Marshalls Park Academy - Curriculum Overview

Subject: Science | Year Group: 8 | Curriculum/Subject Leader: ZST | Academic Year:23/24

During Year 8, students will build upon the knowledge and skills they gained in year 7 and explore previous topics more deeply. This will be through theoretical and practical-based lessons that will develop their knowledge and skills in the study of Science.

<table>
<tr><th>TERM 1</th><th>TERM 2</th><th>TERM 3</th></tr>
<tr><td>KNOWLEDGE/SKILLS
Knowledge/topics:
Unit 1 Biology: Organisms (breathing, drugs, digestions and balanced diets)
Unit 2 Chemistry: Matter (elements, atoms and compounds, polymers and the periodic table)
Unit 3 Physics: Forces (Friction and drag, squashing and stretching, turning forces, pressure and stress)
Unit 4 Physics: Energy (work done and small machines, energy and temperature)</td><td>KNOWLEDGE/SKILLS
Knowledge:
Chemistry: Reactions (atoms, combustion, thermal decomposition, conservation of mass, endothermic, exothermic and bond energies)
Physics: Electromagnets (Magnets, magnetic fields and uses of electromagnets)
Physics: Waves (looking at waves, radiation and energy transfer)</td><td>KNOWLEDGE/SKILLS
Knowledge:
Biology: Genes (Natural selection, extinction, biodiversity, DNA and inheritance, genetics and genetic modification)
Biology: Ecosystems (respiration and photosynthesis)
Chemistry: Earth (Global warming, climate change, the carbon cycle, extracting metals and recycling)</td></tr>
<tr><td colspan="3">Skills:
• AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.
• AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.
• AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</td></tr>
<tr><td>KEY ASSESSMENTS
HALF TERM 1
Baseline Test

HALF TERM 2
End of unit test including units: Organisms, matter and Forces – 1hr</td><td>KEY ASSESSMENTS

HALF TERM 2
End of unit test including units: Energy, Reactions and Electromagnets – 1hr</td><td>KEY ASSESSMENTS
HALF TERM 2
End of unit test including units: Waves, Genes and Ecosystems – 1hr

End of year test – 1hr</td></tr>
<tr><td colspan="3">Extended reading suggestions and links to external resources:
http://www.physics4kids.com/
http://www.biology4kids.com/
http://www.chem4kids.com/
https://www.bbc.com/bitesize/subjects/zng4d2p
Revision guide suggestion: Letts KS3 Success Science Complete coursebook (age 11-14)
The Skeleton Inside You by Philip Balestrino
Lost in the Solar System (The Magic School Bus, #4) by Joanna Cole</td></tr>
</table>