OCR 21st Century Science (2012 spec)

**Unit P1a Statements**

The Earth in the universe

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | the Earth is one of eight planets moving in almost circular paths  |  | dust in space, about five thousand million years ago |  |
| **2** | the solar system was formed over very long periods from clouds of gases and |  | measured using parallax |  |
| **3** | light travels through space (a vacuum) at a very  |  | from its relative brightness |  |
| **4** | the distance to a star can be  |  | thousands of millions of stars in the Milky Way galaxy |  |
| **5** | the distance to a star can be estimated  |  | high but finite speed, 300 000 km/s |  |
| **6** | the Sun is one of  |  | round the Sun which, together with other smaller objects orbiting the Sun (asteroids, dwarf planets, comets)and moons orbiting several planets, make up the solar system |  |
| **7** | light pollution and other atmospheric conditions  |  | distant galaxies are moving away from us |  |
| **8** | **the redshift in the light coming from them suggests that**  |  | interfere with observations of the night sky |  |
| **9** | **(in general) the further away a galaxy is,**  |  | In measuring the very large distances involved **and the mass of the Universe**, and studying the motion of very distant objects. |  |
| **10** | scientists believe the Universe began  |  | with a ‘big bang’ about 14 thousand million years ago |  |
| **11** | the ultimate fate of the Universe is difficult to predict because of difficulties  |  | **the faster it is moving away from us** |  |
| **12** | the source of the Sun’s energy  |  | is the fusion of hydrogen nuclei |  |

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