The King's CHURCH OF ENGLAND SCHOOL KIDSGROVE

Meaningful homework plan: Science

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Half term points

AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Cells – the building blocks of life	**Mixing, dissolving, and separating**	**Cells – the building blocks of life**	**Eating, drinking, and breathing**	**Elements, compounds, and their reactions**	**Eating, drinking, and breathing**
Meaningful homeworks: Research how either the Paramecium or Amoeba moves, feeds, and reproduces compared to larger, multicellular organism.	**Meaningful homeworks:** Research some common mixtures and use this knowledge to describe how they are separated into component substances.	**Meaningful homeworks:** Research and describe the effect of a number of different substances on the developing foetus.	**Meaningful homeworks:** You are going to keep a food diary to investigate the food that you eat over a week by looking at the nutritional information on packaging.	**Meaningful homeworks:** Write instructions for an investigation to find out how mass changes when magnesium burns.	**Meaningful homeworks:** Quotation detective – read the short story and find quotes to support the statements provided.
Key skills and knowledge assessed: • Cells are the building blocks of life. They contain structures called organelles which have specific jobs • Many cells are specialised for a specific task • Explain how different factors affect the rate of exchange of substances	**Key skills and knowledge assessed:** • Recognise the differences between substances and use these to separate them • Explain solubility • Obtain pure salt from a mixture	**Key skills and knowledge assessed:** • Recognise the variety of dufferent structures shown by different seeds • Describe the need for plants to disperse tehir seeds • Plan, execute and analyse an investigation into seed dispersal	**Key skills and knowledge assessed:** • Describe how to test foods for starch, sugars, protein, and fat. • Predict the results of food tests for a range of foods. • Evaluate the risks involved in carrying our food tests	**Key skills and knowledge assessed:** • Describe the composition and uses of carbonate compounds. • Recognise and explain thermal decomposition reaction. • Observe and explain mass changes. • Use scientific terms and simple models to explain chemical processes.	**Key skills and knowledge assessed:** • Explain how diffusion makes breathing possible. • Observe the effects of diffusion. • Apply diffusion to our breathing system and ask questions to develop understanding.
Forces and their effects	**Exploring the basics of electricity**	**Elements, compounds, and their reactions**	**Mixing, dissolving, and separating**	**Energy transfers and sound**	**Energy transfers and sound**
Meaningful homeworks: Explore the behaviour of brass, cast iron, copper and aluminium alloy when exposed to a force.	TBC	**Meaningful homeworks:** Using your knowledge from the previous lessons, annotate your periodic tables to highlight the information we can gain.	**Meaningful homeworks:** Using materials at home such as modelling dough, tin foil, beads, or dried pasta, make models for different chemical structures.	**Meaningful homeworks:** Dual code your understanding of show how energy is transferred.	**Meaningful homeworks:** Research the average volume in decibels of a number of activities and design a poster that highlights and warns people about the dangers of exposure to loud sounds.
Key skills and knowledge assessed: • Describe the effects of friction • Understand that friction acts in the opposite direction to the direction of movement	TBC	**Key skills and knowledge assessed:** • Identify where and how different elements were found. • Recognise differences between elements. Recognise that the periodic table has changed over time.	**Key skills and knowledge assessed:** • Use chromatography to identify unknown substances • Draw conclusions from evidence • Use chromatography to separate dyes	**Key skills and knowledge assessed:** • Describe the composition of fuels and recognise that different fuels transfer different amounts of energy. • Describe the advantages and disadvantages of using different fuels.	**Key skills and knowledge assessed:** • Identify how sounds are made. • Describe how sound waves transfer energy. • Explain how loud and quiet sounds are made.

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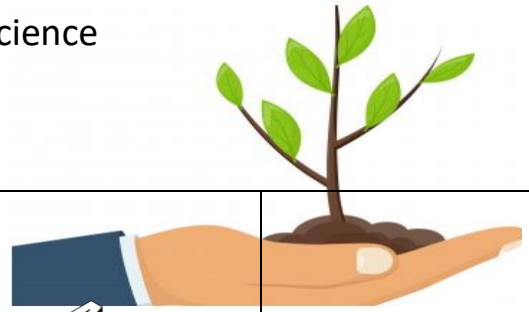

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					• Present data using appropriate graphs and evaluate the quality of evidence collected.	
			Forces and their effects			
			Meaningful homeworks: Using the data provided, analyse the range of different electric cars and critically analyse the way n which they are tested.			
			Key skills and knowledge assessed: • Describe the effects of forces about a pivot point • Understand how distance and force effects moments • Calculate moments			

**Click on the icons to see examples of meaningful homeworks in Science.*