

Year 8 Science

Autumn 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: Reproduction, Practical Skills & Variation and genetic disease

EG:

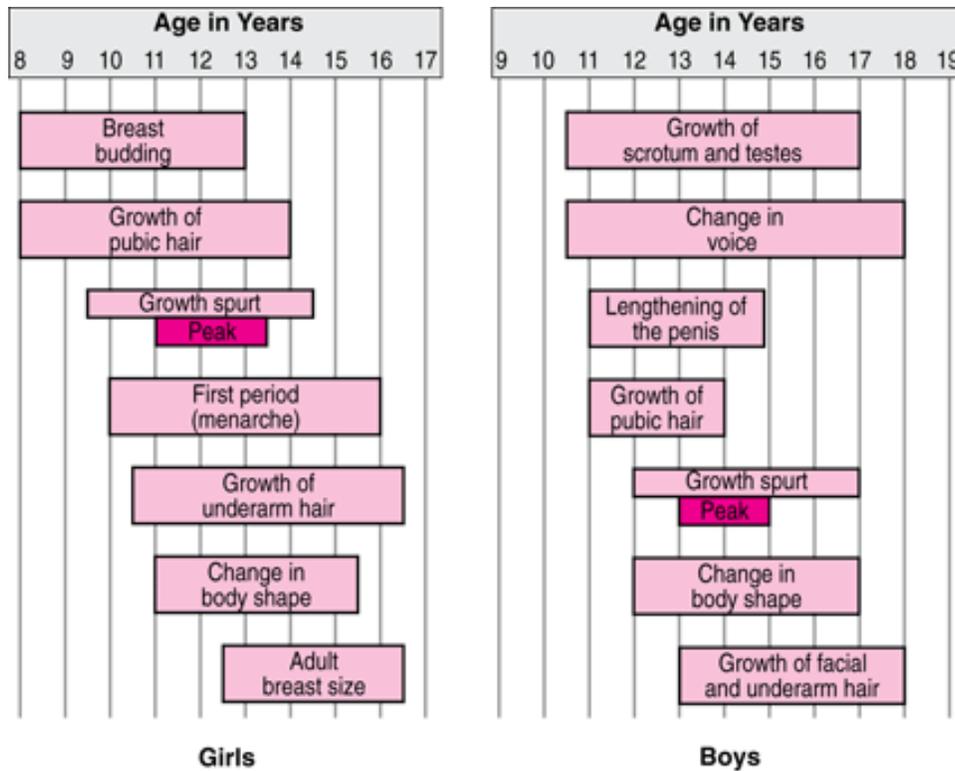
5A - mastered all of the Level 5 content

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	<p><u>Reproduction:</u></p> <ol style="list-style-type: none">1. What is inside the nucleus of human gametes (sex cells - the sperm and egg) that is important for reproduction?2. What do the following words mean:<ol style="list-style-type: none">a) gameteb) fertilisationc) fuse

	<p><u>Practical skills:</u> 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.</p>
5	<p><u>Reproduction:</u> 1. Explain why a woman has a period once a month. 2. Suggest three similarities and one difference between the changes boys and girls undergo at puberty. 3. Interpret the table below, calculating, for example, what is the latest most boys start growing pubic hair and the range of ages when girls would have their first period.</p>



Practical skills:

Draw a table of results, with headings and units.

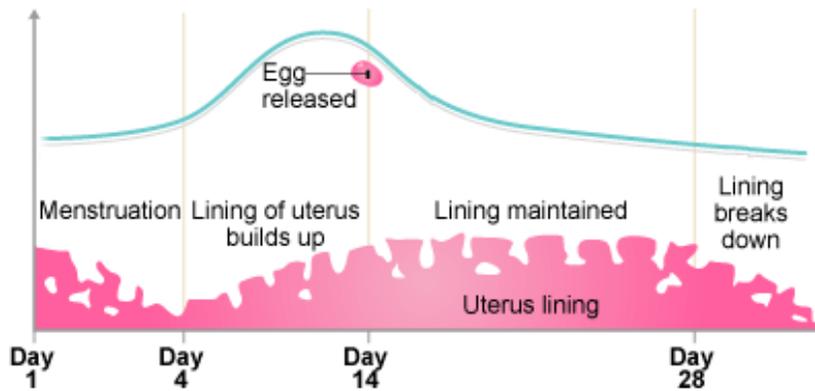
Explain whether your results have any anomalies in them and how you know.

Calculate the mean (ignoring any anomalies).

6

Reproduction:

1. Use your knowledge of diffusion to explain the role of the placenta in getting substances such as oxygen to the foetus.
2. Annotate and explain each stage below, making sure you **link** them.



3. Why does the lining of the uterus need to be filled with blood vessels?

Practical skills:

Evaluate your experiment, **suggesting** ways to improve accuracy.

7

Reproduction:

1. Evaluate the age at and method with which this topic should be taught in schools.
2. Why are men typically taller than women? Explain this using concepts such as puberty, growth spurt and percentages.

Practical skills:

Evaluate your experiment, **suggesting** ways to improve precision.

Create an alternative method to test your hypothesis, **evaluating** its merits.

Students will spend the first lesson back going over their previous test. They will also practice certain skills such as writing a conclusion and preparing for their second controlled assessment.

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.

Students will then spend 2-3 weeks on a Biology topic, learning about reproduction and the changes our bodies undergo during puberty. This topic will be taught in line with the national curriculum.

They will then revise for their end of term assessment.

The assessment level in the first full term will be in early December. It will test students on everything studied since September.

We will then go on to our next topic, variation and genetic disease.

Students will do controlled assessments periodically throughout the year, a total of six or seven times.

