



**COMPLETE IN ANY ORDER YOU WANT** - Choose 1 challenge to research each day to build a case study about Earthquakes!

<p style="text-align: center;"><b>Challenge 1</b></p> <p>Research the 2011 earthquake in Tohoku on:</p> <p><a href="http://en.wikipedia.org/wiki/2011_Tohoku_earthquake_and_tsunami">en.wikipedia.org/wiki/2011_Tohoku_earthquake_and_tsunami</a></p> <p>Answer questions on worksheet 1</p> 	<p style="text-align: center;"><b>Challenge 2</b></p> <p style="text-align: center;"><b>Earthquake Vocabulary</b></p> <p style="text-align: center;">Can you find the definitions? Maybe create a board game or a poster to help you learn them?</p> <ul style="list-style-type: none"> <li>aftershock</li> <li>crust</li> <li>disaster</li> <li>earthquake</li> <li>epicentre</li> <li>faults</li> <li>focus</li> <li>hazard</li> <li>landslides</li> <li>liquefaction</li> <li>magnitude</li> <li>Plate boundary</li> <li>ring of fire</li> <li>Richter scale</li> <li>Seismograph</li> <li>tsunami</li> </ul>	<p style="text-align: center;"><b>Challenge 3</b></p> <p style="text-align: center;">What are earthquakes?</p> <p>Research and/or read what earthquakes are and where they are located.</p> <p>Build/draw or write a description for your own earthquake proof building.</p> <p><b>What is it built of? How does it react to an earthquake? What advice could people take if there is an earthquake?</b></p>
<p style="text-align: center;"><b>Challenge 4 :</b></p> <p>Write a rap, poem, song, powerpoint presentation or script about Earthquakes.</p> <p>Can you make it rhyme? Add alliteration? Similes? Metaphors or Personification?</p> <p>If you are stuck – try an acrostics poem.</p>	<p style="text-align: center;"><b>Challenge 5 – P.E</b></p> <p>Lets get active!</p> <p>Try and do some form of physical exercise every day this week. It could be the golden mile around your living room, an obstacle course in the garden, walking your dog for 20mins a day, PE with Joe Wicks.</p>  <p>Write a log for what you have done and how long you completed each activity.</p>	<p style="text-align: center;">Resources to help you</p> <p style="text-align: center;">Oddizzi.com</p> <p>Log on details are:</p> <p style="text-align: center;">Oak WB Maple WB</p> <p>Password:</p> <p style="text-align: center;">MapleWB OakWB1</p>

Challenge 1 – Earthquake case study

## 2011 Tohoku Fact File

**Your tasks:**

- Using the internet to help you, complete this fact file on the 2011 Tohoku Earthquake that struck in Japan.

### When

Date \_\_\_\_\_  
Time \_\_\_\_\_  
Duration of quake \_\_\_\_\_

### Size

Magnitude \_\_\_\_\_  
Aftershocks \_\_\_\_\_  
Tsunami height \_\_\_\_\_

### Human toll

Deaths \_\_\_\_\_  
Injured \_\_\_\_\_  
Missing \_\_\_\_\_

### Financial toll

Estimated  
cost of the  
earthquake \_\_\_\_\_

### Where

Depth \_\_\_\_\_  
Latitude &  
Longitude \_\_\_\_\_



### Tsunami

Time taken to arrive \_\_\_\_\_  
Maximum height \_\_\_\_\_  
Distance travelled \_\_\_\_\_  
Places hit by  
the tsunami \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Damage to homes

Homes destroyed \_\_\_\_\_  
Homes ½ destroyed \_\_\_\_\_  
Homes part destroyed \_\_\_\_\_  
Homes without power \_\_\_\_\_  
Homes without water \_\_\_\_\_



## Challenge 2 – Earthquake Vocabulary

aftershock

crust

disaster

earthquake

epicentre

faults

focus

hazard

landslides

liquefaction

magnitude

Plate boundary

Ring of fire

Richter scale

Seismograph

tsunami

Can you find the definitions and then a creative way to help you learn them?



### Challenge 3 – What are earthquakes?

How long does an earthquake last?

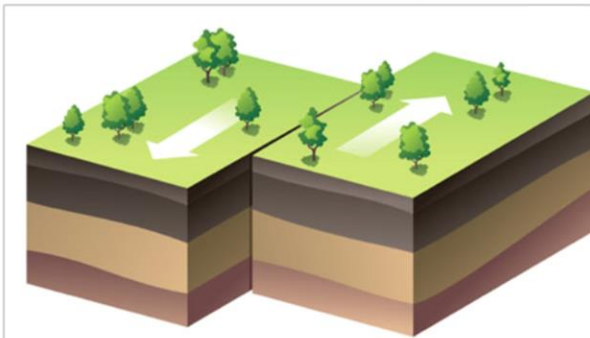
An earthquake can last for just a few seconds – and might not do too much damage – but could last for several minutes. Violent shaking for several minutes, or a series of shorter, more powerful shakes, can cause even the tallest skyscraper, or strongest bridge, to collapse in a pile of rubble.



Design an earthquake proof building. What is it built of? How does it react to an earthquake? What advice could people take if there is an earthquake?

### WHAT IS AN EARTHQUAKE?

An earthquake happens when two of the Earth's giant **plates** suddenly slip past each other, snap, crack or make other rapid movements.



Two plates slowly grind past each other

[View fullscreen](#)

Shock waves of energy spread out from the focus of the quake (the place where the slip or snap occurred). It's this sudden movement that causes the earth to shake. The shaking is an earthquake!

Earthquakes occur because the Earth's plates are always on the **move**, grinding over, under or against one another. As they do this, the friction between them may cause them to get stuck – the rocks lock together.

