**Activate**
*for AQA*

| Lesson | Know | | Apply | | Extend | |
|---|---|---|---|---|---|---|
| 10.4.1 Inheritance | I can state what is meant by DNA. | ☐ | I can describe the relationship between DNA, genes, and chromosomes. | ☐ | I can explain how a change in DNA may affect an organism. | ☐ |
| | I can state what is meant by a chromosome. | ☐ | I can describe how chromosomes from both parents combine to form offspring. | ☐ | I can explain how a change in DNA may affect the future offspring of an organism. | ☐ |
| | I can state what is meant by a gene. | ☐ | I can state what is meant by a mutation. | ☐ | I can explain why gametes have 23 chromosomes, but normal body cells contain 46 chromosomes. | ☐ |
| 10.4.2 DNA | I can build a model of the DNA molecule. | ☐ | I can describe the structure of DNA. | ☐ | I can explain why it is important for scientists to work together. | ☐ |
| | I can name four scientists who worked on the structure of DNA. | ☐ | I can describe how scientists worked together to discover the structure of DNA. | ☐ | | |
| 10.4.3 Genetics | I can state what is meant by an allele. | ☐ | I can describe the difference between dominant and recessive alleles. | ☐ | I can explain how dominant or recessive alleles can be expressed as external features. | ☐ |
| | I can state that genetics allows us to track alleles from one generation to the next. | ☐ | I can use a Punnett square to show what happens during a genetic cross. | ☐ | I can explain how to use a Punnett square to predict the outcome of a genetic cross. | ☐ |
| | I can complete a Punnett square to state how many offspring will have a particular characteristic. | ☐ | I can trace characteristics through a family tree usng Punnett squares, giving answers as percentages and ratios. | ☐ | I can trace characteristics through a family tree using Punnett squares, calculating the probability of different outcomes. | ☐ |

| Lesson | Know | | Apply | | Extend | |
|---|---|---|---|---|---|---|
| 10.4.4 Genetic modification | I can state what is meant by genetic modification. | ☐ | I can state how an organism can be genetically modified. | ☐ | I can describe how an organism can be genetically modified to display a desired characteristic. | ☐ |
| | I can name a product produced by a genetically modified organism. | ☐ | I can describe some advantages of producing products through genetic modification. | ☐ | I can analyse advantages and disadvantages of producing products through genetic modification. | ☐ |