Featherstone Wood Primary School

Our School's Skills - Working Collaboratively, Independence, Community Values, Reflectiveness, Stickability, Risk-Taking, Inquisitiveness, Communication

Year 5 Science Autumn 1 Term

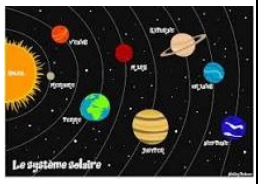
This term in Science, we are exploring Earth and Space

Our Key Learning Objectives			
I can identify and locate the components of the solar system. I			
I can describe the Sun, Earth and Moon as approximately spherical.			
I can describe the movement of the Earth and other planets in relation to the Sun. I			
I can explore and describe how a shadow from the sun changes throughout the day. I			
I can describe the movement of the Moon relative to Earth.			
I can recognise that it is daylight in the part of the Earth facing the Sun.			
I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.			

Extra questions

1. How do planets stay in orbit?
2. Why does the appearance of the moon change? I
3. How have ideas about the solar system changed over time?

Solar System—the collection of eight planets and their moons in orbit round the sun

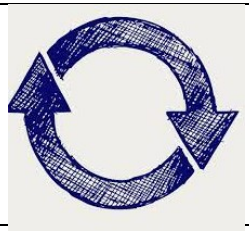


Planets—a celestial body moving in an elliptical orbit round a star

Celestial body—positioned in or relating to the sky, or outer space as observed in astronomy

Earth—the planet on which we live; the world

Rotation—the action of rotating about an axis or centre



Orbit— the curved path of a celestial object or spacecraft round a star,

Sun—the star round which the earth orbits

Gravity—the force that attracts a body towards the centre of the earth, .

Write down any questions you would like to explore further.

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Beacon 3—working scientifically skills

- I can plan different types of scientific enquiries to answer questions.
- I recognise and control variables where necessary.
- I can take measurements, in standardised units, using a range of scientific equipment, with increasing accuracy and precision.
- I record data and results of increasing complexity.
- I record and present my findings using scientific diagrams and labels, classification keys, tables, scatter graphs, bar graphs and line graphs.
- I can report on findings from enquiries in oral and written explanations such as displays and other presentations.
- I can identify conclusions, causal relationships and patterns.
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Year 5 Science Autumn 2 Term

This term in Science, we are exploring Materials

Our Key Learning Objectives			
I can compare and group materials on the basis of their properties e.g. magnetism and transparency			
I can give reasons for the use of a material with evidence from testing I			
I can describe melting and dissolving and explore factors that affect the rate of dissolving I			
I can describe some methods used to separate materials I			
I can demonstrate that dissolving, mixing and changes of state are reversible I			
I can observe and explore a variety of chemical changes and identify whether they are reversible.			
I can explain that change may result in the formation of new materials I			

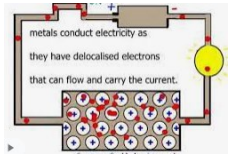
Extra questions

1. What is the difference between melting and dissolving?
2. Why does ink move up the paper in chromatography?
3. What are the properties of new materials?
4. Why are some materials good thermal insulators?

Solubility- the ability to be dissolved, especially in water

Transparent- materials appear clear

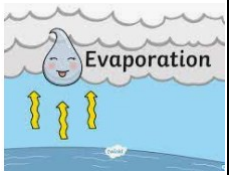
Conduct- meaning they let current flow easily



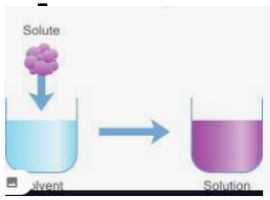
Insulate- prevent the passage of electricity to or from (something) by covering it in non-

Dissolve- to become incorporated into a liquid so as to form a solution

Evaporate- turn from liquid into vapour.



Solution- a liquid mixture in which the solute is uniformly distributed within .



Reversible/- a reaction can be changed back

Irreversible- a reaction cannot be changed back

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Year 5 Science Spring Term

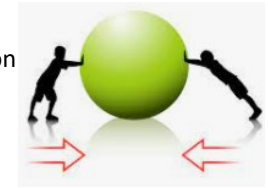
This term in Science, we are exploring Forces

Our Key Learning Objectives			
I can name simple forces such as gravity, friction and air resistance			
I can explain that unsupported objects fall towards the Earth because of the force of gravity			
I can identify that force is measured in Newtons			
I can identify the effect of air resistance and that acts between moving surfaces I			
I can identify the effect of water resistance that acts between moving surfaces I			
I can identify the effect of friction that acts between moving surfaces I			
I can describe and explain the motion of some familiar objects in terms of several forces acting on them			
I can use the terms 'balanced' and unbalanced' when describing several forces on an object			
I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a			

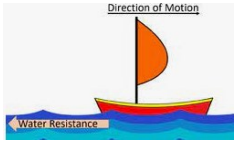
Extra questions

1. How did introducing gears improve cycling?
2. Can you identify any streamlined objects and explain why they were designed this way?

Force- strength or energy as an attribute of physical action or movement



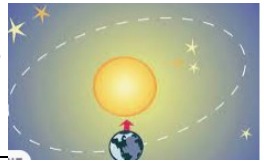
Water Resistance - is a type of force that uses friction to slow things down that are moving through **water**



Air Resistance- the forces that are in opposition to the relative motion of an object as it passes through the air.

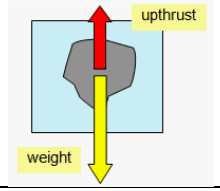
Newton– a unit of **measure** SI unit of force named after Isaac *Newton*

Gravitational Attraction- the force of **attraction** between all masses in the universe;



Force Meter- used to measure **forces**

Upthrust- the upward force that a liquid or gas exerts on a body floating in it



Weight- An object's **weight** depends on its mass and the strength of the gravitational pull

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Year 5 Science Summer Term

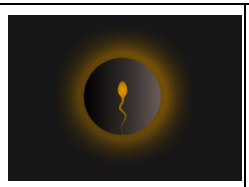
This term in Science, we are exploring Living things and their habitats

Our Key Learning Objectives			
I can sequence the life-cycles of a variety of plants and animals I			
I can describe the differences in the life-cycle of a mammal, amphibian, insect and bird.			
I can describe the main functions of the parts of the plants involved in reproduction I.			
I can describe the process of sexual and asexual reproduction in plants. I			
I can describe the simple functions of parts of the human reproductive system.			
I can describe the life process of reproduction in some plants and animals.			
I can compare gestation periods. I			
I can describe the changes as humans develop to old age.			

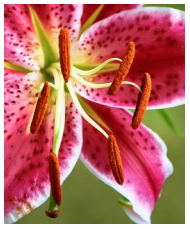
Extra questions

1. What is the difference between internal and external fertilisation?
2. Why do living things need to reproduce for their species to survive?
3. What is unusual about the life-cycle of a koala or kangaroo?

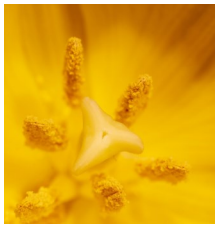
Sexual Reproduction This involves male and female sex cells and fertilisation. Two parents are required.



Stamen The male fertilising part of a flower, typically consisting of an anther and filament.



Pollen Pollen is a fine, powdery substance, typically yellow, that is produced by the male part of a flower.



Larvae The active immature form of an insect. It is the first stage.

Asexual Reproduction This does not involve sex cells or fertilisation. Only one parent is required.

Stigma The female part of the flower that receives the pollen.

Reproduction The production of offspring by a sexual or asexual process.

Pupae The inactive immature form of an insect. It is the second stage.

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