planet Earth and why they are suited to them. **(Y2 Living things and their habitats)**

Know why fossils take so long to form. **(Y3 Rocks, Fossils and Soils)**



Vocabulary

- Variation
- Inheritance
- Organism
- Species
- Characteristics
- Adaptations
- Evolution
- Common ancestor
- Theory
- Decompose
- Palaeontologist

Big Ideas

Biology



Forever Facts

- Know that organisms inherit characteristics from their parents and this is why we show variation.
- Know why living things adapt to their environment over time.
- Know how Charles Darwin developed the theory of evolution using observations of the natural world.

Where will it go?

Showcase

So... why do species show variation and why have they changed over time?

Design an organism and show how it is adapted to a given environment.

