**Science Homework – Lindisfarne – 22.1.24 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Q1.**

**The solar system**

(a)  Joe is finding out about the solar system.

He writes four statements about the Sun.

Write **true** or **false** next to each statement about the Sun.

|  |  |  |
| --- | --- | --- |
|  |   | **True** or **False**? |
|   | The Sun is a light source. | \_\_\_\_\_\_\_\_\_\_\_\_ |
|   | The Sun orbits the Earth. | \_\_\_\_\_\_\_\_\_\_\_\_ |
|   | The Sun is smaller than the Earth. | \_\_\_\_\_\_\_\_\_\_\_\_ |
|   | The Sun is a circle. | \_\_\_\_\_\_\_\_\_\_\_\_ |

2 marks

(b)  Joe finds out that days and years take different amounts of time on different planets.

|  |  |  |
| --- | --- | --- |
| **Planet** | **Time for one day (Earth days)** | **Time for one year (Earth days)** |
| **Mercury** | 59 | 88 |
| **Venus** | 243 | 225 |
| **Earth** | 1 | 365 |
| **Mars** | 1 | 687 |
| **Jupiter** | 0.4 | 4329 |

Look at the table.

(i)   Which planet has the shortest day?

  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 mark

(ii)  Which planet orbits the Sun quickest?

  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 mark

(c)

Look at the table above.

Do the planets with shorter days have shorter years? Tick **ONE** box.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | yes |  |   | no |  |

Use the information in the table to explain your answer.

  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 mark

(d)  All of the planets in our solar system have days and nights.

What movement in space causes day and night on Earth?

  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 mark

**Q2.**

**Famous scientist**

(a)  What shape is the Sun?

  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 mark

(b)

|  |  |
| --- | --- |
| Galileo developed the equipment that scientists use to see the Sun, Moon, stars and planets in more detail. | **Galileo (1564–1642)** |

Name the equipment that scientists use to see into space.

  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 mark

(c)  The Moon orbits the Earth.

Tick **ONE** box to show how much time the **Moon** takes to orbit the Earth.



|  |  |  |  |
| --- | --- | --- | --- |
| 1 day |  | 24 days |  |
| 28 days |  | 365 days |  |

1 mark

(d)  People used to think the Sun orbited the Earth because the Sun seems to move across the sky every day.

What movement in space makes the Sun seem to move across the sky every day?

  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 mark

(e)  Galileo believed the Earth orbited the Sun.

His observations into space gave evidence to support his idea.

Why is it important to get evidence to support a scientific idea?

  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 mark

(f)   Galileo said that the Earth stays in the same orbit as it travels around the Sun.

Write **true** or **false** next to each sentence to show what it would be like if the Earth’s orbit was further away from the Sun.

|  |  |  |
| --- | --- | --- |
|  | If the Earth’s orbit was further away from the Sun... | **True** or **False**? |
|   | the Earth would be colder. | \_\_\_\_\_\_\_\_\_\_\_\_ |
|   | the Earth would be darker. | \_\_\_\_\_\_\_\_\_\_\_\_ |
|   | the Earth would not have night-times. | \_\_\_\_\_\_\_\_\_\_\_\_ |
|   | the Earth would have longer years. | \_\_\_\_\_\_\_\_\_\_\_\_ |

2 marks

**Q3.**

**Space**

(a)     Adele’s class is learning about space.

Write **Earth**, **Sun** or **Moon** next to each sentence to show what it is describing.

  It is a light source.                                ..............................

It takes 24 hours to spin on its axis.     ..............................

Its orbit takes 28 days.                         ..............................

1 mark

(b)

Draw **FOUR** lines below to show what time it would be at each place on the globe.



|  |  |  |
| --- | --- | --- |
| **Place** |   | **Time** |
|   |   |   |
| A |   | midnight |
|   |   |   |
| B |   | midday |
|   |   |   |
| C |   | 6 pm |
|   |   |   |
| D |   | 3 pm |

2 marks

**Q4.**

**Sun, Earth and Moon**

(a)     Yu Lin is using fruit to model the Sun, Earth and Moon.

Complete the table to show the best fruit for modelling the Sun, Earth and Moon. Think about the size and shape.



|  |  |  |  |
| --- | --- | --- | --- |
| **Object in space** | Sun | Earth | Moon |
| **Which fruit should be used for the model?** |   |   |   |

1 mark

(b)     Yu Lin is in the playground on a sunny day.

(i)     Tick **ONE** box to show when Yu Lin’s shadow will be shortest.



|  |  |
| --- | --- |
| before school: 8.30 – 9.00 am |  |
| morning break: 10.30 – 10.45 am |  |
| lunch break: 12.00 – 1.00 pm |  |
| afternoon break: 2.30 – 2.45 pm |  |
| after school: 3.30 – 3.45 pm |  |

1 mark

(ii)     Tick **ONE** box to show which movement in space causes Yu Lin’s shadow to change length during the day.



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| the spin ofthe Earth |  |    | the Earth orbiting the Sun |  |
| the spin of the Sun |  |    | the Moon orbiting the Earth |  |

1 mark

(c)     Complete the table below about the different movements in space.



|  |  |
| --- | --- |
| **Movement in space** | **Time movement takes** |
| Earth orbits the Sun | 365 days |
| Earth spins once on its axis | .......................................... |
| ............................................................ | 28 days |

2 marks