Key Stage 3 Assessment

<u>Science-Biology</u>

			CELLS						
Year 7	Working Towards	RAG	Meeting	RAC	6	Exceeding	RA	G	
Practical Skills	Correctly use a microscope to view plant or animal cells		Record accurate drawings of cells viewed using a microscope			Correctly label your cells diagram with the structure and function of each feature.			
Application	Apply your knowledge of cells to label diagrams or models of cells								
Explanations	Explain why some organisms are unicellular but others are multicellular		Explain the differences between plant and animal cells			Explain why some cells need to be specialised			
			Explain how cells are specialised			Explain why plant cells are different to animal cells			
Descriptions	Define a cell and name its components Describe the roles of different organ systems in the body		Describe the cell structure of plant and animal cells			Describe the role of each organs in carrying out the life processes e.g digestion, respiration			
	Describe cellular organisation in the body		Define specialised cells and give examples			-			
	Identify the position of organs in the body		Describe the function of the main organs in the body						
Student Explain	: Self-assessment your self-assessment decision:	Final S	elf Assessment A.R.M						
Teache	r Assessment:								
Signatu	ire:	Date:							

	Queen's Park High School Key Stage 3 Assessment Science- Biology IA6 target								
			REPRODUCTION						
Year 7	Working Towards	RAG	Meeting	RAG	Exceeding	Evidence			
Application			Use your knowledge of the menstrual cycle and the information provided to determine whether it is likely a woman is pregnant .		Use your knowledge of fertilisation and the menstrual cycle to explain how contraceptive work.				
Explanations	Explain why changes occur during puberty.		Explain the changes in the uterus wall during the menstrual cycle.		Name the parts needed for a developing foetus and explain their role in helping development.				
Descriptions	Name the parts of the male and female reproductive systems.		Describe the stages in the menstrual cycle.		Describe the structure of gametes and how their structure links to their function.				
	Describe changes that occur during puberty.		Describe what happens during fertilisation.						
Explain	your self-assessment decision:								
Signatu	re:	Date:							
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Teache	r Assessment:								

Signature:

Date:

Key Stage 3 Assessment

<u>Science-Biology</u>

Interdependence											
Year 7	Working Towards	RAG		Meeting	RA	٩G		Exceeding	RA	G	
Practical Skills	Interpret data in tables to recognise patterns in population sizes			Plot a suitable graph to show the changes in population size				Explain patterns in your data using values from the graph or table to support your ideas			
Application	Use food chains to construct a food web			Analyse food webs and describe the consequences of the changes in numbers of organisms				Apply your knowledge of interdependence to suggest what might happen when an unfamiliar species is introduced into a food web			
Explanations	Explain the importance of each organism to other organisms.			Explain how the population size is affected by predators, disease and competition.				Explain how toxic substances can accumulate in human food			
Descriptions	Describe energy transfer in a food chain Define key words e.g. ecosystem, environment, producer, prey.										
	Produce a simple food cahin			Describe the importance of insects to pollinate food crops Describe how a species' population changes as its predator or prey							1
	Descrbie factors that can affect the population size			population changes							1
Explain	your self-assessment decision:		ai 36	En Assessment A.K.IVI							
Teache	r Assessment:										
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Key Stage 3 Assessment

<u>Science-Biology</u>

				Movement					
Year 7	Working Towards	R/	١G	Meeting	RAG	Exceeding	RA	١G	
Practical Skills	Measure the force on a model arm using the correct equipment and record all results			Interpret results to discuss factors that affect the force exerted		 Suggest advantages and disadvantages of the model used.			F
Application				Apply your knowledge of the skeleton to predict the consequences of damage to a joint, bone or muscle					T
Explanations	Explain the role of the skeleton			Explain how technology is used to improve human movement Explain how antagonistic muscles work to move bones		 Explain the benefits and risks of technology to improve human movement Explain how muscles and the skeleton work together			
Descriptions	Identify the bones in the body			Describe a ligament, tendon and cartilage					+
	Describe a joint								
				Describe antagonistic muscles					
				Give examples of antagonistic muscles					
Signatu	re:	D	ate:						
Teache	r Assessment:								
Signatu	ıre:	D	ate:						

Key Stage 3 Assessment

<u>Science-Biology</u>

Plant Reproduction								
Year 7	Working Towards	RAG	Meeting	RAG		Exceeding	RAG	
Practical skills	Design a practical to investigate the effect of an independent variable on the dispersal of a seed by the wind		Suggest your own variables for the practical and suggest how to make your results a fair test and reliable.			Interpret your results to draw accurate conclusions and evaluate your practical method.		
Application			Apply knowledge of selective breeding to suggest how plant breeders could use this			Apply your knowledge of seed dispersal to explain why a particular plant structure increases the likelihood of successful seed dispersal		
Explanations						Explain the difference between pollination and fertilisation		
	Explain the difference between a fruit and a seed		Explain why seed dispersal is important to the plants			Explain the similarities and differences between the structure of wind and insect pollinated plants		
Descriptions	Correctly label the male and female reproductive organs in a plant							
	Define fertilisation and pollination							
	Describe different types of pollination and seed dispersal		Describe adaptations of plants to allow seed dispersal by wind, water and animal					
	Describe the function of pollen		Describe the main steps involved when a plant reproduces successfully Describe selective breeding					
Student	Self-assessment	Final S	elf Assessment A.R.M					
Explain	your self-assessment decision:							
Teache	r Assessment:							
Signatu	re:	Date:						

Key Stage 3 Assessment

<u>Science-Biology</u>

	VARIATION								[
Year 7	Working Towards	RA	١G	Meeting	RAG		Exceeding	Evid	lence	
How Science Works	Draw a bar chart to show the variation of a characteristic.			Draw an accurate bar chart to show the variation of a characteristic.			Carry out an investigation to find the variation of characteristic, recording results in an appropriate table and using them to plot an accurate bar chart.			
Application	Identify whether variation is continuous or discontinuous.			Identify whether a characteristic is inherited, environmental or both.						
Explanations	Explain how variation is caused.			Explain how species are adapted to their environment.			Explain how variation can influence an individual's chance of survival.			
Descriptions	Define variation and gene.			Describe where genes are found in the cell.			Describe the organisation of genetic material in cell.			
	Describe how species are adapted to their environment.			Describe how characteristics are passed on.			1			
Explain	your self-assessment decision:									
Signatu	re:	D	ate:							
Teache	r Assessment:									
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Key Stage 3 Assessment

<u>Science-Biology</u>

BREATHING								
Year 8	Working Towards	RAG	Meeting	RAG	Exceeding	RAG	à	
Practical Skills	Predict the effect of exercise on breathing rate and record all results		Use results to plot an accurate graph to show the effect of exercise on breathing rate		Interpret results to draw accurate conclusions on breathing rate and exercise			
					Apply your ideas to interpret data and statistics on smoking and cancer			
Application			Apply your knowledge of breathing to data on breathing rate e.g. the effect of exercise		Apply your knowledge of breathing and healthy living to data on smoking and drugs			
Explanations	Explain the use of each gas we inhale and exhale		Explain how and where gas exchange occurs and how the alveoli are adapted to function		Explain the effects of exercise on breathing			
	Explain the role of each structure in the respiratory system		Explain the differences in composition of inhaled and exhaled air		Explain the effects of each harmful component in cigarettes			
Descriptions	State the main gases we inhale and exhale Describe the movements of the respiratory system during inhalation and exhalation		Describe inhalation and exhalation in terms of changes in pressure		Describe the link between smoking and lung cancer			
	State the organs in the respiratory system and correctly label a diagram of the respiratory system		Describe some of the health risks associated with smoking and drugs					
	Give examples of drugs							
Student	t Self-assessment	Final S	elf Assessment A.R.M					
Explain	your self-assessment decision:							
Teache	r Assessment:							
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Year 7	Working Towards	RAG	Meeting	RAG	Exceeding
How Science Works	Correctly use a microscope to view plant or animal cells		Record accurate drawings of cells viewed using a microscope		Correctly label your cells diagram with the structure and function of each feature.
Application	Apply your knowledge of cells to label diagrams or models of cells				
Explanations	Explain why some organisms are unicellular but others are multicellular		Explain the differences between plant and animal cells Explain how cells are specialised		Explain why some cells need to be specialised Explain why plant cells are different to animal cells
Descriptions	Define a cell and name its components Describe cellular organisation in the body Describe the roles of different organ systems in the body Identify the position of organs in the body		Describe the cell structure of plant and animal cells Define specialised cells and give examples Describe the function of the main organs in the body		Describe the role of each organs in carrying out the life processes e.g digestion, respiration.

Key Stage 3 Assessment

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			DIGESTION				[
Year 8	Working Towards	RAG	Meeting	RAG	Exceeding	RAG	
Practical Skills	Collect data on food test and present this in a table Collect data on energy content in food practical		Interpret results from food tests to draw conclusions on which food groups are present		Discuss the limitations of using chemicals to test for different food groups		
			Present results in an appropriate results table and interpret these to draw conclusions		Suggest improvements to the burning food practical		
Application	Apply your knowledge of food groups and diet to evaluate peoples' diets		Apply BMI to evaluate the diet or lifestyle choices				
Explanations	Explain the role of organs in the digestive system		Explain the importance of different enzymes in digestions		Explain the importance of digestion for the body e.g. glucose for respiration		
	Explain the importance of a balanced diet		Explain why food must be digested		Explain how different organs in the digestive system are adapted Explain the effect of malnutrition		
Descriptions	Describe the importance of food Describe the role of the 7 main food groups and a balanced diet		Describe what happens to food in each organ in the digestive system		Describe the limitations of using BMI and suggest alternatives.		
	State the organs in the digestive system		Describe the role of enzymes in digestion				
			Describe and calculate BMI				
Signatu	, re.	Date:					
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Teache	r Assessment:						
Signatu	re:	Date:					

Year 7	Working Towards	RAG	Meeting	RAG	Exceeding
How Science Works	Correctly use a microscope to view plant or animal cells		Record accurate drawings of cells viewed using a microscope		Correctly label your cells diagram with the structure and function of each feature
Works					
Application	Apply your knowledge of cells to label diagrams or models of cells				
Explanations	Explain why some organisms are unicellular but others are		Explain the differences between plant and animal cells		Explain why some cells need to be specialised
	multicellular		Explain how cells are specialised		Explain why plant cells are different to animal cells
Descriptions	Define a cell and name its components		Describe the cell structure of plant and animal cells		Describe the role of each organs in carrying out the life processes e.g digestion,
	Describe cellular organisation in the body		Define specialised cells and give examples		respiration.
	Describe the roles of different organ systems in the body		Describe the function of the main organs in the body		
	Identify the position of organs in the body				

Key Stage 3 Assessment

<u>Science-Biology</u>

	VARIATION									
Year 8	Working Towards	RA	١G	Meeting	RAG		Exceeding	Evi	dence	2
How Science Works				Use information to describe how the structure of DNA was discovered.			Use information to evaluate the contributions of different scientists to the discovery of the structure of DNA.			
Application	Fill in a Punnett square to show possible allele combinations of offspring.			Draw a Punnett square to show the possible allele combinations of offspring for two given parents.			Draw an accurate Punnett square and calculate the probability of offspring having each characteristic.			
Explanations	Explain why offspring look like their parents.			Explain why offspring are not identical to their parents.						
Descriptions	Define the terms gene and chromosome and describe where they are found.			Define the terms dominant and recessive.			Define the terms homozygous and heterozygous.			
	Describe the shape of DNA.			Describe the structure of DNA and label the parts.						
Explain	your self-assessment decision:									
Signatu	re:	D	ate:							
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Signature:		D	ate:							

Queen's Park High School Key Stage 3 Assessment Science- Biology IA6 target									
			PHOTOSYNTHESIS						
Year 8	Working Towards	RAG	Meeting	RAG	Exceeding	Evi	dence	e	
How Science Works	Write a word equation to show photosynthesis.		Write a symbol equation to show photosynthesis.		Write a balanced symbol equation to show photosynthesis.		· · · · · · · · ·		
Application	Describe how the leaf is adapted for photosynthesis.		Explain how the leaf is adapted for photosynthesis.		Suggest how gas exchange in the leaf will differ from day to night.				
Explanations			Explain why photosynthesis is needed.		Explain why organisms are dependent on photosynthesis.			1	
Descriptions	Name the reactants and products in photosynthesis.	Name the pigment involved in trapping light energy from the sun.			Describe where the reactants of photosynthesis are found and how they				
Name the organelle in cells where photosynthesis reaction take place.			†		Per une que brance				
Explain	your self-assessment decision: ire:	Dat	:e:						
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Signature:

Date:

Queen's Park High School Key Stage 3 Assessment Science- Biology IA6 target								
RESPIRATION								
Year 8	Working Towards	RAG	Meeting	RAG	Exceeding	Evi	dence	
How Science Works	Write a word equation to show aerobic respiration.		Write a symbol equation to show aerobic respiration.		Write a balanced symbol equation to show aerobic respiration.			
Application	Describe what happens to the respiration rate during exercise.		Explain the changes in respiration rate during exercise.		Suggest why muscle tissue has lots of mitochondria.			
Explanations			Explain why respiration is needed.		Explain when anaerobic and aerobic respiration occur.			
Descriptions	Name the reactants and products in respiration.		Describe the difference in products between aerobic and anaerobic respiration		Describe where the reactants of respiration are found and how they get			
	Name the organelle in cells where respiration reactions take place.							
Student	t Self-assessment	Final	Self Assessment A.R.M					
Explain your self-assessment decision:								
		Data						
Signature:		Date:						
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Signature:

Date: