

Year 8 Science

Spring 2 Level Ladder

All students are expected to master at least the Level 5 content by the end of the half term.

Check Arbor or ask your child what their current working and target level is in science

Topics: Respiration and controlled assessment practical skills

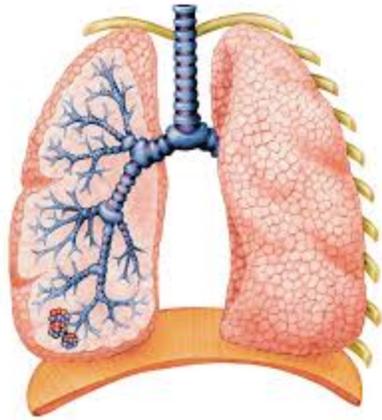
EG:

5A - mastered all of the Level 5 content

5B - mastered some of the Level 5 content

5C - mastered all of the Level 4 content and beginning to master some Level 4 content

Level	Sample tasks
4	<u>Knowledge of respiration</u> 1. Here is a picture of a lung. Label it with key words such as alveoli and diaphragm.



2. Describe what happens to the diaphragm to make us inhale.

3. Describe some chemicals in cigarette smoke and their effects on the body.

Practical skills:

Describe the independent and dependent variable in your experiment.

Describe 3 ways to make sure your experiment is a fair test.

Explain why you repeat your experiment 3 times.

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Knowledge of respiration

1. Explain what aerobic respiration is.

2. Explain what we mean by gas exchange, including where it takes place and what gases are involved.

	<p><u>Practical skills:</u> Draw a table of results, with headings and units. Explain whether your results have any anomalies in them and how you know. Calculate the mean (ignoring any anomalies).</p>
6	<p><u>Knowledge of respiration</u></p> <ol style="list-style-type: none">1. Explain how red blood cells are adapted to their function.2. Explain how capillaries are adapted to their function. <p><u>Practical skills:</u> Evaluate your experiment, suggesting ways to improve accuracy.</p>
7	<p><u>Knowledge of respiration</u></p> <ol style="list-style-type: none">1. Use your knowledge of diffusion to link it to gas exchange.2. Use your knowledge of diffusion to link it to respiration. <p><u>Practical skills:</u> Evaluate your experiment, suggesting ways to improve precision.</p>

<p>Create an alternative method to test your hypothesis, evaluating its merits.</p>

Students will spend the first 3 weeks on one topic (Respiration).

They will then spend 1 week doing what is called a *controlled assessment*. This will give them a chance to practice certain skills which are needed for practical work and which are assessed at GCSE.

This is done within the context of a topic the students have studied so as to also test their understanding of the theory and give them a chance to apply this understanding.

They will finish the half term by practicing GCSE exam skills, doing an assessment and starting their new topic (Photosynthesis).

The assessment level in the first half term will be based on the formal assessment. This will use only GCSE past paper questions to get students used to the format/vocabulary.

Questions have been selected to be appropriate for KS3 (mostly from foundation papers).

