

Year 9 End of key stage Exam will be on Thursday the 9th of December lesson 1 and 2

Physics Topics (CGP rev. guide pages)

Forces 1 (p120-135; 162)

Types of forces and how they affect an object

Understanding speed

Describing journeys with distance-time graphs

Exploring journeys on distance-time graphs

Investigating the motion of a car on a ramp

Understanding relative motion

Understanding gravitational fields

Understanding mass and weight differences Understanding gravity

Forces 2

Analysing equilibrium

Understanding stretch and compression Investigating Hooke's Law

Exploring pressure on a solid surface Exploring pressure in a fluid

Calculating pressure

Explaining sinking and floating

Electromagnets 1 (p151-161)

Describing electric circuits

Understanding energy in circuits

Explaining resistance

Describing series and parallel circuits Comparing series and parallel circuits Investigating static charge

Explaining static charge

Understanding electric fields

Forces and magnetic fields

Electromagnets 2

Electromagnets: Introduction

Forces and fields

Using ideas about fields

Investigating electromagnetism

Using electromagnets

Investigating strength of electromagnets

Energy 1 (p102-113)

Energy transfer by fuels and food

Comparing rates of energy transfers Looking

at the cost of energy use in the home Getting the electricity we need

Using electricity responsibly

Energy stores and transfers

Exploring energy transfers

Potential energy and kinetic energy Understanding elastic energy

Energy 2

Doing work

Making work easier

Explaining thermal energy

Heating

How to stop energy from travelling

Energy and temperature

Waves 1 (p136-150)

Exploring sound and what it is

Hearing sounds

How sound travels through materials Reflection and absorption of sound Exploring properties of light

Exploring reflection

Exploring refraction

Seeing clearly

Exploring coloured light

Exploring sound

Exploring light

Comparing transverse and longitudinal waves Exploring waves

Waves 2

Waves: Introduction

Exploring sound

Sound systems

Exploring light

Comparing transverse and longitudinal waves

Exploring waves

Chemistry Topics (CGP rev. guide pages)

Matter 1 (p48-54; 55-66; 115-117)

Using particles to explain matter
Understanding solids
Understanding liquids and gases
Exploring diffusion
Explaining changes of state
Separating mixtures
Exploring solutions
Understanding distillation
Exploring chromatography

Matter 2

Looking at the Periodic Table of elements
Exploring metals in the periodic table
Exploring non-metals in the periodic table
Combining elements
Comparing elements and compounds
Exploring polymers
Exploring ceramics and composites

Reactions 1 (p67-90)

Properties of metals and non-metals
Using metals and non-metals
Exploring the reactions of metals with acids
Understanding displacement reactions
Understanding oxidation reactions
Exploring acids
Exploring alkalis
Using indicators
Exploring neutralisation
Investigating neutralisation

Reactions 2

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Environment 2**

Biology Topics (CGP rev. guide pages)

Organisms 1 (p2-21)

Exploring the human skeleton
Understanding the role of joints and

Understanding exothermic reactions
Comparing endothermic and exothermic changes
Investigating endothermic reactions
Explaining the use of catalysts
Exploring combustion
Exploring the use of fuels
Understanding thermal decomposition
Explaining changes

Earth 1 (p91-101; 163-166)

Understanding the structure of the Earth
Exploring igneous rocks
Exploring sedimentary rocks
Exploring metamorphic rocks
Understanding the rock cycle
Describing stars and galaxies
Explaining the effects of the Earth's motion
Exploring our neighbours in the Universe

Earth 2

Understanding our atmosphere
Understanding how carbon is recycled
Exploring how humans affect the carbon cycle
Understanding global warming
Exploring damage to the Earth's resources
Considering the importance of recycling
How to extract metals

Understanding aerobic respiration
Exploring respiration in sport
Understanding anaerobic respiration
Investigating fermentation
muscles
Exploring digestion
Examining interacting muscles
Exploring problems with the skeletal system
Understanding organisation in organisms
Describing animal and plant cells

Understanding adaptations of cells
Exploring specialised cells
Describing the 7 life processes
Understanding unicellular organisms
Exploring microscopy

Explaining extinction
Understanding the nature of genetic material
Exploring the role of chromosomes
Understanding variation
Modelling inheritance

Organisms 2

Understanding how we breathe
Measuring breathing
Explaining gas exchange in humans
Exploring the effects of disease and lifestyle
Exploring a healthy diet
Understanding the effects of an unbalanced diet
Understanding the human digestive system
Understanding the roles of the digestive organs

Environment 1 (p4; 30-40)

Understanding food chains and food webs
The effects of toxins in the environment
Exploring the importance of insects
Exploring ecological balance/ interdependence
Comparing aerobic and anaerobic respiration
Exploring how plants make food
Looking at leaves
Exploring the movement of water and minerals in plants
Investigating the importance of minerals to plants
Investigating photosynthesis

Genes 1 (p21-27; 41-47)

Looking at variation
Exploring causes of variation
Considering the importance of variation
Understanding the female reproductive system and fertility
Understanding the male reproductive system and fertilisation
Learning how a foetus develops
Understanding factors affecting a developing foetus
Communicating ideas about smoking in pregnancy

Genes 2

Genes: Introduction
Explaining natural selection
Understanding the importance of biodiversity