Homework Space Units: Junior Cycle Science

Units	Homework Assignments
1. The nature of science	1.1 The scientific method
	1.2 Carrying out investigations
	1.3 Communicating in science
	1.4 Science in society
	1.5 Final test
2. Graphs	2.1 The use of graphs
	2.2 Simple graphs
	2.3 Advanced graphs and interpreting graphs
	2.4 Final test
3. The cell	3.1 Cells – Introduction
	3.2 Animal cells
	3.3 Plant cells
	3.4 The microscope
	3.5 Final test
4. The digestive system	4.1 Nutrition
	4.2 Functions of organs in the digestive system
	4.3 Teeth and enzymes
	4.4 Interaction of organs in the digestive system
	4.5 Final test
5. The circulatory system	5.1 Blood and blood vessels
	5.2 The heart and blood circulation
	5.3 The organs of the circulatory system
	5.4 The circulatory system and other systems
	5.5 Final test
6. The respiratory system	6.1 The respiratory system – Introduction
	6.2 Gaseous exchange and breathing
	6.3 The organs of the respiratory system
	6.4 The respiratory system and other systems
	6.5 Final test
7. Respiration	7.1 Energy
	7.2 Respiration – A chemical process
	7.3 Respiration – A biological process
	7.4 Factors affecting respiration
	7.5 Final test
8. Photosynthesis	8.1 The process of photosynthesis
	8.2 Factors affecting photosynthesis
	8.3 Photosynthesis and plant yields
	8.4 Final test

9. Human reproduction	9.1 Human reproduction – Introduction
	9.2 The menstrual cycle
	9.3 Fertilisation, implantation and birth
	9.4 Contraception and IVF
	9.5 Final test
10. Inheritance and variation	10.1 Sexual reproduction, asexual reproduction and variation
	10.2 DNA, chromosomes and genes
	10.3 Mendelian inheritance
	10.4 Final test
11. Evolution	11.1 Diversity, variation and evolution
	11.2 Charles Darwin and natural selection
	11.3 New species and Alfred Wallace
	11.4 Final test
12. Human health	12.1 Human health and inherited factors
	12.2. Environmental factors
	12.3. Food and energy
	12.4. Final test
13. Microorganisms	13.1 Viruses
	13.2 Bacteria
	13.3 Fungi
	13.4 Food spoilage and pandemics
	13.5 Final test
14. Habitat study	14.1 Ecology and habitat
	14.2 Study of a habitat (Steps 1–4)
	14.3 Study of a habitat (Steps 5–7)
	14.4 Study of a habitat (Steps 8–9)
	14.5 Final test
15. Conservation of biodiversity	15.1 Ecosystems and habitats
	15.2 Energy flow in an ecosystem
	15.3 Ecological biodiversity
	15.4 Global food production
	15.5 Final test
16. Materials	16.1 States of matter and their properties
	16.2 Particle theory
	16.3 Change of state 1 – Melting and boiling
	16.4 Change of state 2 – Evaporation and condensation
	16.5 Final test
17. Elements, compounds and mixtures	17.1 Elements
	17.2 Compounds
	17.3 Mixtures
	17.4 Final test
18. Solutions	18.1 Water as a solvent
	18.2 Dilute and concentrated solutions
	18.3 Crystal formation
	18.4 Solubility and solubility curves
	18.5 Final test
19. Separating mixtures	19.1 Separating mixtures with filtration
	19.2 Separating mixtures with evaporation

	19.3 Separation mixtures with distillation
	19.4 Separating mixtures with paper chromatography
	19.5 Final test
20. Acids and bases	20.1 Acids and bases
	20.2 Acid-base indicators
	20.3 The pH scale
	20.4 Final test
21. Chemical reactions	21.1 Chemical reactions
	21.2 Balancing chemical equations
	21.3 The law of conservation of mass
	21.4 Final test
22. Rates of reaction	22.1 Rate of reaction – Introduction
	22.2 Nature of reactant, particle size and concentration
	22.3 Temperature and catalysts
	22.4 Rate of reaction graphs
	22.5 Final test
23. Reactions between acids and bases	23.1 Common acids and bases
	23.2 Neutralisation
	23.3 Acid rain
	23.4 Final test
24. Energy in chemical reactions	24.1 Heat changes in chemical reactions
	24.2 Activation energy
	24.3 Energy profile diagrams
	24.4 Final test
25. The structure of the atom	25.1 The atom and atomic particles
	25.2 Atomic structure
	25.3 Bohr diagrams 1
	25.4 Bohr diagrams 2
	25.5 Final test
26. The Periodic Table	26.1 The Periodic Table
	26.2 Bohr structure
	26.3 Predicting ratios of atoms in compounds 1
	26.4 Predicting ratios of atoms in compounds 2
	26.5 Final test
27. Metals and non-metals	27.1 Properties of metals and non-metals
	27.2 Recognising metals, non-metals and alloys
	27.3 Corrosion of metals
	27.4 Final test
28. Sustainability	28.1 Population growth
	28.2 Fossil fuels
	28.3 Extraction, disposal and recycling of nutrients
	28.4 Contributing to sustainability
	28.5 Final test
29. Length, area, volume, time, temperature, mass and density	29.1 Length, area and volume
	29.2 Time, temperature and mass
	29.3 Density
	29.4 Density and flotation

	29.5 Final test
30. Speed, velocity and acceleration	30.1 Speed
	30.2 Displacement and velocity
	30.3 Acceleration
	30.4 Final test
31. Forces	31.1 Force and measuring force
	31.2 Balanced and unbalanced forces
	31.3 Friction and weight
	31.4 Forces on elastic objects
	31.5 Final test
32. Energy	32.1 Energy and energy conversion
	32.2 Sources of energy
	32.3 Sustainable energy and energy efficiency
	32.4 Calculating energy use
	32.5 Final test
33. Current electricity	33.1 Constructing a simple circuit
	33.2 Conductors and insulators
	33.3 Circuit diagrams
	33.4 Bulbs in series and parallel
	33.5 Final test
34. Voltage current and resistance	34.1 Current
	34.2 Voltage
	34.3 Resistance and Ohm's law
	34.4 Electrical components and electrical power
	34.5 Final test
35. The application of physics	35.1 Nuclear fission
	35.2 MRIs
	35.3 Cars of the future
	35.4 Wind turbines
	35.5 Artificial satellites
36. Celestial objects	36.1 Astronomy and celestial bodies
	36.2 Planetary system
	36.3 The Big Bang theory
	36.4 Final test
37. The Earth, Sun and Moon	37.1 Gravity
	37.2 The Sun, Earth, days and seasons
	37.3 Phases of the Moon and eclipses
	37.4 Space exploration
	37.5 Final test
38. The water cycle and the carbon cycle	38.1 The water cycle 1
	38.2 The water cycle 2
	38.3 The carbon cycle 1
	38.4 The carbon cycle 2
	38.5 Final test