

Year 9 Science 2017

Half Yearly Examination Study Guide

The Half Yearly Examination will test your knowledge and understanding of the content that you have learnt in 'Evidence is Everything'. You will also be examined on your ability to interpret information presented in diagrams, tables and graphs and make conclusions. You will also be required to solve problems and communicate your understanding using appropriate scientific terminology.

Length: 60 minutes Structure: Multiple Choice (20 marks) & Short answer questions (30 marks)

You should set aside time to study for this task at least two weeks before the due date. To assist you with your revision and the preparation of study notes, you should refer to all classwork and the following guide.

Case Study 1: Theory of plate tectonics

- Who proposed the theory of continental drift? What 3 pieces of evidence supported the theory of continental drift?
- State the theory of seafloor spreading.
- Outline the evidence for seafloor spreading and the technologies used to gather this evidence.
- Outline the theory of plate tectonics.
- How are the plates thought to move?
- Describe the different types of movement that can occur at plate boundaries. Include diagrams to show each.
- What type of plate interaction is likely to cause volcanoes?
- How are earthquakes caused?
- What might cause a tsunami?



Case Study 2: The Big Bang theory

- What is the universe and what is a galaxy?
- What is a light year?
- Outline what the Big Bang theory states.
- Identify that the information collected from stars and galaxies is in the form of electromagnetic radiation, especially light waves and radio waves. Outline all the parts of electromagnetic spectrum.
- Describe the technologies used to collect information from stars and galaxies (light telescopes and radio telescopes)
- Explain how red shift and cosmic background radiation provide evidence for the Big Bang Theory

Case Study 3: The theory of Evolution by Natural Selection

- Outline what the theory of evolution states.
- Identify and describe 4 pieces of evidence that present day organisms have evolved from organisms in the past.
- Define natural selection.
- Who first proposed that natural selection was the process by which evolution occurs?
- Explain natural selection by outlining the role of genes and environmental factors in the survival of organisms in a population.
- How does natural selection cause changes in a population?

How to achieve results you can be proud of:

- Be prepared! Plan your study time in the two weeks leading up to the exam.
- Summarise and read over class work after every lesson.
- Ask your teacher for assistance if you find something difficult in class.
- Catch up on work missed if you are absent.
- Read each question in the exam carefully and underline or circle the keywords. Look at how many marks each question is worth.
- Don't leave any answers blank.



- **If you finish the task early – read over every question and check every answer again.**

Equipment you will need: Blue/black pens, pencil, ruler, eraser, sharpener, calculator