**JAG01K Unit 1**

**Task 1 Scientific disciplines**

**Discuss these questions: Which of these subjects have you studied? Which subjects are/ were you good at? Which of them do you consider relevant to your future career?**



**What is the subject of study and a person called who specialises in the subject? Which is the stressed syllable in the word?**

|  |  |  |
| --- | --- | --- |
| **Science**  | **Subject of study**  | **Scientist**  |
| *Example: genetic engineering*  | *manipulation of DNA*  | *genetic engineer*  |
| mathematics   |   |   |
| history   |   |   |
| geography   |   |   |
| physics  |   |   |
| chemistry   |   |   |
| sociology   |   |   |
| philosophy   |   |   |
| languages   |   |   |
| economics   |   |   |
| statistics   |   |   |
| biology   |   |   |
| psychology  |   |   |

**Task 2 Vocabulary**

**Complete the sentences with one of these verbs in the correct form.**

*skip attend revise resit do apply get study fail pass pay*

1. I hated maths at school. I didn´t do any of the homework, never …………… attention to the teacher and ……………….. classes whenever I could. Of course, the first time round I ………… my exams and had to ………… them the following year. The second time round I ……………, which I was really pleased about. It boosted my confidence a lot and I decided to …………. to one of the better universities. To my amazement, I got in and I´m there now – studying maths!
2. Marc´s a very bright student. He always …………….. very well when he was at school. I´m sure he´ll ………… a good degree, even though he doesn´t …………… hard. Of course, he hardly ever ………….. lectures or ………… the things we´ve done. I sometimes resent the fact he´s so clever!

**What sort of student are you? What are the good and bad things about your studies?**

**Task 3 What is it that fascinates you most about geology? Are you and your partner similar or different in your interests?**



**Summarise your discussion using some of these expressions:**

* *to be drawn to*
* *to be interested in*
* *to have a keen interest in*
* *to be passionate about*
* *to be into*

**Task 4 Speaking: At the end of the day, it all comes down to geology**

You are presenting at an open day for high school students who are exploring different fields of study. Your mission is to make them realize how **geology impacts everything** from the environment and energy to construction and natural disasters.

**Brainstorm** various aspects of life, including:

* + Buildings and construction (materials like stone, concrete, metals)
	+ Energy sources (oil, gas, coal, geothermal)
	+ Natural disasters (earthquakes, volcanoes)
	+ The environment (soil, minerals, ecosystems)
	+ Others?

Choose **one area** of our lives that is significantly influenced by geology.

Use **functional phrases** to support or signpost your points (optional).

* + *One of the main reasons geology is so important is because...*
	+ *When natural disasters like earthquakes happen, it’s geology that helps us understand...*
	+ *Without geology, we wouldn’t have access to essential energy sources like...*
	+ *From the roads we drive on to the phones we use, geology is behind it all...*

**Task 5 Grammar: Conditionals**

**C1: If you study geology, you ……………………**

**C2: If you studied geology, you …………………….**

**(C3 optional): If you had studied geology, you …………………**

**Where would we be without geology?**

**Complete the sentences:**

1. If geologists studied Mars more closely, they ……………………………….……….. .
2. If ………………………………………, it would revolutionize technology.
3. If the Earth's core were more unstable, ……………………………………………….. .
4. If ………………………………………, we would reduce the need for mining.
5. If we could predict earthquakes, ……………………………………………………… .
6. If geologists had better tools, ………………………..……………………………….. .
7. If tectonic plates moved faster, ……………………………………………………….. .

**Task 6 Video: The Earth´s age**

<https://ed.ted.com/lessons/the-earth-s-age-in-measurements-you-can-understand-joshua-m-sneideman>

**Watch the video about the Earth´s age and answer the questions below.**

1. What analogies can be used to represent the age of the Earth?
2. How do geologists determine the age of planets?
3. How old is the Earth?
4. Why is understanding geological time important?

**Explain the meaning of the expressions from the video:**

*estimate*

*entire*

*single-celled*

*a milestone*

*to wipe sth. out*

*to go extinct*

**Task 7 Read the text. Can you find four pieces of information that are false?**

The Earth is the sixth largest planet in our solar system and the third planet from the Sun. The Earth is made up of three main layers. There is the crust which is the outer layer and is very thin, between 5 and 67 km thick. The crust consists of the land and sea. The land is mainly made up of two types of rock: limestone and basalt.

Then there is the mantle. This is a thick layer which is about 3000 km thick that lies directly below the crust. It consists of hot dense rocks and compounds of magnesium, iron and silicon. The rocks of the mantle are much lighter than those in the crust.

Lastly, there is the core. This is the centre of the Earth which consists of heavy metals. It has an inner and an outer layer. The outer core consists of molten rocks, iron and nickel, and it is about 2000 km thick. The inner core is about 1500 km thick and is a solid structure containing nickel and iron. The temperature and pressure of the inner core of the Earth is so low that the metals are squeezed together making it difficult for them to move about like a liquid, instead they are forced to vibrate in one place like a solid.



(adapted from Kelly, K. *Science.* Macmillan Education, 2008.)