Independent Learning in Applied Science

Consolidation – after every lesson

Summaries

- Within 24 hours, rewrite your notes in your own words.
- Create a half-page summary
  - Key definitions
  - Main ideas
  - Diagrams or equations
  - How it links to the unit's learning aims
- Make annotated diagrams of equipment setups, reaction pathways, or experimental results.

Flashcard Creation

- Create flashcards (Quizlet or paper) for:
  - Keywords & definitions (particularly for unit 1 Principles and Applications of Biology, Unit 2 Principles and Applications of Chemistry and unit 3 Principles and Applications of Physics

Mind Maps & Knowledge Organisers

- Complete topic-based mind maps.

Formal home learning

Completion of internal assignments

- Complete assessment criteria
- Complete resubmissions after being provided formal feedback.

Exam Practice (for resits)

- Answer past exam questions
- Use mark schemes and examiner reports for feedback.

Wider reading and extension

General Science Understanding

- **TED-Ed Science Videos** – 5–10 min animations linking science concepts to real life.
  https://ed.ted.com/
- **New Scientist (student articles)** – readable summaries of cutting-edge science and applications.
  https://www.newscientist.com/
- **The Conversation (Science & Technology section)** – university researchers explain current science news.
  https://theconversation.com/uk

Podcasts:

- **"Science Vs" (Spotify)** – compares popular myths to real evidence.
- **"BBC Inside Science"** – weekly updates on new scientific discoveries.
- **"The Life Scientific" (BBC Radio 4)** – interviews with working scientists.

Wider reading

- **"Bad Science"** – Ben Goldacre
  Covers how data and experiments are used or misused — great for developing scientific evaluation skills.
- **"The Disappearing Spoon"** – Sam Kean
  Fascinating stories behind the elements on the Periodic Table.
- **"Storm in a Teacup"** – Helen Czerski
  Relates physics to everyday phenomena