

Year 7 Science

Cells

- Structure of animal cells
- Function of the different parts
- Types and function of specialised cells

Particles

- The particle model and states of matter
- Changes of state
- Diffusion and gas pressure
- Boiling, melting and freezing points

Forces

- Types of forces
- Drag forces and friction
- Forces at a distance
- Unbalanced and balanced forces

Body systems

- Gas exchange and breathing
- Skeleton
- Levels of organisation
- Movement of muscles and joints

Elements, atoms and compounds

- Arrangement of elements on the periodic table
- Structure of atoms
- Compounds
- Chemical formulae

Sound

- Types of waves
- Sound and energy transfer
- Loudness and pitch
- Detecting sound
- Echoes and ultrasound

Reproduction

- Structure of male and female reproductive organs
- Menstrual cycle
- Gametes and fertilisation
- Gestation and birth
- Fertilisation and pollination
- Seed dispersal and fruit formation

<p>Chemical reactions</p> <ul style="list-style-type: none"> • Types of chemical reactions • Word equations • Burning fuels and thermal decomposition • Conservation of mass • Exothermic and Endothermic reactions 	
<p>Light</p> <ul style="list-style-type: none"> • Reflection and refraction • Light and colour • The eye and the camera 	
<p>Acids and alkalis</p> <ul style="list-style-type: none"> • Definition and examples of acids and alkalis • Indicators and the PH scale • Neutralisation reactions • Making salts 	
<p>Space</p> <ul style="list-style-type: none"> • Structure of the solar system • Gravity on the Earth and other planets • Seasons, day and night • Stars, moons and eclipses 	
<p>Advice to students for independent study</p>	<ul style="list-style-type: none"> • Students can access Sam Learning and BBC Bitesize to support learning and revision. They could also consider purchasing revision books from the following site: https://www.cgpbooks.co.uk/Student/books_ks3_science • Students should read about Science in everyday life; newspapers often have interesting stories.

Forces <ul style="list-style-type: none"> • Explaining forces as interactions between objects. • Contact and non-contact forces on Earth and further afield. • Investigate the different effects of applying forces. • Effects of forces on objects. 	
Space <ul style="list-style-type: none"> • The night sky and our place in the universe. • The structure of the solar system and beyond. • The causes of night/day and the seasons. • The moon. • Mass, weight and gravitational field strength. 	
Human and Animal Reproduction <ul style="list-style-type: none"> • Changes that happen during adolescence. • Fertilisation and the stages of pregnancy. • Sexually transmitted infections; good health during pregnancy. 	
Plant Reproduction <ul style="list-style-type: none"> • Different types of plant cells and their functions. • How substances move in and out of cells. • How plants reproduce; how seeds and fruit are formed. 	
Health and Disease <ul style="list-style-type: none"> • Different types of pathogens and how they are spread. • How to reduce/prevent transmission. • Vaccinations and antibiotics. 	
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