



Year 7 AO	Working Towards	Meeting (You can demonstrate this most of the time)	Exceeding (You can demonstrate this most of the time)
1 – show knowledge and understanding	1.1	Identify the organelles in animal and plant cells	Describe the function of organelles in animal and plant cells
	1.2	Explain why we use microscopes	Describe how to use a microscope
	1.3	Describe the structure of specialised animal and plant cells	Explain how the structure of specialised cells helps them to function
	1.4	Define diffusion in terms of particle movement	Explain how factors affect the rate of diffusion
	1.5	Identify a cell, tissue, organ and organ system	Describe how the levels of organisation are linked
	1.6	Describe how muscles and tendons work together to move bones	Explain how the structure of ligaments and tendons help them function
	1.7	Describe the structure of the skeletal system	Explain the roles of the skeleton in the body
	1.8	Describe the structure of the respiratory system	Explain how the respiratory system is adapted for its function
	1.9	Describe the structure of the heart	Explain the importance of the double circulatory system
	1.10	Describe the pathway of the nervous system	Explain the importance of reflex actions
	1.11	Describe how pathogens are spread	Explain how the body defends against pathogens
	1.12	Describe the main changes that happen during puberty	Compare the changes during puberty in males and females
	1.13	Identify the parts of the male and female reproductive systems	Describe the function of the parts of the reproductive systems
	1.14	Describe the process of fertilisation and implantation	Explain the adaptations of gametes
	1.15	Identify the structures in the womb during pregnancy	Explain the function of the structures in the womb during pregnancy
	1.16	Describe the stages of the menstrual cycle	Explain why the stages of the menstrual cycle happen
	1.17	Describe the functions of parts of a flower	Explain the differences between wind and insect pollinated plants
	1.18	Define fertilisation and germination	Describe the stages in fertilisation
	1.19	Describe how seeds are adapted for seed dispersal	Explain the importance of seed dispersal
	1.20	Define variation	Classify characteristics as being due to genetic or environmental causes
	1.21	Describe the structure of DNA	Describe how Franklin, Watson and Crick were involved in the discovery of DNA
	1.22	Find the probability of offspring having a certain characteristic using a Punnett square	Complete a Punnett square to show the offspring
	1.23	Describe the adaptations of an organism	Explain how the adaptations of an organism help it to survive
	1.24	Give examples of why evolution may occur	Describe the stages of evolution by natural selection
	1.25	Give examples of why a species may become extinct	Describe how fossils are formed
2 – apply knowledge	2.1	Information in the question used in calculations	Correctly use calculations
	2.2	Present data in a graph	Accurately present data in a graph
	2.3	Explain observations/phenomena	Apply scientific ideas to unfamiliar concepts
	2.4	Describe a practical procedure	Explain why stages of a practical procedure are carried out
3 – analyse information and ideas	3.1	Evaluate information provided	Suggest improvements to information provided e.g. methods, diets
	3.2	Interpret graphs/tables	Make conclusions from graphs/tables
	3.3	State improvements to experimental procedures	Suggest how your ideas will improve the practical



**QUEEN'S PARK HIGH SCHOOL**  
Age Related Milestones: Science – Chemistry

Year 7 AO		Working Towards	Meeting (You can demonstrate these skills most of the time)	Exceeding (You can demonstrate these skills most of the time)
1 – show knowledge and understanding	1.1	Not yet meeting the year 8 ARMs	Describe different materials and their properties	Evaluate models that represent different substances on a particle level
	1.2		Describe properties of solids, liquids and gases and draw what they look like in terms of particles	Use ideas about particles to explain the properties of a substance in its three states
	1.3		Describe what happens during melting, freezing and boiling using the particle model	Interpret data about melting points and make decisions about a substance's purity
	1.4		Describe evidence for diffusion	Explain the different diffusion speeds through different substances
	1.5		Describe factors that affect gas pressure	Apply ideas of gas pressure to other situations and explain what affect this may have
	1.6		Describe and give examples of atoms and elements	Compare properties of atoms/elements
	1.7		Describe and give examples of compounds	Explain why compounds have different properties to elements in it
	1.8		Write the names and formulae of simple chemical compounds	Interpret given chemical formulae quantitatively
	1.9		Identify reactants and products in a chemical equation	Attempt to construct simple symbol equations
	1.10		Identify some acids and alkalis using litmus paper	Evaluate the use of litmus paper in identifying acids and alkalis
	1.11		Compare the strength of acids and alkalis using universal indicator	Evaluate the use of universal indicator compared to litmus paper
	1.12		Describe what is meant by neutralisation	Describe examples of where neutralisation reactions are used in the wider world
	1.13		Define a salt	Name metal salts based on the alkali metal and acid used
	1.14		Classify elements into metals or non-metal categories	Use patterns and trends to classify an element as a metal or non-metal
	1.15		Compare reactions of different metals with dilute acids	Write word and symbol equations for acid and metal reactions
	1.16		Compare reactions of different metals with oxygen	Write word and symbol equations for oxygen and metal reactions
	1.17		Compare reactions of metals with water	Write word and symbol equations for water and metal reactions
	1.18		Use the reactivity series to explain displacement reactions	Use balanced symbol equations to describe displacement reactions
	1.19		Recall the properties of a sedimentary rock	Explain how sedimentary rocks are formed
	1.20		Recall the properties of a metamorphic and igneous rock	Explain how metamorphic and igneous rocks are formed
	1.21		Recall the order of the rock cycle	Explain how the rock cycle is linked together
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**QUEEN'S PARK HIGH SCHOOL**  
Age Related Milestones: Science – Physics

Year 7 AO		Working Towards	Meeting (You can demonstrate this most of the time)	Exceeding (You can demonstrate this most of the time)
1 – show knowledge and understanding	1.1	Not yet meeting the year 7 ARMs	State some of the different forms of energy with examples	Describe the energy transfers made by different objects
	1.2		State what is meant by renewable and non-renewable and name different energy resources	Explain the advantages and disadvantages of energy resources including the environmental impact of each.
	1.3		Describe what is meant by electrical 'conductors' and 'insulators'	Explain why different materials are used for different objects
	1.4		Draw and label an atom	Include relative charges and masses for each subatomic particle
	1.5		Describe the behaviour of charged objects (in terms of attraction and repulsion)	Explain how an object becomes charged with static electricity
	1.6		Define 'current', 'potential difference' and resistance	Describe what happens to current and p.d. in series and parallel circuits
	1.10		Describe what is meant by 'speed' and 'acceleration'	
	1.11		Describe the difference between mass and weight	Explain what happens to mass/weight in different locations
	1.12		Name the force keeping objects in orbit	Describe factors affecting the strength of the force
	1.13		Name objects seen in the night sky and put them in size order	Describe the different objects seen in the night sky
	1.14		Name and order the planets within our solar system	Explain how the properties and features of planets are linked to their place in the solar system
	1.15		Describe the terms 'day', 'month' and 'year' and how long each is on Earth	Explain why the Earth has seasons
	1.16		Name the 2 types of eclipse	Explain what happens during an eclipse
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# QUEEN'S PARK HIGH SCHOOL

## Age Related Milestones: Science – Practical Assessment

Year 7 Practical Skill		Working Towards	Meeting (You can demonstrate this most of the time)	Exceeding (You can demonstrate this most of the time)
A. Methods and Variables	A.1	Not yet meeting the year 7 ARMS	Name several pieces of equipment that will be used	Name key pieces of equipment
	A.2		Follow a method with some support <i>or</i> briefly outline some or all of the experiment	Follow a method independently <i>or</i> outline experiment which can be followed to obtain repeatable data
	A.3		Identify one or two variables though not defined	Identify independent, dependent and one control variable
	A.4		Write a prediction for what you think will happen	Explain your prediction using your scientific understanding
B. Health and Safety	B.1		Identify one hazard and the risk it might pose <i>or</i> Identify a hazard and what they could do to reduce risk <i>or</i> Identify more than one hazard	Identify a hazard, the risk it poses and describe how they will reduce the risk
C. Collecting data	C.1		Make a set of measurements or simple observations	Make a set of measurements in a table
	C.2			Correct titles and units in one column
D. Presenting Results	D.1		Present data as an appropriate graph	Appropriate graph with appropriate scales
	D.2		Axes has appropriate scales	Graph has at least <b>two</b> of: labelled axes, correct units, labelled data sets, line of best fit (if appropriate)
E. Conclusions and Evaluations	E.1		Give a simple description of what results show	Identify a linear or non-linear pattern in results
	E.2	Use data from your table to support your description	Use scientific ideas, using two scientific keywords, to conclude results	
	E.3	Suggest an improvement and given a reason	Evaluate effectiveness of method, making practical suggestions to improve	