Ravens Wood School
KS3 Curriculum Plan

Subject: Year 7 Plant reproduction

Overarching Topic: Plant reproduction			
Why is this topic being studied at this time?	• The astonishing reproductive diversity of flowering plants has attracted the senses and curiosity of humans since the dawn of civilization. Flowers have long played a prominent role in religious ceremonies and are the subject of countless artistic endeavours. Through breeding and artificial selection, plants provide the food supply that forms the basis of human civilization, and through horticulture the ornamentals that adorn our cities and gardens. Understanding plant reproduction is of immense practical importance for biotechnology, the conservation of biodiversity and the control of invasive species.		
How does it fit into the wider subject curriculum?	• This unit is used to extend students earlier ideas about plant reproduction and learn how flowering and non-flowering plants grow baby plants. In order for this to occur, plants must go through a process of plant reproduction. Pupils do not study plant reproduction as a separate topic in KS4, however plants and plant reproduction are included in classification, genetics and biodiversity whereby students may need to use scientific techniques to consider sample size in biological investigations, present data in bar charts and graphs, interpret data they have collected and data from secondary sources.		
	Critical	**Core**	**Pinnacle**
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	Can you name two male parts of the plant and two female parts? Do plants reproduce sexually or asexually?	Can you state three methods of seed disposal? Can you describe the main steps that take place when a plant reproduces successfully? Can you explain why seed dispersal is important to survival of the parent plant and its offspring?	Can you describe similarities and differences between the structures of wind pollinated and insect pollinated plants? Why do we observe different plants in different regions? What are the similarities and differences between human and plant reproduction? If you were to genetically modify a plant that would reproduce very quickly, what structural features would you design and why? What might be the implications of releasing your genetically modified plant into the wild?
The Key Skills/ Techniques	**The sophistication and application of skills will become more advanced as students' progress through the critical, core and pinnacle knowledge.**		
	Skill/Technique	**How will this skill be developed?**	
	1. Graphing & Drawing	Draw graphs with suitable scales, axes and units. Correct line of best fit. Appreciation of anomalies and processed data. Scientific drawing of cells, concepts and scientific equipment.	
	2. Variables	Identify independent, dependent and control variables and devise experiments to include these to ensure valid results. Appreciation of uncertainty.	
	3. Data Analysis	Describe, explain and predict trends. Graph and table data interpretation. Identify links and patters within and between topics. Statistical analysis of data to include mode/median/mean/range determination. Drawing justified conclusions from presented data.	
	4. Application	Apply known and taught theory in unfamiliar contexts. Making links to taught theory and extracting key ideas. Communicating using correct scientific terminology.	
	5. Working Scientifically	Identify hazards and planning to limit risk. Describe how to improve accuracy/precision/repeatability/reproducibility/validity. Evaluate reliability of methods and investigations, taking in to account data analysis.	
