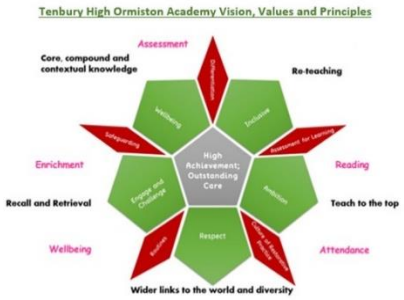
TENBURY HIGH
ORMISTON ACADEMY



Curriculum Overview for Science
Year 7

Half Term 5: OE3 (The cycles) , THb9 (The digestive system)

Substantive Knowledge:

- **The composition of the earth.**
- **The structure of the earth.**
- **The rock cycle and the formation of igneous, sedimentary and metamorphic rocks.**
- **Water cycle (First introduced in BOM3)**
- **Water poverty and how it's being addressed.**
- **Content of a healthy diet; carbohydrates, lipids, (fats and oils), proteins, vitamins, minerals, dietary fibre and water, and why each is needed.**
- **Calculations of energy requirements in a health daily diet.**
- **The consequences of imbalances in the diet, including obesity, starvation, and deficiency disease.**
- **The tissues and organs of the human digestive system, including adaptations to function and how the digestive system digests food (enzymes simply and biological catalysts).**
- **The importance of bacteria in the human digestive system.**
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Disciplinary Knowledge:

- Use simple models to describe scientific ideas. Identify the strengths and weaknesses of particular models
- Formulate an opinion for or against a scientific or technological development, using moral and ethical implications to inform your opinion
- Draw straight forward conclusions from data presented
- Interpret frequency tables, line graphs, bar graph and pie charts
- Identify simple advantages of working together on experiments or investigations.
- Use appropriate sampling techniques and/or scientific procedures to collect data.
- Draw straight forward conclusions from data presented.

Model reading and highlighting to pick out key details, reading of data, Skim reading

Mantle

Crust

Atmosphere

Igneous

Sedimentary

Metamorphic

Tectonic

Percolation

Precipitation

Wastewater

Sanitation

Water Poverty

Biuret

Enzyme

Lipid

Malnutrition

Oesophagus

Pancreas

Reagent

End of unit assessment

Homework set weekly.

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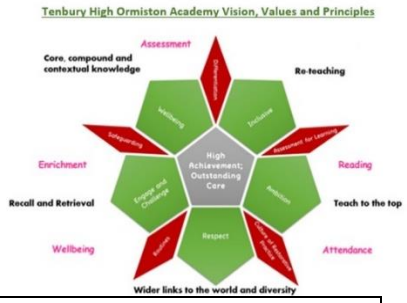

Half Term 6: Bom8 (Purity) , CR4 (The pH scale).

Substantive Knowledge:

- ❑ Demonstrate that dissolving, mixing and changes of state are reversible changes.
- ❑ The concept of a pure substance
- ❑ Mixtures, including dissolving.
- ❑ Simple techniques for separating mixtures; filtration, evaporation, and distillation.
- ❑ The identification of pure substances
- ❑ Define acids and alkalis in terms of neutralisation reactions
- ❑ The PH Scale for measuring acidity/alkalinity; and indicators
- ❑ Reactions of acids with metals to produce a salt plus hydrogen
- ❑ Reactions of acids with alkali to produce a salt plus water.
- ❑ Energy changes on changes of state (qualitative)
- ❑ Exothermic and endothermic chemical reactions (qualitative)
- ❑

Disciplinary Knowledge:

- Recognise real applications of specific scientific ideas
- Independently recognise familiar risks and make suggestions on how to control them
- Suggest improvement to their method without prompts
- Construct scientific plans to make observations, test hypotheses or explore phenomena.
- Describe the difference viewpoints that people have about how science or technology should be developed.
- Present simple scientific data in more than one way, including tables and bar charts
- Identify one or more control variables in an investigation
- Identify data as categoric, discrete or continuous.
- Interpret frequency tables, line graphs, bar graph and pie charts (pie charts covered earlier but standalone lesson for all in this unit)
- Draw straight forward conclusions from data presented
- Construct scientific plans which will allow for reliable results to be collected
- Make order of magnitude calculations
- Interpret frequency tables, line graphs, bar graph and pie charts

	Model reading and highlighting to pick out key details, reading of data, Skim reading
	Acid Alkali The pH Scale Neutral Base Neutralisation Salt Ignition System Exothermic Endothermic Distillation Insoluble Soluble Solution Suspension Technique Mixture
	End of unit assessment
	Homework booklet set weekly.

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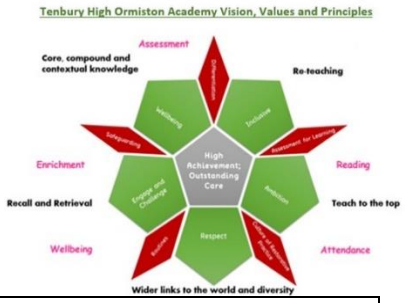

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