



Science Assessment Rubrics: Yr8 Biology

(D: Developing, S: Secure, E, Extending)

Name:

Mastery Indicator	D	S	E
Describe the nutrients required for a healthy diet and their function in the body			
Describe the effects of having a poor diet			
Explain why different energy requirements depend on levels of activity			
Describe how to measure the amount of energy released by different foods			
Describe the role of bacteria and enzymes in the digestive system			
Describe the effects of different types of drugs have on the body			
Describe the effect of alcohol on the body and the effect of drinking while pregnant			
Describe the effect of smoking on the body and the chemicals present in tobacco smoke			
Describe what a producer is in a food chain			
Describe the process of photosynthesis			
Describe the structure of plant leaves			
Explain how oxygen and carbon dioxide get in and out of leaves			
State the minerals plants need to be healthy			
Describe the symptoms of mineral deficiency in plants			
Describe the process of chemosynthesis and compare it to photosynthesis			
Describe the process of aerobic respiration			
Describe the process of anaerobic respiration and its use in fermentation			
Describe the difference between food chains and food webs			
Explain the principle of interdependence within food webs			
Describe some factors that can effect organism populations			
Explain how organisms co-exist by having niches			
Describe the resources that animals and plants compete for			

Explain how organisms adapt to be successful competitors							
Explain the relationship between predators and their prey							
Describe how characteristics vary both within and between species							
Explain why variations are caused by the environment or the genes or a combination of both							
Describe whether variations are continuous or discontinuous							
Describe the role of DNA, chromosomes and genes in fertilisation and inheritance							
Describe how evolution occurs through natural selection							
Explain how fossils provide evidence for extinct species							
State what extinction means and describe how organisms become extinct							
Describe how scientists today try to prevent extinction							
Learning Review 1 (D,S,E)		Learning Review 2 (D,S,E)		Learning Review 3 (D,S,E)			



Science Assessment Rubrics: Yr8 Chemistry

(D: Developing, S: Secure, E, Extending)

Name:

Mastery Indicator	D	S	E
Describe the different properties and reactions of metals and non-metals			
Describe the trends seen in the groups and periods of the periodic table			
Describe the properties and reactions of group 1 elements			
Describe the properties and reactions of group 7 elements			
Describe the properties and reactions of group 0 elements			
Describe how mixtures and compounds are different			
Describe how pure substances can be identified			
State what dissolving is and describe the difference between solute, solvent and solution			
Describe what solubility is and how temperature can effect solubility			
Describe how filtration works and explain why it's useful			
Describe evaporation and distillation and how they can be used to make salts and separate solutions			
Describe how chromatography works and how it is used			
Describe the reactivity of metals with acid			
Describe how to test for presence of hydrogen			
Describe the reactivity of metals with oxygen			
Describe the reactivity of metals with water			
Describe displacement reactions and how to use the reactivity series to explain displacement reactions			
Describe how the reactivity series can be used to explain how metals are extracted from their ores using carbon			
Describe properties of ceramics and how these properties make ceramics useful			
Describe the properties of polymers and how these properties make polymers useful			
Describe the properties of composites and how these properties make composites useful			
Describe the different layers of the earth and the composition of the earth's atmosphere			

Describe the properties of sedimentary rocks and how they are made							
Describe the properties of igneous rocks and how they are made							
Describe the properties of metamorphic rocks and how they are made							
Describe the rock cycle							
Describe the carbon cycle							
Explain how global warming occurs and describe its impact							
Describe how aluminium is recycled and the advantages and disadvantages of recycling							
Learning Review 1 (D,S,E)		Learning Review 2 (D,S,E)		Learning Review 3 (D,S,E)			



Science Assessment Rubrics: Yr8 Physics

(D: Developing, S: Secure, E, Extending)

Name:

Mastery Indicator	D	S	E
Describe how objects become charged			
Describe how charged objects interact			
Describe what is meant by an electric field			
Describe what is meant by current and describe how current is measured			
Describe what potential difference is and how to measure it			
Describe what is meant by the rating of a battery or a bulb			
Describe the difference between series and parallel circuits			
Describe how current and potential difference vary in series and parallel circuits			
Describe what is meant by resistance in a circuit			
Describe how to calculate the resistance of a component in a circuit			
Describe the difference between a conductor and an insulator			
Describe how magnets interact			
Describe how to represent magnetic fields and the earth's magnetic field			
Describe the uses of electromagnets and how simple electric motors works			
Describe how energy values vary in foods and fuels			
Describe how energy differs before and after a charge			
Describe the law of conservation of energy			
Describe the difference between energy and temperature			
Explain what happens when solids, liquids and gases are heated			
Describe what is meant by the term equilibrium			
Describe how energy is transferred by particles in conduction and convection			
Describe some sources of infra-red radiation and how energy is transferred by radiation			
Describe the difference between a renewable and the non-renewable energy source			

Describe how electricity is generated in a power station							
Describe the difference between energy and power							
Explain the link between power, fuel use and the cost of domestic appliances							
Describe how to calculate work done and how to apply the conservation of energy to simple machines							
Describe how to calculate speed and relative motion							
Describe how to interpret distance-time graphs							
Describe the factors that affect gas pressure and how atmospheric pressure changes with height							
Describe how liquid pressure changes with depth and why some objects float whilst sink							
Describe how to calculate pressure							
Describe what a moment is and how to calculate the moment of a force							
Learning Review 1 (D,S,E)		Learning Review 2 (D,S,E)		Learning Review 3 (D,S,E)			