Supplementary material - Quizzes

Quiz 1- Age: ≥9-12:

Multiple Choice Questions

1. If someone asked you what geology was, you could say it is the study of _____.
☐ the interior of planet Earth
☐ communications network on our planet
☐ distribution of populations and resources on Earth
☐ astronomical objects and phenomena

2. A marine geologist can discover clues about the formation of the Earth's crust by studying _____. (more answers are possible)
☐ waves
☐ marine animals
☐ rocks
☐ ocean currents

3. Imagine you have to organize a sea expedition. What are the main elements to consider: (more answers are possible)
☐ the ship
☐ the instruments
☐ the research team
☐ money

4. Do you think there is life at the bottom of the ocean?
☐ Yes
☐ No

5. We know more about the surface of Mars than Earth:
☐ True
☐ False

Quiz 2 – Age: 13-15 years

1. What are the two types of tectonic plates:
☐ Oceanic and continental
☐ Granitic and sandy
☐ Terrestrial and maritime
☐ Eastern and western

2. The oceanic plate: (more answers are possible)
☐ Forms at accretion zones
☐ Disappears at subduction zones
☐ Forms at subduction zones
☐ Disappears at accretion zones
☐ Has a limited lifespan

3. More than 80% of terrestrial volcanism is underwater.
☐ True
☐ False

4. Seismic waves:
☐ are acoustic waves
☐ propagate unchanged in all media
☐ their propagation is modified by the media they travel through

5. What is the temperature at the bottom of the ocean?
☐ 0-3ºC
☐ 23-25ºC
☐ -10ºC

Quiz 3 – Age: >15-18 years

1. Ocean ridges:
☐ are deeper than abyssal plains
☐ are shallower than abyssal plains
☐ have a geothermal flow equal to the average
☐ have a geothermal flow above the average
☐ are roughly symmetrical

2. There are two main types of seismic waves: compressional waves (P waves) and shear waves (S waves). P waves travel through all materials, while S waves only travel through the following materials:
☐ solids
☐ liquids
☐ gases

3. The speed of light in a vacuum is 300,000 km/s. What is the propagation speed of compression waves in water:
☐ 1500 m/s
☐ 1500 km/s
☐ 150 m/s

4. What is an incident ray divided into?
☐ a refracted ray and a reflected ray
☐ a reflected ray and a refracted ray
☐ a reflected ray and a reflected ray

5. To define the depth (d) of a reflector underground, we need to know the round-trip time (t) taken by the wave and its propagation speed (v). Which of the following formulas would you use to calculate the depth:
☐ $d=(v \times t)/2$
☐ $d=(v \div t)/2$
☐ $d=(t \div v)/2$
☐ $d=v \times t$