

## Year 4 Science Autumn Term

This term in Science, we are exploring States of Matter

Our Key Learning Objectives	Red	Orange	Green
I can recognise everyday substances are solids, liquids or gasses			
I can compare and group materials according to whether they're solids, liquids or gasses			
I can make clear distinctions between the properties of solids, liquids and gases (I)			
I can observe that some materials change state when they are heated or cooled. (I)			
I can measure or research the temperate that materials change state (I)			
I can describe how liquids evaporate to form gases and gases condense to form liquids			
I can sequence and describe the water cycle			
I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature			
I can identify a range of contexts where changes take place (I)			

### Extra questions

1. Why do granular solids have some of the same properties as liquids?
2. Why are some substances hard to classify as solids, liquids or gasses?
3. Why is salt put on the roads in winter?

<b>Temperature-</b> intensity of heat present in a sub-		<b>Thermometer-</b> an instrument for measuring temperature		<b>Evaporate-</b> turn from liquid into vapour		<b>Condense-</b> cause to change from a gas or vapour to a liquid	
<b>Properties-</b> what the material is like		<b>Meting Point-</b> the temperature at which a given solid will melt		<b>Freeze-</b> to turn into a solid as a result of extreme cold		<b>Boiling Point-</b> the temperature at which a liquid boils and turns to vapour	

Write down any questions you would like to explore further.

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## **Beacon 2—working scientifically skills**

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- I can make systematic and careful observations.
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- I can identify differences, similarities or changes related to simple scientific ideas and processes.
- I can use results to draw simple conclusions.
- I can use straightforward scientific evidence to answer questions and support my findings.
- I can raise further questions.
- I can make predictions.

## Year 4 Science Spring Term

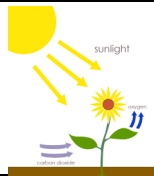
This term in Science, we are exploring Living Things and their Habitats

Our Key Learning Objectives	Red	Orange	Green
I can recognise that living things can be grouped in a variety of ways			
I can explore how classification keys group animals. (I)			
I can create a classification key to group, name and identify living things (I)			
I can group animals into vertebrates and invertebrates			
I can describe characteristics of vertebrates			
I can construct and interpret a variety of food chains, identifying producers, predators and prey			
I know the function of some of the more complex features which aid survival in specific habitats			
I can recognise that environments can change and that this can sometimes pose dangers to living things			

### Extra questions

1. Why are some animals hard to classify? (I)
2. How have humans negatively impacted the environment? (I)

**Producers-** organisms that make their own food.



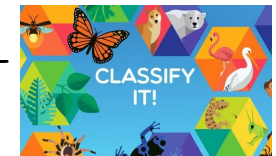
**Predator-** an animal that preys on others.



**Prey-** an animal that is hunted or killed by another for food.



**Classify-** arrange in categories.



**Characteristic** - typical of a particular place or thing.

**Vertebrate-** animals with back bones.



**Invertebrate-** animals without a back bone.



**Vegetation-** a collection of plants in an area



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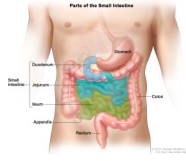
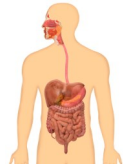




## Year 4 Science Spring Term

This term in Science, we are exploring Animals Including Humans

Our Key Learning Objectives	Red	Orange	Green
I can name and identify the role of each organ in the digestive system.			
I can describe the simple functions of the digestive system. <b>I</b>			
I can describe the role of teeth in the digestive system.			
I can identify different teeth in a human and describe their function.			
I can explain how and why to look after my teeth. <b>I</b>			
I can recognise that animals have different diets so may have different			

### Extra questions

- Why do humans not have a full set of teeth at birth?
- Why are dentists concerned about the amount of sugar children have? **I**
- How can fossilised teeth give us clues about an animal's diet?

<b>Oesophagus</b> - connects the throat to the stomach. 	<b>Large intestine</b> -a long tube like organ. 	<b>Small intestine</b> - an organ that absorbs nutrients. 	<b>Digestion</b> - the breakdown of food. 
<b>Incisor</b> - a narrow edge tooth at the front of the mouth. 	<b>Molar</b> - a grinding tooth at the back of the mouth. 	<b>Canine</b> - a pointed tooth between the premolar and incisor 	<b>Decay</b> -rotting through the action of bacteria. 

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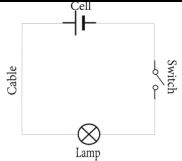


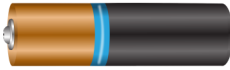

## Year 4 Science Summer Term

This term in Science, we are exploring Electricity

Our Key Learning Objectives	Red	Orange	Green
I can identify common appliances that run on electricity.			
I can identify whether an item is run on mains or battery. <b>I</b>			
I can create a simple electrical circuit, identifying and naming its main parts, <b>I</b>			
I can identify whether or not a lamp will light in a circuit.			
I can recognise that a switch opens and closes and associate this whether or not a lamp lights. <b>I</b>			
I can recognise common conductors and insulators. <b>I</b>			

### Extra questions

- How are conductors and insulators used?
- Why are playdough and graphite unusual conductors?

<b>Component-</b> parts of a circuit 	<b>Insulator-</b> does not let electricity pass 	<b>Switch-</b> controls the flow of a current. 	<b>Circuit-</b> a path that lets electricity flow. 
<b>Appliance-</b> a piece of an equipment that performs a specific task 	<b>Conductor-</b> electricity passes through 	<b>Cell-</b> a cell converts chemical energy to electrical energy 	<b>Crocodile clip-</b> used to create a temporary connection. 

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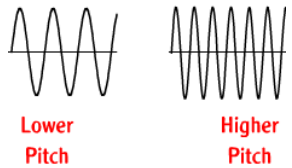

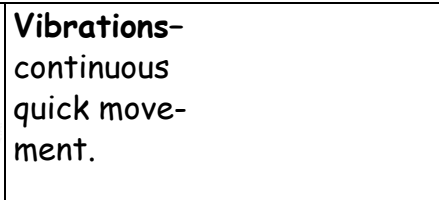



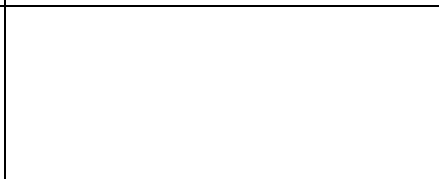
## Year 4 Science Summer Term

This term in Science, we are exploring Sound

Our Key Learning Objectives	Red	Orange	Green
I can identify how sounds are made, associating some of them with vibrations <b>I</b>			
I can recognise that vibrations from sounds travel through a medium to the ear <b>I</b>			
I can recognise that sounds get fainter as the distance from the sound source increases			
I can find patterns between the pitch of a sound and features of the object that produced it <b>I</b>			
I know that altering vibrations alters the pitch or volume			
I can describe how to change the volume and insulate sound <b>I</b>			
I can find patterns between the volume of a sound and the strength of the vibrations that produced it			

### Extra questions

1. How is an echo created?
2. How does sound travel through different materials?
3. What is echo-location and how is it used?

<b>Sound</b> -vibrations that travel through the air and can be heard. 	<b>Pitch</b> - the highness or lowness of a tone. 	<b>Volume</b> - the loudness of a sound. 	<b>Vibrations</b> - continuous quick movement. 
<b>Travel</b> - to move from one place to another. 	<b>Insulation</b> - the action of soundproofing. 	<b>Instrument</b> - a device to make sound 	

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