

AQA Biology

GCSE Student Checklist

B15 Genetics and evolution

Name _____ Class _____ Date _____

Lesson	Aiming for 4		Aiming for 6		Aiming for 8	
B15.1 From Mendel to modern genetics	I can use an example to describe the results from Mendel's experiment.	<input type="checkbox"/>	I can discuss why Mendel's work was not recognised until after his death.	<input type="checkbox"/>	I can use a Punnett square to draw conclusions from the results of Mendel's experiments.	<input type="checkbox"/>
	I can describe some important discoveries in gene theory.	<input type="checkbox"/>	I can correctly order important discoveries in gene therapy.	<input type="checkbox"/>	I can suggest why Mendel's work was not recognised during his lifetime but the work of Watson and Crick was.	<input type="checkbox"/>
B15.2 Theories of evolution	I can define the term evolution.	<input type="checkbox"/>	I can compare and contrast Darwin's and Lamarck's theories of evolution.	<input type="checkbox"/>	I can explain why we no longer accept Lamarck's theory in the vast majority of cases.	<input type="checkbox"/>
	I can state that Charles Darwin proposed the theory of evolution by natural selection.	<input type="checkbox"/>	I can describe the theory of inheritance of acquired characteristics proposed by Jean-Baptiste Lamarck.	<input type="checkbox"/>	I can describe an example of where Lamarck's theory could be correct.	<input type="checkbox"/>
	I can describe the stages of evolution by natural selection.	<input type="checkbox"/>	I can design a storyboard to highlight important events that helped Darwin develop his theory.	<input type="checkbox"/>	I can explain how and why theories, such as how evolution takes place, change over time.	<input type="checkbox"/>
B15.3 Accepting Darwin's ideas	I can state that finches have different shaped beaks so they can eat different foods.	<input type="checkbox"/>	I can explain how finches on different islands evolved different shaped beaks by natural selection.	<input type="checkbox"/>	I can explain how the finch species on the different Galapagos islands is evidence for evolution by natural selection.	<input type="checkbox"/>
	I can state one piece of evidence that supports Darwin's theory of natural selection.	<input type="checkbox"/>	I can describe several reasons why most people did not accept his theory when it was first published.	<input type="checkbox"/>	I can discuss why Darwin was conflicted over publishing his theory.	<input type="checkbox"/>
	I can state one reason why most people did not accept his theory when it was first published.	<input type="checkbox"/>	I can explain why it was important that Darwin collected a variety of evidence.	<input type="checkbox"/>	I can explain why scientists eventually accepted his theory.	<input type="checkbox"/>

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B15.4 Evolution and speciation	I can state what a species is.	<input type="checkbox"/>	I can describe the steps in the process of speciation.	<input type="checkbox"/>	I can explain the relationship between the length of isolation and number of unique species that evolve.,	<input type="checkbox"/>
	I can state that speciation is the process by which new species form.	<input type="checkbox"/>	I can explain why there are species living on Madagascar that share some similarities with species found elsewhere.	<input type="checkbox"/>	I can suggest how new species of organisms evolved.	<input type="checkbox"/>
	I can give an example of an important discovery by Wallace.	<input type="checkbox"/>	I can carry out research to describe other examples of speciation.	<input type="checkbox"/>	I can explain why Wallace's work prompted Darwin to publish <i>The Origin of Species</i> .	<input type="checkbox"/>
B15.5 Evidence for evolution	I can describe what a fossil is and give an example.	<input type="checkbox"/>	I can describe how fossils are formed.	<input type="checkbox"/>	I can evaluate the use of fossils as evidence for evolution by natural selection and how life first formed.	<input type="checkbox"/>
	I can state that fossils are evidence for evolution by natural selection.	<input type="checkbox"/>	I can describe how fossils are evidence for evolution by natural selection.	<input type="checkbox"/>	I can use standard form to discuss the large time scales that we use when considering the evolution of life.	<input type="checkbox"/>
	I can order geological events.	<input type="checkbox"/>	I can explain why the fossil record is not complete.	<input type="checkbox"/>	I can create a geological timeline to scale.	<input type="checkbox"/>
B15.6 Fossils and extinction	I can state what is meant by extinction.	<input type="checkbox"/>	I can describe how other organisms can cause an animal or plant to become extinct.	<input type="checkbox"/>	I can suggest alternative hypotheses for why an organism became extinct.	<input type="checkbox"/>
	I can describe one way that an animal could become extinct.	<input type="checkbox"/>	I can suggest a hypothesis for why an organism became extinct.	<input type="checkbox"/>	I can evaluate in detail the need to conserve endangered plants.	<input type="checkbox"/>
	I can order fossil diagrams to show the evolution of the horse.	<input type="checkbox"/>	I can explain how fossil diagrams show how the horse has evolved.	<input type="checkbox"/>	I can apply knowledge of speciation to explain why dodos were only found on one island.	<input type="checkbox"/>

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B15.7 More about extinction	I can describe what a mass extinction is.	<input type="checkbox"/>	I can suggest the effects of an asteroid, comet or meteorite strike on Earth.	<input type="checkbox"/>	I can link ideas to give a scientific explanation why an asteroid could have caused the dinosaurs to become extinct.	<input type="checkbox"/>
	I can state that environmental change and a catastrophic event are two possible causes of mass extinction.	<input type="checkbox"/>	I can explain how environmental change can cause mass extinctions.	<input type="checkbox"/>	I can suggest why mass extinctions are important for the evolution of life on Earth.	<input type="checkbox"/>
	I can describe one theory that explains why the dinosaurs became extinct.	<input type="checkbox"/>	I can identify strengths and weaknesses in two different theories of mass extinction.	<input type="checkbox"/>	I can evaluate two theories to come to a conclusion about which is more believable and explain why scientists are not sure what caused the extinction of dinosaurs or mammoths.	<input type="checkbox"/>
B15.8 Antibiotic resistant bacteria	I can state what is meant by an antibiotic resistant bacteria.	<input type="checkbox"/>	I can describe how antibiotic resistant bacteria evolve.	<input type="checkbox"/>	I can explain how a fast reproduction rate is linked to the development of antibiotic resistance strains.	<input type="checkbox"/>
	I can describe why scientists want to slow down the rate of development of new strains of antibiotic resistant bacteria.	<input type="checkbox"/>	I can explain why scientists need to develop new antibiotics.	<input type="checkbox"/>	I can explain how antibiotic resistant bacteria are evidence for evolution.	<input type="checkbox"/>
	I can list some ways scientists can slow down the development of new strains of antibiotic resistant bacteria.	<input type="checkbox"/>	I can create an information sheet outlining important facts about antibiotic resistant bacteria to the public.	<input type="checkbox"/>	I can summarise the reasons why the development of new antibiotics is unlikely to keep up with the emergence of new strains of antibiotic resistant bacteria.	<input type="checkbox"/>
B15.9 Classification	I can state what classification is.	<input type="checkbox"/>	I can describe the classification system developed by Carl Linnaeus, to include the order of the taxonomic groups.	<input type="checkbox"/>	I can use the Linnaean system to name the groups that given organisms belong to.	<input type="checkbox"/>
	I can classify animals into groups based on their shared characteristics.	<input type="checkbox"/>	I can identify genus and species from a scientific name.	<input type="checkbox"/>	I can suggest why hybrids are not assigned scientific names using the binomial system.	<input type="checkbox"/>
	I can write an organism's name correctly using the binomial system.	<input type="checkbox"/>	I can explain why a binomial naming system is useful.	<input type="checkbox"/>		<input type="checkbox"/>

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B15.10 New systems of classification	I can name the three domains.	<input type="checkbox"/>	I can describe how organisms are divided in the three domain system.	<input type="checkbox"/>	I can compare and contrast the Linnaean system with the three domain system.	<input type="checkbox"/>
	I can state that ideas about classification have changed over time.	<input type="checkbox"/>	I can describe why the three domain system was proposed.	<input type="checkbox"/>	I can outline how ideas about classification have developed over time.	<input type="checkbox"/>
	I can draw a conclusion from a simple evolutionary tree.	<input type="checkbox"/>	I can draw several conclusions from a simple evolutionary tree.	<input type="checkbox"/>	I can draw conclusions from a more complex evolutionary tree.	<input type="checkbox"/>