



The Best That You Can Be

Devonshire Primary Academy

Science Long Term Plan



Year 4			
Week	Autumn	Spring	Summer
1	Explain how leaves are important in creating food for a plant.	Compare and contrast the conditions for growth for a range of different plants. Explain why these differences may exist.	Create a planting plan for a 1 metre square bed of flowers that will look its best three years from planting. Justify your choice of plants. *
2	Experiment with food colouring to demonstrate how water is transported through a plant. Explain the experiment and summarise your observations.	Using a range of (real) flowering plants, locate and name the parts of a flower. (apply)	Why might flowering plants grow in high up rooftops or gutters even if humans did not put them there? *
3	Explain why a flower that is not pollinated will not reproduce.	Explain and give examples of the idea of adaptation.	True or false? Plants and animals would not survive if they could not adapt. Which do you think are the best examples of an animal and a plant that show adaptation? (suggest)
4	Compare changes in two or more habitats and categorise the effects of the changes. Identify animals (and plants) using a classification key. (apply) Adapt a classification key to include different criteria.	Construct classification keys for animals (and plants).	Suggest reasons why a growth in sparrow hawks might lead to a reduction in songbirds and too many insects, snails and slugs in gardens. *
5	Explain the concept of inheritance. Investigate how scientists and doctors are researching conditions that are inherited from a parent. *	Cite evidence of how diet is linked to the health of human teeth. *	Are there any ways in which you could classify animals (and plants) so that they may be in more than one group? (suggest, reason, propose, arrange)
6	Relate the human digestive system to the way humans get nutrition. Contrast this with how plants get nutrition.	Explain the main differences between igneous and sedimentary rocks. Compare the origins of different types of rocks and identify patterns that would help you to infer the type of rock.	True or false? The colour of a rock is a good clue that helps to identify it? *
7	Explain the three states of matter of water and how temperature affects its state.	True or false? Liquids take the form of the container they are in.	Graph the relationship between temperature and evaporation. Summarise your results.

8	Identify patterns in the type of surface and how this affects movement. Explain why these patterns may exist. Experiment with practical applications of this relationship.	Experiment with magnets to explore whether the force of magnetism can act through materials (e.g. by placing magnets in ice). Identify any patterns in the type and amount of material the force is acting through.	Investigate the design of car tyres and connect this to your understanding of friction. *
9	Experiment with iron filings to see how they act when magnets attract and repel each other. Record your findings and explain what is happening.	Investigate practical applications of the understanding of which materials are or are not attracted to magnets. Suggest some uses for this in school.	Why do we call parts of Earth the North and South Poles? (explain concept)
10	True or false? The Sun is the only natural source of light in our solar system. *	Compare and contrast the effectiveness of different mediums in transmitting sounds.	Explain why shadows change size.
11	Compare and contrast how loud and quiet sounds are made. Experiment with stringed musical instruments to discover how high and low notes are made and explain your findings. Explain the role of vibration in creating sounds.	Experiment with the effect of placing more than one bulb in a series circuit and summarise your findings. Explain the concept of a series circuit and recommend some general rules.	True or false? Higher notes are louder than lower notes. *
12	Explain why opening and closing switches affects a series circuit. Make a number of series circuits containing different components. Explain the similarities between the circuits despite the different components.	True or false? Everything on Earth either conducts or doesn't conduct electricity, including humans.	Find and rectify faults (solve non-routine problems) for a range of incomplete circuits.