Coonabarabran High School

Assessment Notification

Subject:	Year 9 Science	**Task:**	Half Yearly Exam
Weighting:	15%	**Date:**	Fri 31st May (week 5)

Topics: Energy and the Atom, Ecology, Electrical Circuits.

Equipment needed: Blue or black pens, lead pencil, pencil sharpener, ruler, an eraser and calculator.

Length of exam: 1 period

Exam structure: 13 stations with 3 minutes allocated per station including 3 min at the end to review answers. Students start at one of the 13 stations located around the room. Notice will be given at the start of each timeslot and with one minute remaining before being directed to move to the next station (in consecutive order).

Year 9 Science – Revision guide

Knowledge and Understanding

Energy and the Atom

- identify that all matter is made of atoms which are composed of protons, neutrons and electrons
- describe the structure of atoms in terms of the nucleus, protons, neutrons and electrons
- outline historical developments of the atomic theory to demonstrate how models and theories have been contested and refined over time through a process of review by the scientific community
- identify that natural radioactivity arises from the decay of nuclei in atoms, releasing particles and energy
- evaluate the benefits and problems associated with medical and industrial uses of nuclear energy
- identify that chemical reactions involve energy transfer and can be exothermic or endothermic
- compare combustion and respiration as types of chemical reactions that release energy but occur at different rates

Ecology

- recall that ecosystems consist of communities of interdependent organisms and abiotic components of the environment
- outline using examples how matter is cycled through ecosystems such as nitrogen
- describe how energy flows through ecosystems, including input and output through food webs
- analyse how changes in some biotic and abiotic components of an ecosystem affect populations and/or communities

Electrical Circuits

- describe qualitatively the relationship between voltage, resistance and current
- Draw circuit diagrams using appropriate symbols
- Identify parallel and series circuits

Skills

- Draw scientifically (2D / Lead Pencil / Ruler / Labels / Large and clear)
- Use the experiment report format (title, aim, hypothesis, materials, risk assessment, method, results, discussion, conclusion)
- Draw graphs (title, label axes, line or column graph)
- Interpret results and analyse graphs
- Take accurate measurements (reading scales, choice of equipment)
- Make predictions based on scientific knowledge and observations
- Describe safety guidelines
- Use equipment
- Present information in tables, graphs and flow charts
- Follow a procedure
- Read and interpret diagrams
- Read and interpret a piece of text
- Evaluate the reliability of first hand and secondary sources of information