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| outhern River College | **Year 11 Earth and Environmental Science**  **Task 4: Design a Seismograph** |

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| **Name:**  **Due Date:** | **Weighting 5% of final mark** | **Score: /** |

**Background**

Earthquakes can cause large and varied damage through the release of seismic waves. In addition if Earthquakes occur near a coastline or on a boundary in an ocean Earthquakes can also trigger Tsunami’s that inflict further damage. In order to minimise the severity of Earthquakes scientists have been tracking earthquakes using **seismographs** to measure the ricter scale in terms of severity.

Today modern technology allows us to create digital seismographs, but in traditional days seismographs were made simple in order to measure movement.

**Assessment**

For this assessment in pairs, you will be designing a seismograph that is capable of measuring the severity of earthquakes. For this assessment we will be using a simulated earthquake which will form seismic waves that a seismograph will measure. You will need to choose a scale that you will use to measure the severity of the earthquake after testing.

**Phase 1: Research**

In the space provided below collect any information you find online that will help in the planning stage of the assessment **(5 marks)**

In this section please include the references for the websites that you visited in **APA format (3 marks)**

**Phase 2: Planning and Design**

Materials: Please include a list of all the materials you require for building the seismograph **(3 marks)**

Method

In the space below list the steps to make a seismograph **(5 marks)**

Design

In the space below please draw a diagram of your prototype of the seismograph with labels **(4 marks)**

**Phase 3: Testing**

Use the table below to include the results from testing the seismograph for different heights a ball is dropped **(6 marks)**

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| --- | --- | --- | --- |
| **Quake** | **0.5 metre** | **1 metre** | **1.5 metres** |
| Measurement of quake in your scale |  |  |  |
| Physical observations of the test (what did you notice what worked |  |  |  |

Here you will be measure on your ability to present your prototype to the class

**(5 marks)**

**Phase 4: Evaluation**

In this stage you will evaluate the effectiveness of your prototype

What worked and what did not? **(3 marks)**

What would you change if you needed to do it again? **(2 marks)**

In this stage give your team member(s) a rating out of 5 for their contribution and participation **(2 marks)**