Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_\_\_\_

*STEM 8 – Science* Unit 3 – Plate Tectonics

**Lesson #5 – Volcanoes and Earthquakes Inquiry Project**

**INFORMATION WHICH MUST BE INCLUDED IN YOUR LOCAL VOLCANO RESEARCH:**

|  |  |
| --- | --- |
| Name of volcano: |  |
| Name of volcanic belt: |  |
| Elevation: (how tall is the volcano) |  |
| Canadian province or American state where volcano is located: (include a map) |  |
| Cities near or on the volcano? |  |
| Describe, if any, uses of the volcano in the country? |  |

**First Nations Significance:**

|  |  |
| --- | --- |
| Name given by First Peoples and explanation why? |  |

**Earth’s Plates:**

|  |  |
| --- | --- |
| Name of Earth’s plate or plates that surround your volcano: |  |
| Type of plate boundary located at your near your volcano: (divergent, convergent, transform) |  |
| Explain the interaction of the type of plate boundary located at or near your volcano? |  |
| Explain the basic driving force for plate movement: |  |

**Volcano Type:**

|  |  |
| --- | --- |
| Explain the basic anatomy of the volcano – |  |
| Name your volcano type (shield, rift, or composite) |  |
| Explain how your type of volcano is created/produced and how this affects its shape/size |  |

**Eruption:**

|  |  |
| --- | --- |
| What factors cause your volcano to erupt? |  |
| How does an eruption from your type of volcano look? |  |
| How often does it erupt? |  |
| When did it erupt last and what was the extent of the damage? |  |

**Hazards and Safety:**

|  |  |
| --- | --- |
| Volcanic hazards - is it only the lava that is a problem or are there other hazards such as lahars, pyroclastic flows, and ash fall? |  |
| How can you prepare for a volcanic eruption? |  |
| Is there any means of early warning? |  |
| Which is considered the most dangerous type of volcano? Explain why. |  |

**Part 2: Choose your earthquake:**

**INFORMATION WHICH MUST BE INCLUDED IN YOUR GLOBAL EARTHQUAKE RESEARCH:**

|  |  |
| --- | --- |
| Name of earthquake |  |
| Country where earthquake occurred. (include a map) |  |
| Describe who or what lives in the earthquake zone. |  |

**Earth’s Plates:**

|  |  |
| --- | --- |
| Name of Earth’s plate or plates that is close to the earthquake. |  |
| Type of plate boundary located at your near your earthquake. (divergent, convergent, transform fault) |  |
| Explain the interaction of the type of plate boundary located at or near your earthquake. |  |
| Explain the basic reason behind plate movement. |  |
| Explain what earthquakes are and why they occur. |  |
| Which plates are interacting in what ways? |  |
| What part of the plates are breaking to cause earthquakes? |  |
| When was the last earthquake at your location? How strong was it? (Richter scale) |  |
| How much damage was caused or lives lost in the last earthquake at your location? |  |
| How often do earthquakes occur here and how strong (on average) is each earthquake? |  |

**Hazards and Safety:**

|  |  |
| --- | --- |
| List and explain the different hazards caused by earthquakes (falling objects, collapsing infrastructure, tsunamis) and how to avoid them. |  |
| Explain what people can do to prepare for an earthquake (safety). |  |
| Include what people should put in an earthquake survival kit. |  |

|  |  |  |
| --- | --- | --- |
| **C** | Communicate ideas, findings, and solutions to problems, using scientific language, representations, and digital technologies as appropriate |  |
| **Beginning** | **Developing** | **Accomplishing** | **Mastering**  |
| The student gives direct answers to questions without elaborating and does not use evidence or examples to help with their reasoning.  | The student elaborates in their response with some evidence or examples to communicate their ideas.  | The student is able to use evidence and examples to communicate clearly with scientific language.  | The student is able to use evidence and examples to communicate clearly with scientific language. The student connects their response where possible to their own experience.  |