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| **Year 5 Knowledge Organiser** | **Data handling: Mars Rover 1** | | | **Focus: Computing** |
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| **Key Vocabulary** | **Binary** | **Key Facts** | | |
| |  |  | | --- | --- | | 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.** | |  |  | | --- | --- | | 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.** | | | | |