**Year 8 Space**

Please complete this week’s National Oak Academy lesson.

Once this is completed have a look at this link <https://www.bbc.co.uk/bitesize/topics/z8c9q6f> and answer the following questions:-

**What are days, seasons and years?**

Read the section on ‘What are days, seasons and years’ and answer the following questions:

1. What is a day?
2. What is a year?
3. What is a season? Why do we need to learn about them?

Watch the video on how farmers need to understand the seasons in order to grow food and answer the following questions:

1. If the farmer plants the crops a little late what will happen?
2. What happens if he plants them too early?
3. Why does he plant his crops in spring?
4. What season is everything ready by?
5. What is the difference in farming in the UK compared to developing countries?
6. What material encourages the crops to grow a bit faster and how?

Complete the gap fill:

The Earth's axis is ………... as it travels around the Sun, so some parts of the Earth receive more ……………. each …… than others.

This …………. during the year because the Earth moves about the Sun, which gives rise to ……………..

The UK is in the top half of the Earth. When the n…................ h…………… is tilted towards the ……… it is s………….. in the UK. ……. months later the northern hemisphere is tilted …………. from the Sun and it is ………….

In Spring, the temperature and day length become …………... In Autumn, they are ……………….

Watch the video below to see how the Earth moving around the Sun changes the seasons and answer the following questions:

1. How long does the Earth take to travel around the Sun?
2. What part of the Earth is the UK in?
3. Which way is the northern hemisphere tilted in winter?
4. How often does the Earth spin on its axis?
5. Why is it useful to know about the seasons? Give three reasons.

Quick Quiz:

1. A day is the time it takes for the Earth to...
2. Spin on its axis
3. Orbit the Sun
4. Orbit the moon
5. How long does it take for the Earth to orbit the Sun?
6. 24 Hours
7. 7 days
8. 28 days
9. 365 days

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1. In June, the UK (northern hemisphere) has more hours of sunlight than Australia (southern hemisphere). This is partly because the...
2. Earth spins on its axis
3. Earth’s axis is tilted
4. Moon orbits the sun
5. Farmers plant seeds for many crops in spring because…
6. The weather is windy
7. There is a risk of snow
8. The soil is warming up

**What are tides?**

Read the section on ‘What are tides’ and answer the following questions:

1. True or False?

Tides are the regular rise and fall of sea levels.

The gravitational pull of the Moon and Sun causes the tides.

Knowledge of the tides is not needed to safely enjoy the seaside.

Watch the videos and answer the following questions:

1. What are the three reasons why tides rise and fall?
2. What happens when there is a full moon?
3. What are the two different types of tides each day?
4. Why do we have tides?
5. Why do we have two tides a day? Include the gravitational pull and **centrifugal force of the Earth spinning in your explanation.**
6. What industries require knowledge about tides?
7. How can we tell if a tide is dangerous?

Quick quiz:

1. Tides are ……..
2. Very big waves
3. Shallow areas of the sea
4. The rise/fall of sea levels
5. Tides are caused by the force of ……………..
6. Air resistance
7. Friction
8. Gravity
9. Magnetism
10. The highest tides occur when the gravitational pull on the oceans is…
11. Greatest
12. Smallest
13. Neither strong or weak
14. The lowest tides occur when there is a…
15. Full moon only
16. New moon only
17. Full moon or new moon