[](http://www.google.com.au/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&docid=Q-jachXC6K5l9M&tbnid=dEZcnnM6t4ztbM:&ved=0CAUQjRw&url=http://all-free-download.com/free-vector/vector-clip-art/tree_outline_clip_art_11785.html&ei=gkD1U_q5CIzp8AXO4oLQAQ&bvm=bv.73231344,d.dGc&psig=AFQjCNFOn96papxJpTkYcyqtzYCWu8mjvQ&ust=1408668120729314)Earth Science Year 7

Topic Test

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Total: 76 marks

Part A: Multiple-Choice (10 marks)

1. Which of the following are **all** planets?

**A** Mars, Earth, Pluto, Leo, Venus.

**B** Neptune, Uranus, Mars, Jupiter.

**C** Scorpio, Pluto, Neptune, Saturn, Sagittarius.

**D** Gemini, Cancer, Virgo, Pisces, Taurus.

2. Which of the following is true?

**A** different constellations can be seen in different positions at different times of the year.

**B** different cultures have developed different stories about the same constellations .

**C** Some constellations are only visible in the southern hemisphere and some in the northern hemisphere.

**D** all the statements are true.

3.Gravity is affected by:

**A** mass and distance.

**B** mass only.

**C** distance only.

**D** mass, distance and light.

4. In a solar eclipse which of the following occurs?

**A** Earth blocks the sunlight from the Moon.

**B** Moon blocks the sunlight from the Earth.

**C** Sun gets in the way of us seeing the Moon.

**D** a comet blocks the Sun.

5. In the phases of the moon a new moon appears as:

**A** a complete circle in the night sky.

**B** a half of the moon visible in the night sky.

**C** nothing visible in the night sky.

**D** almost all the moon visible in the night sky.

6. Which of the following are all natural satellites?

**A** moons, planets and the International Space Station.

**B** moons, planets and comets.

**C** Earth, Moon and spy satellites .

**D** International Space Station, comets and Jupiter.

7. Earth has 4 seasons because:

**A** it spins on its axis.

**B** it would be boring to have the same climate all year.

**C** of its orbit around the Sun.

**D** of the tilt of the axis.

8. The temperatures at the equator are hotter because?

**A** sunlight travels less distance before it hits the Earth’s surface.

**B** sunlight travels greater distance before it hits the Earth’s surface.

**C** the land absorbs more heat there.

**D** it is always summer.

9. Every four years we have a leap year because?

**A** it makes it interesting for people born on the 29th February.

**B** the earth is orbiting the Sun faster every four years.

**C** the Earth is orbiting the Sun slower every four years.

**D** it takes 365 ¼ days for the Earth to go around the Sun but you cannot have a ¼ day on a calendar.

10. Daylight hours are longest in summer and shortest in winter. An equinox is when there is equal amount of daylight hours as night hours. When would this occur?

**A** autumn only.

**B** autumn and spring.

**C** spring only.

**D** summer and winter.

**Part 2: Short Answer**

1. **Match** the following terms with their correct meaning. Note: not all words will be used.

Tide, astrology, satellite, constellation, lunar eclipse, Milky Way, solar eclipse, axis, ellipse, orbit, astronomy, phases, year, gravity, Orion, waves, equator, day,

a) A group of stars that forms a recognisable pattern in the night sky \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) An imaginary line connecting the North and South poles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) The time a planet takes to revolve once around the Sun \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d) Force of attraction between masses \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) When the Earth blocks sunlight from reaching the moon \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

f) The path a planet takes around a star \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

g) Bulges in the ocean caused by the combined gravitational pull of the Moon and Sun

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

h) The scientific study of stars, planets and other objects in space \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

i) Different shapes of the moon as seen over the month \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

j) The galaxy in which our solar system is located \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(10 marks)

2. a) **Draw** and **label** how a Spring tide occurs in the space below:

(5 marks)

b) **Describe** how a solar eclipse occurs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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(4 marks)

3. a) **State** how many high tides Perth experiences in a day \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Name** one natural satellite of the Sun \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Name** a constellation that can only be seen in the Southern Hemisphere \_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

(3 marks)

4. **Justify** the following statement:

1. Lunar eclipse and phases of the moon are different things \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

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(2 marks)

5. **Explain** why seasons occur: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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(2 marks)

6. **Classify** the following as planet, dwarf planet or zodiac:

1. Pluto \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Mars \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Pisces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Venus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(4 marks)

7. **Identify** the following: (a day, a year, summer, winter)

1. A rotation of the Earth \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. A revolution of the Earth \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. When Australia is tilted towards the Sun \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. When Australia is tilted away from the Sun \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(4 marks)

8. Does the angle that sunlight hits the Earth affect the temperature?

**Design** an experiment that could be used to answer this question.

1. Aim \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Independent variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Dependent variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Controlled variables \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Equipment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Method \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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(10 marks)

9. The table below shows different planets and the moon and their gravity compared to Earth.

If your average jump height on Earth is 46cm **calculate** your predicted height jump on each planet and the moon.

**Your average jump height ÷ gravity**

|  |  |  |
| --- | --- | --- |
| **Planet or Moon** | **Gravity compared to Earth’s** | **Predicted Height Jump (cm)** |
| Earth | 1 |  |
| Moon | 0.16 |  |
| Mercury | 0.38 |  |
| Venus | 0.91 |  |
| Mars | 0.38 |  |
| Jupiter | 2.36 |  |
| Saturn | 0.92 |  |
| Uranus | 0.89 |  |
| Neptune | 1.1 |  |

a) Graph the predicted height jump above as a column graph. (5 marks)

b) Which **two** planets have the lowest jump height? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

(2 mark)

c) Which **two** places have the highest jump height? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

(2 mark)

d) **Compare** the moon and Jupiter \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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(2 marks)

f) **Explain** why your predicted jump height is so low on Jupiter

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(2 mark)

10. **Estimate** the time of the next tide and whether it is low or high:

1. low tide 10.30am \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. high tide 2.20pm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. high tide 12.04 am \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. low tide 9.27pm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(4 marks)

11. **Define** the following:

i) satellite \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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ii) zodiac \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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iii) new moon \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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iv) season \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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v) astrology \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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(5 marks)