

Science – Year 7

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Subject Content

Autumn	Spring	Summer
Introduction to science	Acids and alkalis and metal reactions	Energy
Particles and Separation	Skeleton	Food chains and reproduction
Forces	circuits	Skills
Cells		

Assessment

Homework: To be completed in each termly workbook. Approximately 30 mins per fortnight

Assessment: small class graded assessments at the end of each topic in the Autumn term and then 1 topic test to cover two topics of learning thereafter. An end of year exam to focus on the fundamental learning of cells, forces and matter in the Summer term.

Useful Study Support Resources

- BBC KS3 Science Bitesize has many useful activities: best use by searching the appropriate topic in the search bar under KS3 Science Bitesize
- KS3 Science knowledge organisers can be found on the student hub
- All homework tasks can be found on the student hub

Anything else relevant / subject specific

Science is an exciting practical subject that students enjoy studying. Students are encouraged to take an interest in Science outside of school and appreciate that Science is all around us at all times. Many students visit zoos, wildlife sanctuaries and museums in their spare time, others choose to watch programmes such as 'Bang Goes the Theory' and science documentaries that interest them or take an interest in new scientific discoveries that are reported in the media. Science club and ecoschools are available to students – more information to be given in tutor times.

Year 7 expectations:

Application

- 30mins of homework per fortnight, plus revision for assessments
- Respond to all feedback given by teacher

Organisation

- Bring all equipment to Science lessons, including pen, pencil, ruler, rubber and calculator
- Ask your teacher if you need additional help or have missed a lesson and need to catch up

Independence

- Students should complete homework independently where possible, but feel free to support when help is required
- Students are encouraged to develop the skills required to work independently and to seek help in working out answers using the '4B's': *'brain* (can they work out an answer their selves?) *book* (could they look up the answer in their exercise/ textbook/ internet?), *buddy* (could they work out the answer by talking to a friend?), *boss* (ask a teacher).

Improving grades

Students will be able to regularly access feedback to work that will tell them how to improve their grade. As a general overview, to achieve each grade, students are required to be able to do the following:

Emerging

- Label diagrams and use some scientific key terms. Recall basic scientific facts. Supported in their practical work

Aspiring

- Label diagrams and use more scientific key terms. Describe some basic scientific concepts and plan practical activities.

Developing

- Give the meanings of scientific key terms and correctly use these in sentences. Describe scientific concepts and patterns in data. Complete practical work referencing variables.

Securing

- Explain scientific concepts and the patterns in data using scientific knowledge and evidence. Plan and complete valid and fair experimental investigations

Mastering

- Evaluate scientific theories and evidence and understands its limitations. Link scientific concepts to real world examples. Plan and complete valid and fair experimental investigations with presentation of results and supported scientific conclusions.

Extended resource List

Autumn	Spring	Summer
Particle theory	Acids and alkalis and metal reactions	Energy and resources
Separation	Variation and human reproduction	Food chains and plant reproduction
Forces	Voltage, current and circuits	Geology
Cells and movement		Skills

Matter - Particle model

[The particle model of matter - KS3 Chemistry - BBC Bitesize](#)

Matter - Separating mixtures

[Pure and impure substances - KS3 Chemistry - BBC Bitesize](#)

Forces - Forces

[Introduction to forces - Forces and movement - KS3 Physics - BBC Bitesize - BBC Bitesize](#)

[Force diagrams and resultant forces - Forces and movement - KS3 Physics - BBC Bitesize - BBC Bitesize](#)

[Weight and mass - Forces and movement - KS3 Physics - BBC Bitesize - BBC Bitesize](#)

[Friction - Forces and movement - KS3 Physics - BBC Bitesize - BBC Bitesize](#)

[Magnets and magnetic materials - BBC Bitesize](#)

[Hooke's law - Forces and movement - KS3 Physics - BBC Bitesize - BBC Bitesize](#)

Organisation - Cells

[What are plant and animal cells? - BBC Bitesize](#)

[Specialised animal cells - Living organisms - KS3 Biology - BBC Bitesize - BBC Bitesize](#)

[Specialised plant cells - Living organisms - KS3 Biology - BBC Bitesize - BBC Bitesize](#)

[Diffusion in cells - Living organisms - KS3 Biology - BBC Bitesize - BBC Bitesize](#)

Organisation - Movement

[How plants and animals are organised - Living organisms - KS3 Biology - BBC Bitesize - BBC Bitesize](#)

[The skeletal system - Skeleton - Living organisms - KS3 Biology - BBC Bitesize - BBC Bitesize](#)

[What are skeletal muscles? - Living organisms - KS3 Biology - BBC Bitesize - BBC Bitesize](#)

Reactions - acid-alkali

[Acids and alkalis - KS3 Chemistry - BBC Bitesize](#)

Reactions - metals

[The reactivity series - KS3 Chemistry - BBC Bitesize](#)

Genes -Reproduction

[Human reproduction - Reproduction - KS3 Biology - BBC Bitesize - BBC Bitesize](#)

Electricity - circuits, voltage and current

[Electricity - KS3 Physics - BBC Bitesize](#)

Energy - energy

[Energy stores - Energy - KS3 Physics - BBC Bitesize - BBC Bitesize](#)

[Generating electricity guide for KS3 physics students - BBC Bitesize](#)

Ecosystems - food webs

[Food chains and webs - Ecosystems and habitats - KS3 Biology – BBC Bitesize - BBC Bitesize](#)

[Changes to food webs - Ecosystems and habitats - KS3 Biology - BBC Bitesize - BBC Bitesize](#)

[Bioaccumulation - KS3 Biology - BBC Bitesize - BBC Bitesize](#)

Skills

[Working scientifically - KS3 Biology - BBC Bitesize](#)