**SOLUTIONS**

**EARTH AND SPACE 2**

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| --- | --- |
| **1 C** | **2 D** |
| **3 B** | **4 B** |
| **5 C** | **6 B** |
| **7 D** | **8 A** |
| **9 D** | **10 C** |

**Part 2 Short Answers**

1a A renewable natural resource is one that is replaced by natural processes that occur on Earth in a timescale less than an average human life.

1b Rocks and soils cannot be replaced within a human lifetime, whereas living things reproduce, replacing themselves, usually within a human lifetime.

2a Photosynthesis, breathing (could also say combustion, evaporation, etc.)

2b Breathing removes oxygen from the air and releases carbon dioxide back into the air.

3a In flask A, carbon dioxide and water would have combined using the energy of sunlight and formed sugar and oxygen. The oxygen escaped into the test-tube.

3b Flask B had no carbon dioxide, and plants use that in photosynthesis. So no oxygen would have been made.

4 A renewable energy source is one that can be used over and over again and is replaced by natural processes that occur in a timescale shorter than an average human life. Non-renewable energy sources are limited in supply and will one day run out if they continue to be used.

***renewable energy*:** Solar, hydroelectric, tidal or wind energy

***non-renewable energy***: oil, coal and nuclear energy.

5 a The water would percolate slowly through the top layer of soil. It would then collect in the spaces between the soil particles in the lower level. It would not be able to move any further down because of the impervious rock underneath.

b In very heavy rainfall there may not be time for the water to move through between the closely packed soil particles of the upper layer. The water would flow over the soil as run-off. In less heavy rain, more of the water would be able to penetrate the soil and run-off would be less.