

# Linton Heights Curriculum Progression Science

## Year 6

Classifying big and small  
Light and reflection  
Evolution and inheritance  
Energy – circuits and batteries  
Circulation and exercise

## Year 5

Mixtures and separation  
Properties and changes  
Earth and space  
Imbalanced forces  
Life cycles and reproduction  
Human timeline

## Year 4

Animals, digestion and food  
Energy – electricity and circuits  
Living things – Classification and habitats  
Materials – states of matter  
Energy – sound and vibrations

## Year 3

Movement and nutrition  
Forces and magnets  
Light and shadows  
Plant reproduction  
Making connections

### UKS2 Light Pupils learn:

Straight line travel of light  
Luminous and non-luminous objects  
Uniform reflection  
Mirrors and periscopes  
Relationships – light sources, objects and shadows  
Distance from source and the effect on shadow size  
Angle of the reflect ray

### UKS2 Materials Pupils learn:

Broader range of materials and properties  
Hardness, solubility, transparency and conductivity  
Dissolving substances  
Reversible/ irreversible changes  
Formation of new materials

### UKS2 Plants Pupils learn:

A plant's reproductive organs  
The process of pollination  
Seed formation  
Seed dispersal

### LKS2 Light Pupils learn:

Sources of light  
Light and dark  
The need for protection from the sun  
Light reflection  
Shadows  
How shadows change during the day

### LKS2 Materials Pupils learn:

Rocks and soils  
Categorisation of rocks via properties and appearance  
Grains, crystals and fossils  
Soil constituents  
Rocks and their uses  
What is a fossil?  
Rock erosion and weathering  
States of matter – solids, liquids and gases  
Freezing/ melting/ evaporating  
Freezing and boiling points  
Water cycle

### LKS2 Plants Pupils learn:

Functions – basic parts  
Water transportation  
Plants need water, light, air, nutrients and the correct temperature for growth  
Variation in plants  
Plant life cycle

### UKS2 Electricity Pupils learn:

Components in a series circuit  
Buzzers and motors  
Recognised symbols in a circuit diagram, for electrical components  
Changes of voltage and its effect

### UKS2 Living things and habitats Pupils learn:

That an organism is an individual living thing  
Micro-organism  
Characteristics of a vertebrate and invertebrate  
Lifecycles of animals and plants  
Reproduction – sexual and asexual  
Evolution of living things  
The message that fossils give us about the past  
Characteristics of inheritance/ variations from parents  
Variation and animal survival  
Animal and plant adaptation

### UKS2 Animals (including humans) Pupils learn:

The human life cycle  
Changes in puberty  
Gestation periods – mammals  
Parts of the circulatory system  
Functions of the heart  
Blood vessels  
Relationships between organ systems  
Impact of diet, exercise and drugs  
Heart rate and breathing rate.

### LKS2 Electricity Pupils learn:

Batteries and electrical appliances  
The need for a completeness of an electrical circuit  
Components in a simple circuit  
Electrical safety  
Conductors and insulators  
Switches  
How to affect bulb brightness

### LKS2 Living things and habitats Pupils learn:

Classification keys  
Vertebrate and invertebrate definitions  
Plants flowering and non-flowering  
5 main vertebrate groups and invertebrate groups  
Change in habitats throughout the year  
Human impact on the environment

### LKS2 Animals (including humans) Pupils learn:

How animals are grouped based on skeleton  
Skeleton – its purpose  
Muscles – their purpose  
The need for nutrition  
Main food groups and importance of a balanced diet  
Main organs in the digestive system  
Human teeth and care for them  
Teeth in carnivores and herbivores  
Predators and prey  
Food chains

# Linton Heights Curriculum Progression

## Science

### UKS2 Forces – Earth and Space

Pupils learn:

Sun, stars and their position  
Spherical bodies  
Names and order of the planets  
Moon and its orbit of the earth  
How planets orbit the sun  
Causes of the seasons – tilt of the earth  
Causes of night and day

### Year 6

Classifying big and small  
Light and reflection  
Evolution and inheritance  
Energy – circuits and batteries  
Circulation and exercise

### UKS2 Forces and Magnets

Pupils learn:

Gravity and its effects  
Air and water resistance  
Opposing forces to movement  
Imbalanced forces and their effects on speed, shape and direction of a moving object  
Rougher surfaces – more friction than smoother surfaces  
Effect of surface area on air and water resistance.

### Year 5

Mixtures and separation  
Properties and changes  
Earth and space  
Imbalanced forces  
Life cycles and reproduction  
Human timeline

### UKS2 Sound

Pupils learn:

How vibrations are made  
How we hear  
Sound insulating materials  
Pitch/ volume of sound  
Effect of distance on sound

### Year 4

Animals, digestion and food  
Energy – electricity and circuits  
Living things – Classification and habitats  
Materials – states of matter  
Energy – sound and vibrations

### LKS2 Forces – Earth and Space

Pupils learn:

Seasonal changes  
4 seasons and their characteristics  
Danger of the sun  
Weather in the 4 seasons  
Causes of the variation of day length

### Year 3

Movement and nutrition  
Forces and magnets  
Light and shadows  
Plant reproduction  
Making connections

### LKS2 Forces and Magnets

Pupils learn:

Contact and non-contact forces  
Magnetism  
The north and south poles of magnets  
Types of magnets  
Uses of magnets  
Friction – how it is reduced and increased & benefits/disadvantages of friction  
Attraction and repulsion of magnetic poles  
Variation in magnet strength  
Electromagnets and their uses