

Subject	Science
Term	Cycle 3
Duration (approx.)	7 lessons
Module	Biology — Reproduction

Factual knowledge to be taught and assessed (including subject specific vocabulary)

- **Describe** the main structures in the male and female reproductive systems.
Describe the function of the main structures in the male and female reproductive systems.
- **State** the difference between adolescence and puberty. **Describe** the main changes that take place during puberty.
- **Describe** the structure and function of gametes. **Describe** the process of fertilisation.
- **Describe** what happens during gestation. **Describe** what happens during birth.
- **State** what the menstrual cycle is. **Describe** the main stages in the menstrual cycle.
- **Identify** the main structure of a flower. **Describe** the process of fertilisation in plants. **Describe** how seeds and fruits are formed.

Skills and concepts to be developed

Working Scientifically skills

Recognise different variables in a variety of experiments.

Drawing and interpreting graphs from data collected

Formative Assessment one:

FT1a – Key word spellings/pronunciation + Glossary

FT1b – Use of key words in sentences

Formative Assessment two:

FT2 – Reproduction

(Application of knowledge)

Summative Assessment:

End of cycle test

This test will cover questions from this topic and current cycle topics to check understanding.

Link to prior learning:

Students will be able to link back to Cells and Structure & Function – Clear understanding of the main organelles of a cell and aware of specialised cells, e.g. sperm.

Literacy and Numeracy:

How will high standards be promoted in this module?

Literacy -

FT1a – spellings, pronunciations and definitions of key terms

FT1b – Use of key words in sentences

FT2 – Extended answer question in final task that requires pupils to apply their knowledge

Numeracy – FT2 – Extended answer question in final task that requires pupils to apply their knowledge

Link Forward: Where next for learning?

Students will develop a greater understanding of DNA, chromosomes which will feed into Y8 adaptations & inheritance, as well as KS4:

B11 – Hormonal coordination

B13 – Reproduction

B14 – Variation & Evolution

Subject	Science
Term	Cycle 3
Duration (approx.)	7 lessons
Module	Chemistry—Acids & Alkalis

Factual knowledge to be taught and assessed (including subject specific vocabulary)

- **Compare** the properties of acids and alkalis. **Describe** differences between concentrated and dilute solutions of an acid.
- **State** the pH scale to measure acidity and alkalinity. **Describe** how indicators categorise solutions as acidic/alkaline or neutral.
- **Describe** how pH changes in neutralisation reactions. **State** examples of useful neutralisation reactions.
- **Describe** what a salt is and how it is formed.
- **Predict** the salts that form when acids react with metals or bases.
- **Understanding** the different names given to salts when different metals and acids react.

Skills and concepts to be developed

Working Scientifically skills:

Recognise different variables in a variety of experiments.

Drawing and interpreting graphs from data collected

Lab safety skills—when making salts from metal and acid reactions.

Formative Assessment one:

FT1a – Key word spellings/pronunciation + Glossary

FT1b – Use of key words in sentences

Formative Assessment two:

FT2 – Acids & Alkalis

(Application of knowledge)

Summative Assessment:

End of cycle test

This test will cover questions from this topic and current cycle topics to check understanding.

Link to prior learning:

KS2: Chemical changes – Acidic and alkali – referring to examples e.g. lemon juice and bitter vegetables

KS3: Year 7 Cycle 1+2

Atomic Chemistry (Students will understand the structure of an atom in terms of Daltons atomic model)

The Periodic table (Students will know the difference between metals and non-metals in terms of their arrangement. Reactivity/ Patterns of certain groups of elements).

Literacy and Numeracy:

How will high standards be promoted in this module?

Literacy -

FT1a – spellings, pronunciations and definitions of key terms

FT1b – Use of key words in sentences

FT2 – Extended answer question in final task that requires pupils to apply their knowledge

Numeracy –

Drawing and interpreting graphs from data collected

Link Forward: Where next for learning?

Student will develop using skill and knowledge in year 8 Cycle 1 reactions & Cycle 3 Metals and acids, as well as KS4:

C1 – Atomic Structure

C2 – Periodic Table

C3 – Structure & Bonding

C5 – Chemical Changes

Subject	Science
Term	Cycle 3
Duration (approx.)	7 lessons
Module	Physics — Motion & Pressure

Factual knowledge to be taught and assessed (including subject specific vocabulary)

- **Calculate** speed. **Describe** relative motion.
- **Interpret** distance-time graphs. **Calculate** speed using a distance-time graph.
- **Describe** the factors that affect gas pressure. **Describe** how atmospheric pressure changes with height.
- **Describe** how liquid pressure changes with depth. **Explain** why some things float and other sink.
- **Calculate** pressure. **Apply** ideas of pressure to different situations.
- **Describe** what is meant by a moment. **Calculate** the moment of a force.

Skills and concepts to be developed

Working Scientifically skills:

Recognise different variables in a variety of experiments.

Drawing and interpreting graphs from data collected

Formative Assessment one:

FT1a – Key word spellings/pronunciation + Glossary

FT1b – Use of key words in sentences

Formative Assessment two:

FT2 – Motion & Pressure

(Application of knowledge)

Summative Assessment:

End of cycle test

This test will cover questions from this topic and current cycle topics to check understanding.

Link to prior learning:

KS2 – Students understand forces acting on objects on earth to keep them on the ground (gravity).

Y7 Cycle 2 – Forces. Students should be familiar with contact & non-contact forces. Knowing that unbalanced forces result in motion.

Some students will be able to recall Newtons 1st & 3rd Law.

Literacy and Numeracy:

How will high standards be promoted in this module?

Literacy -

FT1a – spellings, pronunciations and definitions of key terms

FT1b – Use of key words in sentences

FT2 – Extended answer question in final task that requires pupils to apply their knowledge

Numeracy –

Drawing and interpreting graphs from data collected

Link Forward: Where next for learning?

KS3—Electricity & Magnetism (aware of forces to understand voltage).

KS4:

P8 – Forces in balance

P9 – Motion

P10 – Force & Motion

P11 – Force & Pressure