MYTON SCHOOL

KS3 Science Assessment Statements – Year 7

Developing		Secure		Expert	
Cells: Use microscopes to view cells Explore the basic structure of cells Identify plant and animal cells	☐	Cells: State the function of each part of a cell Explain how substances move in and out of cells Identify specialised cells	☐	Explain how specialised cells are adapted to their function Use the magnification equation to measure cells	☐
Organisation: Identify organs and the skeletal system State that muscles let us move	☐	Organisation: Explain how muscles work together to let us move State that cells work together to perform specific functions	☐	Organisation: Explain the functions of skeletal, muscular, and other organ systems Explain how cells work together to perform specific functions	☐
Digestion: State the components of a healthy diet State what happens if people don't have a healthy diet	☐	Digestion: Describe what makes a diet healthy Explain how the digestive system breaks down food	☐	Digestion: Explain the role of gut bacteria in digestion Evaluate how healthy a diet is	☐
Particles: Know that everything is made of particles State the properties of the different states of matter Describe what happens to materials when they are heated or cooled	☐	Particles: Explain the properties of the different states of matter Describe what happens to the temperature of a substance during melting or boiling	☐	Particles: Predict how different conditions affect gas pressure Analyse a materials structure, bonding and properties in terms of particles	☐
Elements: Know what atoms, elements and the periodic table are Identify risks, hazards and precautions in practical work Describe the properties of a given substance	☐	Elements: Know about the different types of subatomic particles Identify elements from the periodic table by name and symbol	☐	Elements: Explain how electrons are arranged around the nucleus Interpret chemical formulae	☐
Substances: Identify pure and impure substances Explain how a solution is formed Describe how diffusion causes substances to spread out	☐	Substances: Describe how to use the techniques of filtration, evaporation, distillation, and chromatography	☐	Substances: Analyse and evaluate the separation techniques of filtration, evaporation, distillation, and chromatography	☐
Energy: Describe how fuels can be used to heat things State the names of energy resources	☐	Energy: Describe how energy can be transferred through a system Calculate using the power equation	☐	Energy: Explain changes in objects and systems using the idea of conservation of energy Evaluate energy resources	☐
Speed: Know that speed tells us how much distance is travelled in 1 second		Speed: Calculate using the speed equation Compare the motion of objects using relative speed Interpret distance/time graphs		Speed: Calculate the speed of one object relative to another Calculate speed from a distance/time graph	
Forces: Describe forces using diagrams Describe how objects stretch, squash and rotate Know what a balanced force is	☐	Forces: Name forces Apply idea of work done and energy to stretching Calculate a resultant force	☐	Forces: Calculate compression or extension State Hooke's Law Describe the motion of an object when forces are not balanced	☐

CURRICULUM INTENT:

Pupils are taught the foundations of modern science, focussing jointly on the skills and techniques of science, and introducing them to the concepts that underpin the modern world. Pupils receive live, planned explanations from expert teachers, supplemented by varied investigative practical work, silent independent practice, effective and constructive feedback, and related cultural information such as historical context and related careers.

MYTON SCHOOL

KS3 Science Assessment Statements – Year 8

Developing		Secure		Expert	
Archaeologist: Know that rocks are classified into three groups Know that metals are extracted from ores Know that fossils are the remains of long dead organisms Know that organisms change over time	☐	Archaeologist: Describe the rock cycle and the properties of different types Describe how a fossil forms Know what is meant by a scientific theory Describe what is meant by evolution	☐	Archaeologist: Evaluate rock and fossil evidence to make conclusions about the earth in the deep past Explain the evolution of an organism via selection pressures	☐
Being Healthy: Identify organs and organ systems Interpret food labels Describe some diseases caused by microorganisms	☐	Being Healthy: Describe the process of digestion Explain what a healthy diet consists of and why Use food tests to identify chemicals in foods Describe the causes of diseases	☐	Being Healthy: Evaluate a diet Explain the role of enzymes in digestion Diagnose nutrient deficiencies Compare microorganisms and how they interact with humans	☐
Science in the Home: Know what acids and alkalis are Explain safety precautions for lab work Interpret chemical formulae and symbol equations Measure changes in chemical reactions	☐	Science in the Home: Describe reactions as exo or endothermic Calculate the mean Describe some reactions of acids Explain what neutralisation means	☐	Science in the Home: Predict the products of reactions with acids Describe exo or endothermic reactions using energy and reaction profiles Explain neutralisation using ideas of ions	☐
Feeding the Nation: Describe plant adaptations Describe how population changes affect the UK Describe changes to the body during puberty Know that plants get food from photosynthesis	☐	Feeding the Nation: Describe how pollinators help plants reproduce Describe the processes of fertilisation, IVF, and pregnancy Describe how contraception works Explain how to increase crop yield	☐	Feeding the Nation: Link plant adaptations to plant lifecycles and human use Evaluate food supply chains Compare the effectiveness of contraceptives	☐
Energy for the Nation: Create a risk assessment Interpret circuit diagrams Describe electricity as the flow of electrical charges Know that high voltages and currents are dangerous Describe some energy resources	☐	Energy for the Nation: Explain what is meant by current, potential difference, resistance Explain how potential difference affect current Compare energy resources Describe the role and structure of the national grid	☐	Energy for the Nation: Calculate using Ohm's law Evaluate energy resources in context Explain static phenomena in terms of charge transfer	☐
Water for the World: Describe physical and chemical changes Describe solids, liquids and gases in terms of their particle arrangement and motion Identify when science is presented in the media	☐	Water for the World: Explain state changes in terms of particle arrangement and motion Explain the properties of states of matter Know that objects do not change temperature during state changes	☐	Water for the World: Evaluate models of the states of matter Evaluate the presentation of science in the media	☐

CURRICULUM INTENT:

The Y8 curriculum builds on the skills and knowledge taught in Y7. The topics inspire curiosity in learners and links scientific knowledge to the context of everyday lives. Throughout Y8, pupils will progress from basic description and explanation to the analysis and evaluation of ideas and models within specific contexts. Pupils will learn the scientific reasoning that will equip them with the scientific literacy needed to make informed decisions about health, environment, and technology in their personal lives and future careers.

Removing Barriers **Community Minded**

Investing in Futures **Aspirational**

Working Together **Respectful**

Self Assured Learners **Engaged**

MYTON SCHOOL

KS3 Science Assessment Statements – Year 9

Developing		Secure		Expert	
Forensics: Know that DNA is genetic information and where it is found State the types and causes of variation Describe what refraction is	☐	Forensics: Describe the parts of blood Explain the role of DNA Explain how inherited disorders can be passed on	☐	Forensics: Use punnet squares to calculate probabilities and predict the genes of offspring Evaluate the likeliness of information being accurate or not.	☐
Buildings: Describe moments as turning forces Describe the structure and electronic configuration of atoms State the types of chemical bond Describe how heat can be transferred	☐	Buildings: Explain the properties of different chemical bonds Describe the structure and properties of polymers, metals and ceramics Explain the processes of conduction, convection, radiation	☐	Buildings: Explain reactivity trends and link to chemical bonding Analyse buildings in terms of material choices	☐
Space: Describe how we can explore space Describe the composition of the atmosphere Describe factors affecting air resistance and what it means to be streamlined	☐	Space: Explain what causes seasons, and phases of the moon Describe the difference between mass and weight Describe the lifecycle of stars	☐	Space: Explain how and why the earth's atmosphere has changed Describe evidence for the big bang Evaluate different methods of exploring space, and different methods of fuelling craft	☐
Save the Planet: Identify pollutants and link to health problems Describe the greenhouse effect and link to climate change Describe what biodiversity is	☐	Save the Planet: Describe the carbon cycle Explain the use of indicator species Explain the importance of biodiversity Describe different recycling methods	☐	Save the Planet: Explain what is meant by eutrophication and why it occurs Evaluate methods for reducing pollution and greenhouse gas emissions	☐
Medicine: Describe what is meant by health and disease Describe communicable and non-communicable diseases State the types of pathogen Describe what vaccines and antibiotics are	☐	Medicine: Explain how specific pathogens cause specific diseases Explain how to fight each type of pathogen Describe causes of some non-communicable diseases Explain the importance of medical trials	☐	Medicine: Evaluate the use of x rays, ultrasound and other medical interventions Analyse drug and medical trials to assess medical interventions	☐

CURRICULUM INTENT:

In Y9 pupils will deepen their understanding of the modern world in five main contexts, linked the modern world. Pupils progress from foundational knowledge to sophisticated analysis and evaluation, using probabilities, evidence assessment and critical analysis that will prepare them for informed citizenship and further study.