# Year 9 Scheme of Work

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| **Lesson** | **Main aims** |
| **Breathing and Respiration** |  |
| **Uptake of O2** | Organisms take in a gas from the air  Introduce the term ‘validity’, ie ‘are we measuring what we think we are measuring?’  *First lesson of year - expectations* |
| **Organisms produce CO2** | To show that organisms give out CO2  Experimental design  -Respiration equation |
| **Structure of lungs** |  |
| **Structure and workings of heart** |  |
| **Mechanism of breathing** |  |
| **Measurement of lung volume**  **Health and safety assessment** | - Calculate lung volume  - Assess Health and safety risks of an experiment. |
| **Effect of exercise on number of breaths**  How Science Works lesson | Link breathing with O2 intake and use by muscles.  . |
| **8) Effect of smoking**  **Also mention solvents.** | Pro and cons of smoking. Effects on health. |
| **Test** |  |
| **Teeth** |  |
| **Teeth** | 1. Structure and function 2. Dental formula |
| **Dental hygiene** | 1. Composition of plaque 2. Avoiding tooth decay |
| **Herbivore and carnivore dentition** | Adaptations of teeth to diet. Stereoscopic vision. |
| **How science works (Ideas and evidence)** |  |
| **Intro to terms, experimental design** |  |
| **Reliable results** | The importance of repeats; how to recognise when enough repeats have been done. |
| **Fact and conjecture** | How to recognise the difference between fact and conjecture. |
| **Predictions and evaluating for improvement** |  |
| **Photosynthesis** |  |
| **Plants use CO2** | CO2 balance in the atmosphere changes |
| **Structure of a plant** | Structure adapted to function. Xylem, phloem. |
| **Stomata** | Holes in leaves allow gas to flow in + out, and for water vapour to flow out. Biological drawing. |
| **Leaves produce starch** |  |
| ***Growing cress in a house. Starch production.*** | *Plants grow towards the light.*  *Excess glucose is stored as starch* |
| **Water movement in a plant. Importance of minerals.** | Need for minerals |
| **Fertiliser How Science Works investigation** |  |
| **How Science Works assessment (AfL) ‘Factors affecting rate of photosynthesis’** | Count number of bubbles produced by *Elodea* at different distances from the light. |
| **Revision lesson** |  |
| **Y9 EXAM** |  |
| **Sex education catch up lesson.** |  |
| **Start GCSE work** |  |