












Castercliff Primary Academy – Year 5 Science Progression.

| Curriculum Year 5 | Materials: Dissolving or Absorbing | Materials: Illusion Layers | Animals Including Humans: Growth | Space: Craters | Living Things: Life Cycle research | Forces: Aquadynamics |
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| Key Skill | Asking and Answering Questions | Comparative and Fair Testing  | Pattern Seeking  | Observing Over Time  | Identify and Classifying  | Research Using Secondary Resources  |
| Applied Skills |  |  |  |  |  |  |
| Knowledge | <ul style="list-style-type: none"> •Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. •Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution. •Use knowledge of solids, liquids and gases to decide how | <ul style="list-style-type: none"> •Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. | <ul style="list-style-type: none"> •Describe the changes as humans develop to old age | <ul style="list-style-type: none"> •Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. •Describe the movement of the Moon relative to the Earth. •Describe the Sun, Earth and Moon as approximately spherical bodies. •Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky | <ul style="list-style-type: none"> •Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. •Describe the life process of reproduction in some plants and animals. | <ul style="list-style-type: none"> •Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. •Identify the effects of air resistance, water resistance and friction that act between moving surfaces. •Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. |



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| | <p>mixtures might be separated, including through filtering, sieving and evaporating.</p> <ul style="list-style-type: none"> •Demonstrate that dissolving, mixing and changes of state are reversible changes. •Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. | | | | | |
| Sticky Knowledge 'Evidencing' | <ul style="list-style-type: none"> •Can explain what dissolving means, giving examples •Can name equipment used for filtering and sieving •Can use knowledge of liquids, gases and solids to suggest how materials can be recovered from solutions or mixtures by evaporation, filtering or sieving •Can describe some simple reversible and non-reversible changes to materials, giving examples | <ul style="list-style-type: none"> •Can use understanding of properties to explain everyday uses of materials, for example, how bricks, wood, glass and metals are used in buildings | <ul style="list-style-type: none"> •Can explain the changes that takes place in boys and girls during puberty •Can explain how a baby changes physically as it grows, and also what it is able to do •Can present information about the changes occurring during puberty as an information leaflet for other Y5 children or answers to 'problem page questions' | <ul style="list-style-type: none"> •Can create a voice over for a video clip or animation •Can show, using diagrams, the movement of the Earth and Moon •Can explain the movement of the Earth and Moon •Can show using diagrams the rotation of the Earth and how this causes day and night •Can explain what causes day and night •Can use the model to explain how the Earth moves in relation to the Sun and the Moon moves in relation to the Earth | <ul style="list-style-type: none"> •Can draw the life cycle of a range of animals identifying similarities and differences between the life cycles •Can explain the difference between sexual and asexual reproduction and give examples of how plants reproduce in both ways •Can present their understanding of the life cycle of a range of animals in different ways e.g. drama, pictorially, chronological reports, creating a game •Can identify patterns in life cycles | <ul style="list-style-type: none"> •Can demonstrate the effect of gravity acting on an unsupported object •Can give examples of friction, water resistance and air resistance •Can give examples of when it is beneficial to have high or low friction, water resistance and air resistance •Can demonstrate how pulleys, levers and gears work •Can explain the results of their investigations in terms of the force, showing a good understanding that as the object tries to move through the |



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| | | | | <ul style="list-style-type: none">•Can demonstrate and explain verbally how day and night occur•Can explain evidence gathered about the position of shadows in term of the movement of the Earth and show this using a model•Can explain how a sundial works•Can explain verbally, using a model, why we have time zones•Can describe the arguments and evidence used by scientists in the past | <ul style="list-style-type: none">•Can compare two or more animal life cycles they have studied•Can explain how a range of plants reproduce asexually | <p>water or air or across the surface the particles in the water, air or on the surface slow it down</p> <ul style="list-style-type: none">•Can demonstrate clearly the effects of using levers, pulleys and gears |
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