Curriculum Sequencing - Year 8

<table>
<tr><th colspan="4">Year 8: Physics - Wave Properties (Sound)</th></tr>
<tr><td colspan="2">Topics covered:
1. What is a wave?
2. How can waves be measured?
3. What is sound?
4. What sounds can we hear?
5. How fast does sound travel?
6. How do ears work?
7. Sound Badger task</td><td>How it links to what has been studied before:
In year 7 you have learnt about particles and how they behave in different states of matter (solid, liquid and gas). You will also have learnt about speed and how we can measure it using the equation speed = distance ÷ time</td><td>How it links to what will be studied:
In year 8, you start to apply the idea of particles to every day situations such as how they enable us to hear sounds.</td></tr>
<tr><td colspan="2">Key words:
Waves, vibrate, longitudinal wave, wavelength, amplitude, volume, echo, pitch, frequency, vacuum, oscilloscope, absorption, auditory range</td><td colspan="2">Key skills:
Investigative and Practical Skills:
- Planning a practical, including identifying dependent, independent and control variables
- Observing, recording and analysing results</td></tr>
<tr><td colspan="2">Assessment focus
Sound and Hearing Badger Task
End of term test</td><td colspan="2">Revision tips
● Educake (quizzing website)
● Create Mind Maps/Flashcards (using BBC Bitesize)</td></tr>
<tr><td colspan="4">Why we study it:
In this unit, you learn about the different properties of waves (amplitude, frequency, wavelength) and be able to apply it to different sounds. By the end of the unit you will be able to describe and explain how you are able to hear noises around you and how that sound travels.</td></tr>
<tr><td colspan="4">Mastery in this subject
● To suggest the effects behind particular ear problems on a person's hearing.
● To evaluate data behind a claim for a sound creation or blocking device, using the properties of sound waves.
● To use diagrams to compare waves that a musical instrument makes when playing different pitches and volumes.</td></tr>
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<table>
<tr><th colspan="3">Year 8: Biology - Plant Reproduction</th></tr>
<tr><td>Topics covered:
1. Plant Reproductive System
2. Pollination and Fertilisation
3. Seed Dispersal
4. Investigating Seed Dispersal</td><td>How it links to what has been studied before:
At KS2 you have studied the following:
- The basic structure and function of common flowering plants</td><td>How it links to what will be studied:
Year 8, Interdependence:
You will learn about the ways in which different plants are structurally adapted for their environment to enhance their chance of survival</td></tr>
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5. The importance of bees	- The conditions needed for plant life and growth - The role played by flowers in the life-cycle of a flowering plant	

Key words: stamen, anther, filament, carpel, ovary, ovules, sepal, stigma, stem, style, pollination, fertilisation, dispersal, pollination	**Key skills:** ● Practical Lab Skills - dissection and observation of parts of a flower ● Research, collaboration and oracy - working in a team to present the importance of bees
Assessment focus: End of term test	**Revision tips:** ● Educake (quizzing website) ● Create Mind Maps/Flashcards (using BBC Bitesize)

Why we study it:
In this topic, you will be learning about the stages of plant reproduction and growth in more depth and detail. You will have a more solid understanding of the functions of plant structure.

Mastery in this subject:
- I can independently investigate different variables that can impact seed dispersal
- I can use a range of reliable sources to explain the importance of bees in detail

<table>
<tr><th colspan="3">Year 8: Chemistry - Chemical Reactions</th></tr>
<tr><td>Topics covered:
1. What is a chemical reaction?
2. Conservation of mass
3. Fuels and Burning
4. Assessed Practical: Burning Fuels
5. Thermal Decomposition
6. Burning Fuels Badger</td><td>How it links to what has been studied before:
In year 7 you have learnt about the structure of atoms and that compounds are elements that have chemically combined.
You can list different ways in which you know a chemical reaction has occurred and you have also carried out chemical reactions involving acids and alkalis.</td><td>How it links to what will be studied:
In year 8, you will continue to learn about different types of chemical reactions, including reactions involving metals and non-metals.</td></tr>
<tr><td colspan="2">Key words:
atom, element, compound, reactant, product, combustion, thermal decomposition</td><td>Key skills:
Investigative and Practical Skills:
- Planning a practical, including identifying dependent, independent and control variables
- Observing, recording and analysing results</td></tr>
<tr><td colspan="2">Assessment focus
Assessed Practical Investigation - Burning Fuels
End of term test</td><td>Revision tips
● Educake (quizzing website)
● Create Mind Maps/Flashcards (using BBC Bitesize)</td></tr>
<tr><td colspan="3">Why we study it:
In this unit, you will look at what occurs during a chemical reaction in terms of reactants and products. You will use the knowledge you gain from this topic to describe and explain chemical reactions. You will develop fundamental practical skills to be used in future chemistry lessons.</td></tr>
<tr><td colspan="3">Mastery in this subject
● I can explain why the mass of atoms is always conserved in a chemical reaction
● I can name the products formed in simple chemical reactions and write word equations to show this
● I can plan a practical that will produce valid and accurate results</td></tr>
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