

The City School
University Road Campus
Science Blog Worksheet#3
2nd Term



Name: _____ Class: 5 Sec: _____ Date: _____

True or false?

- 1 Decide if each of the statements below is true or false. If a statement is false, write out a correct version underneath it.
- 2 Now look at each pair of statements, and decide if the second statement is an explanation for the first one. If you have corrected a statement, use your corrected version for this question.

The first one has been done for you.

A You can sail around the Earth without falling off.

B The Earth is round, like a plate.

C The Sun rises in the west and sets in the east.

D The Earth spins around on its axis.

E The Sun is bigger than the Earth.

F The Moon is bigger than the Earth.

G The Sun and the Moon look about the same size.

H The Moon is much further away than the Sun.

Leap years

We all use calendars to keep track of what day of the week it is, how long it is to the weekend, or how long it is until our next holiday. Knowing the time of year is even more important for some people. Farmers have to plant seeds at the right time of year so that their crops have time to grow and ripen before winter comes.

At one time, people used the length of shadows, or the direction of the Sun at sunrise or sunset, to work out what time of year it was. Midsummer's day was the longest day, and the day that shadows were shortest. However it wasn't very convenient to have to check the lengths of

shadows every day – it was much easier just to count the days, and say that a new year started every 365 days.

This worked for a while, but eventually people noticed that the seasons were happening at the wrong times according to the calendar. The problem was that the Earth does not take exactly 365 days to go around the Sun once – it actually takes nearly $365\frac{1}{4}$ days.

In Roman times they changed the calendar by adding one day every 4 years. The year with an extra day in it is called a **leap year**. Today, we have the extra day in February, which has 29 days every 4th year. Leap years will happen in 2004, 2008, and every 4 years after that.

Even this is not quite the whole story! To keep the calendar in step with the seasons, we occasionally have to miss out a leap year. Every century year (e.g. 1900, 2000, 2100) would normally be a leap year, but the extra day is only added if the year can be divided exactly by 400. This means that 2000 was a leap year, but 1900 was not.

- 1 Write down two things that you might use a calendar for.
- 2 Why is it important for farmers to know what season it is?
- 3 Why did people start to measure years by counting days?
- 4 Why did seasons start to happen at the wrong times according to the calendar?
- 5 What is a leap year?
- 6 Why do we have leap years?
- 7 Write down the next 5 leap years after 2008.
- 8 Will these years be leap years?
 - a 2010
 - b 2048
 - c 2100
 - d 2200
 - e 2400

Earth, Sun and Moon

Tick the boxes to show the answer to each question.

	Earth	Sun	Moon
1 Which one is the biggest?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Which one is the smallest?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Which one do we live on?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Which one can we only see in the sky during the day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Which one seems to change its shape?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 6 Which one can we sometimes see in the sky at night?
- 7 Which one is closest to the Earth?
- 8 Which one is furthest away from the Earth?
- 9 Which one orbits the Earth?
- 10 Which one orbits the Sun?