**Topic Overview: Inheritance**

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|  | Ref | Outcome | Achieved | ☺ |
| Emerging | E9SbIh1.1 | Know that we inherit genes from our parents |  |  |
| E9SbIh1.2 | Know what DNA is and that everyone’s is different apart from identical twins |  |  |
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| E9SbIh2.1 | Recall what inherited and genetic variation are |  |  |
| E9SbIh2.2 | Describe where you find DNA and what its basic function is |  |  |
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| Developing | D9SbIh3.1 | Compare the differences between inherited and environmental |  |  |
| D9SbIh3.2 | Describe how Chromosomes are long pieces of DNA which contain many genes. |  |  |
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| D9SbIh4.1 | Recall there is more than one version of each gene e.g. different blood groups |  |  |
| D9SbIh4.2 | Use a diagram to show the relationship between DNA, chromosomes and genes |  |  |
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| Securing | S9SbIh5.1 | Explain how Inherited characteristics are the result of genetic information |  |  |
| S9SbIh5.2 | Identify why scientist Watson, Crick and Franklin were so important |  |  |
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| S9SbIh6.1 | Describe how organisms become extinct |  |  |
| S9SbIh6.2 | Explain why offspring from the same parents look similar but are not usually identical. |  |  |
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| Mastering | M9SbIh7.1 | Explain how a change in the DNA (mutation) may affect an organism and its future offspring |  |  |
| M9SbIh7.2 | Suggest arguments for and against genetic modification |  |  |
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| M9SbIh8.1 | Suggest benefits from scientists knowing all the genes in the human genome |  |  |
| M9SbIh8.2 | Use a diagram to show how genes are inherited |  |  |
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| M9SbIh9.1 | Make a reasoned argument about designer babies |  |  |
| M9SbIh9.2 | Determine how the number of chromosomes changes during cell division, production of sex cells and fertilisation |  |  |

**Keywords**

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| **Inherited characteristics:** Features that are passed from parents to their offspring. |
| **DNA:** A molecule found in the nucleus of cells that contains genetic information. |
| **Chromosomes:** Thread-like structures containing tightly coiled DNA. |
| **Gene:** A section of DNA that determines an inherited characteristic. |