

My target grade

<b>B1 You and Your Genes</b>	<b>R</b>	<b>A</b>	<b>G</b>
Objective	☹️	😐	😊
<b>Grade G/F/E</b>			
I know that genes carry instructions that control how the body functions			
I know that our characteristics are controlled by genes and the environment			
I can state what genes carry instructions for			
I know how many chromosomes there are in a human body cell and human sex cell			
I know how sex is determined by our chromosomes			
I understand how variation occurs because of the way we inherit our genes			
I can state symptoms for cystic fibrosis and Huntingtons disorder			
I can state what is meant by a clone			
I can state what a stem cell is and where they are found			
I can state the difference between embryonic and adult stem cells			
<b>Grade D/C</b>			
I can explain what a gene is			
I can describe the structure DNA takes in the body			
I can explain the difference between structural and functional proteins			
I know what we call different versions of genes			
I can illustrate a corresponding genes on a pair of chromosomes			
I understand how dominant and recessive alleles behave in combination			
I can use family trees and Punnett squares to show inheritance			
I can describe how genetic testing can be used to check for disorders			
I know that stem cells have the potential to treat illnesses			
<b>Grade B/A/A* (Higher only)</b>			
I understand the terms genotype, phenotype, homozygous, heterozygous			
I can explain how the Y chromosome triggers development of testes			
I understand the implications of testing and selecting embryos			
I know how a clone can be produced			



<b>C1 Air Quality</b>	<b>R</b>	<b>A</b>	<b>G</b>
Objective			
<b>Grade G/F/E</b>			
I know how the Earth's atmosphere was probably formed			
I know how human activity adds to air pollution			
I can describe what a hydrocarbon is			
I know the products of complete and incomplete combustion			
I can state what is meant by an atmospheric pollutant and name some			
I know that outliers are results different from all the other			
<b>Grade D/C</b>			
I can recall how the Earth's atmosphere has changed over time			
I know how solid particulates form			
I understand how acid rain is formed from air pollutants			
I know what are meant by the terms oxidation and reduction with regard to oxygen			
I know how nitrogen oxides are formed			
I can balance a chemical equation			
I can explain what a range is and its significance			
I can work out a best estimate of a true value from a set of results			
<b>Grade B/A/A* (Higher only)</b>			
I know that explanations are based on evidence but can change			
I understand what is meant by a correlation			
I can compare a correlation to a causal link			
I can illustrate by equation how NO is oxidised to NO <sub>2</sub> and refer to both as NO <sub>x</sub>			
I know the problems and benefits of using biofuels and electric cars			
I can use the calculate true vales and range to compare pollution levels and state confidence in these conclusions			

<b>P1 Earth and the Universe</b>	<b>R</b>	<b>A</b>	<b>G</b>
Objective	☹	☺	☺
<b>Grade G/F/E</b>			
I can state the speed of light and what is meant by a light year			
I know we use brightness as a measure of distance to stars			
I can describe what nuclear fusion is			
I know when we predict the Universe began and what is happening to it now			
I can describe how rocks change over time			
I can describe the theory of continental drift			
I can label the interior of the Earth			
I can describe what is meant by a P-wave and S-wave			
I can describe a wave and its features and label a diagram to show this			
<b>Grade D/C</b>			
I know the names, relative sizes and motions of different bodies in our solar system			
I can describe how parallax can be used to measure distance of stars			
I understand the problems with measuring distances to stars			
I can explain how Wegener's theory of continental drift was developed			
I can explain what causes convection currents in the mantle and how this leads to sea floor spreading			
I can explain what happens at plate boundaries			
I can compare P and S-waves and state how they give evidence to Earth structure			
I can compare a transverse and longitudinal wave			
<b>Grade B/A/A* (Higher only)</b>			
I can explain why we see objects in space in the past			
I can explain how redshift tells us that galaxies further away from us are moving faster			
I can compare principal frequency of radiation on Earth to the Sun (greenhouse effect)			
I understand why Wegener's theory was initially rejected			
I can explain why magnetic reversal patterns confirmed his theory			
I can explain how the difference in P-waves (longitudinal) and S-Waves (transverse) give evidence of Earth's structure			



**Useful websites**

**B1 You and your Genes**

<http://www.bbc.co.uk/schools/gcsebitesize/science/21c/genes/>

**C1 Air Quality**

[http://www.bbc.co.uk/schools/gcsebitesize/science/21c/air\\_quality/](http://www.bbc.co.uk/schools/gcsebitesize/science/21c/air_quality/)

**P1 Earth and the universe**

[http://www.bbc.co.uk/schools/gcsebitesize/science/21c/earth\\_universe/](http://www.bbc.co.uk/schools/gcsebitesize/science/21c/earth_universe/)

**All**

<http://www.docbrown.info/page20/ocr21b1c1p1.htm>

**Please encourage students to follow us @sciencedeptleaf for revision questions. Prizes for students who come back to us with the answers to the daily questions.**

