



Supplement of

How do we make a scan of Earth's oceanic crust?

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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?

- 0-3°C
- 23-25°C
- 10°C

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:

- $d=(v \times t)/2$
- $d=(v \div t)/2$
- $d=(t \div v)/2$
- $d=v \times t$