**Earth & Space Science**

**Predictable Phenomena.**

**Teacher notes**

* Guide students toward task where they are most likely to succeed.
* Explain and model difference between **Identifying, Describing** and **Explaining** in responses
* When assessing, if a student is able to **describe** then we assume that they have **identified** (and get marks credit for that). Similarly, if the have **Explained** the phenomenon, they are credited with marks for **Identifying** and **Describing.**
* Diagram should be hand drawn, with evidence of use of appropriate equipment (ruler, pencil, compass or template) to attract full marks.
* Diagram labels may be simple, supporting a separate description or explanation, or may be complete description or explanation in their own right, linked to diagram.

**Assessment Task**

**Earth & Space Science**

**Predictable Phenomena.**

Day and night, the seasons, tides and eclipses are all predictable phenomena.

This means that we are able to work out exactly when these events will happen.

**Task:** Make an A3 folded poster to describe and explain **ONE** of the predictable phenomena to students in year six at your old Primary school.

You will need to use words and language that a year 6 student can understand, or will need to explain what the science words mean.

There are two topics to choose from, HOWEVER, one will earn you more marks than the other (but only if you get it all right!!).

Choose the topic you feel that you can complete.

**The topics:**

**The Seasons:** Weighting = 80%

**Lunar & Solar Eclipses:** Weighting = 90%

**The Tides:** Weighting = 100%

**The Seasons:**

(Weighting = 80%)

**Describe and explain the seasons and how different parts of the world experience different seasons at different time of the year**

|  |  |  |
| --- | --- | --- |
|  | **Max.**  **Mark** | **Your score** |
| * Identifies that Earth orbits the sun | **1** |  |
| * Identifies that revolution takes 1 year. | **1** |  |
| * Identifies axis tilt | **1** |  |
| * Identifies four seasons and describes the differences between them | **8** |  |
| * Explains seasonal difference in relation to orbit and axis tilt. | **4** |  |
| * Describes axis tilt affects angle at which sunlight reaches Earth surface. | **2** |  |
| * Explains how axis tilt affects angle at which sunlight reaches Earth surface. | **4** |  |
| **DIAGRAM** |  |  |
| * Accurate, neat drawing showing relative positions of Earth and Sun | **4** |  |
| * Diagram labels support explanatory notes. | **2** |  |
| * Diagram drawn with appropriate equipment | **1** |  |
| * Illustrates and labels Earth axis line at approx. 23.5o | **2** |  |
| **PRESENTATION** |  |  |
| * Uses correct spelling | **2** |  |
| * Writing is legible (can read it) and neat | **2** |  |
| * Uses a variety of colours | **2** |  |
| * Uses pictures/ diagrams | **2** |  |
| * Poster is structured clearly | **2** |  |
| Total | 40 |  |
| **TOTAL (x2)** | **100** |  |

**Comment:**

**Lunar & Solar Eclipses:**

(Weighting= 90%)

**Describe and explain Lunar and Solar eclipses.**

|  |  |  |
| --- | --- | --- |
|  | **Max.**  **Mark** | **Your score** |
| * Identifies two types of eclipses | **2** |  |
| * Identifies movements/ orbit paths of earth and moon as cause of eclipses. | **4** |  |
| * Explains movements of earth and moon relative to sun as cause of lunar eclipse | **5** |  |
| * Identifies how often lunar eclipses occur and why | **3** |  |
| * Explains movements of earth and moon relative to sun as cause of solar eclipse | **5** |  |
| * Identifies how often solar eclipses occur and why | **3** |  |
| **DIAGRAM** |  |  |
| * Accurate, neat drawings showing relative positions of Earth, moon and Sun | **6** |  |
| * Diagram labels support explanatory notes. | **4** |  |
| * Diagram drawn with appropriate equipment | **3** |  |
| **PRESENTATION** |  |  |
| * Uses correct spelling | **2** |  |
| * Writing is legible (can read it) and neat | **2** |  |
| * Uses a variety of colours | **2** |  |
| * Uses pictures/ diagrams | **2** |  |
| * Poster is structured clearly | **2** |  |
| Total | 45 |  |
| **TOTAL** **(x2)** | **100** |  |

**Comment:**

**The Tides:**

**(**Weighting = 100%)

**Describe and explain how ocean tides are caused and how spring and neap tides occur.**

|  |  |  |
| --- | --- | --- |
|  | **Max.**  **Mark** | **Your score** |
| * Identifies gravitational pull of moon and sun as cause of tides. | **1** |  |
| * Describes how gravitational pull of moon and sun results in tides | **2** |  |
| * Explains how gravitational pull of moon and sun causes tides. | **4** |  |
| * Identifies high and low tides | **1** |  |
| * Describes high and low tides in terms of position of moon. | **4** |  |
| * Explains high and low tides in terms of position of moon and inertia. | **5** |  |
| * Identifies Spring and Neap tides | **1** |  |
| * Describes Spring and Neap tides in terms of position of moon and sun relative to earth. | 4 |  |
| * Explains Spring and Neap tides in terms of position of moon and sun relative to earth. | 5 |  |
| **DIAGRAM** |  |  |
| * Accurate, neat drawings showing relative positions of Earth, moon and Sun | **5** |  |
| * Diagram labels support explanatory notes. | **4** |  |
| * Diagram drawn with appropriate equipment | **4** |  |
| **PRESENTATION** |  |  |
| * Uses correct spelling | **2** |  |
| * Writing is legible (can read it) and neat | **2** |  |
| * Uses a variety of colours | **2** |  |
| * Uses pictures/ diagrams | **2** |  |
| * Poster is structured clearly | **2** |  |
| Total | **50** |  |
| **TOTAL (x2)** | **100** |  |

**Comment:**