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| **Year 5 Knowledge Organiser** | **Data handling: Mars Rover 1** | **Focus: Computing** |
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| **Key Vocabulary** | **Binary** | **Key Facts** |
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| 8-bit binary | A way to send up to 255 different signals, with only eight on or offs. |
| binary code | A computer code, based around the binary values of zero and one. |
| byte | A unit of data which is eight digits long. |
| CPU | **Central Processing Unit** - the 'brain' of a computer that deals with data it receives from input and output devices, as well as programs in the computer |
| data transmission | The movement of information from one or more points to another. |
| radio signal | A radio wave that is sent or received to somewhere. |
| RAM | **Random Access Memory** - The computer's memory where instructions are stored while a program is running. |
| simulation | Computer generated imitation of something such as a program test. |

 | **When a robot thinks independently, it needs to be able to calculate a range of data.****All decisions carried out by a robot, or any computer, are done in binary – including the Mars Rover.** | **The Mars Rover had to travel 350 million****miles (approximately) to get to Mars.** |
| **Mars Rover** |  |  |
| **The Mars Rover is a robot that scientists have sent to Mars to explore the planet’s surface.** |

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| Wow Stickers - Free communications Stickers | **It took the Mars Rover Curiosity eight and a half months to travel from Earth to Mars.** |
| Wow Stickers - Free communications Stickers | **The mission cost approximately £2.2 billion!** |
| Wow Stickers - Free communications Stickers | **The Mars Rover found signs of water, suggesting there might have been life on Mars.** |

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