

blank working sheet



UNDERSTANDING EARTHQUAKES AND SEISMIC WAVES

Earthquakes are sudden and violent movements of the earth's crust. They are caused by the deformation of the crust due to the release of energy stored in tectonic plates or in volcanoes. During earthquakes, seismic waves (elastic waves) propagate through the Earth. There are two types of seismic waves: surface waves and body waves. Surface waves (P-wave and S-wave) are slower and can propagate across the surface of the Earth. Body waves (Love wave and Rayleigh wave) are faster and can propagate through the body of the Earth. Seismic waves are used to measure the magnitude and location of an earthquake.

Can you develop a solution to measure the magnitude of a seismic wave?





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DEFINE YOUR SCIENTIFIC EXPERIMENT

We invite you through this model to be creative while developing the scientific and technical points to design a unique and motivating experiment! You are free to develop your own solution or to draw on our existing protocols and pre-existing resources you can find on the internet.

OQIENTOTION

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Briefly introduce your experiment, the issues addressed, the learning objectives. Define the problem to be solved, what are the learning objectives?

INTERDISCIPLINARITY

Discipline	Concept addressed through the protocol

CONCEPTUALISATION

Formulate a hypothesis to answer the given problem.





ΙΠΛΕζΙΙΟυΙΙΟυ

Describe the steps needed to answer your hypothesis. You could use the following steps as a guide: collect the data and use sensors, display the data, make it accessible, analyse the data and conclude, use the data to propose one or more solutions.



INVESTIGATION - CONTINUED

CONCLUDE, DEBQIEF

Identify the knowledge mobilised during this phase, identify the learnings aquired, reflect on what you have gained as competencies, knowledge and skills.

