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| **Group Members & Grade Levels** | Members: Anthony, Jessica, Katrina, Kyra  Grade Level: 7 |
| **Teacher/School** | Teacher: Mrs. Strachan  School: Golden Ears Elementary |

Imagine that you have been asked to do a group research project about **Earth Science.** The project will take 2-3 weeks.

**Research questions**

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| **Brainstorm some questions you could ask about a particular aspect of the community (ex. Housing, land use, schools, etc.)** | DOING SCIENCE INQUIRY INSTEAD!  Katrina  Jessica  Anthony  Kyra    1. How can volcanoes erupting effect future generations?  2. Are there any pros to volcanoes existing on Earth?  3. How prepared are we for a volcanic eruption in Maple Ridge, or Canada in general?  4. What can we do in order to make sure we’re safe if a volcano erupts?  5. Is there anything we do that can cause a volcano to erupt? How can we change those things?   6. How do Volcanoes mentally affect humans?  7. How can Volcanoes help fellow humans in the coming future?  8. What would the effects be on our community be if volcanoes never erupted? Would our community be better or worse to this day?  9. Can active volcanoes be used to stop other crisises? If so, how?  10. How prepared is our community for a huge volcanic eruption?  11. How and why are volcanoes important to the Earth’s crust?  12. How do volcanoes affect vegetation around them?  13. How dangerous are Volcanoes?  14. Why would we study Volcanoes?  15. How are we affected by volcanoes?  16. How ready is British Columbia for a volcanic eruption on the North American Plate? What would the effects be? (Economically, financially, danger risks…etc.)  17. What impact do volcanoes have on the environment around us?  18. What would it be like if no volcanoes existed on earth?  19. Why have stories and myths been made in early times to explain what volcanoes are?  20. How do volcanoes shape the world and its inhabitants? (Including animals, plants, humans…etc.)  21. Why do Volcanoes erupt?  22. What types of volcanoes are there, and what’s the difference between them?  23. Can any form of life survive the temperature of a volcano?  24. How can scientist tell if one of today’s mountains is an active volcano?  25. How many mountains are volcanoes?  26. How can people prevent volcanic eruptions?  27. Do our daily routines trigger volcanic eruptions? If so, how can we stop it?  28. Have there been questions about how to stop volcanic eruptions? If so, what are they and how can we make this become reality?  29. How has volcanoes shaped a better life for fellow humans?  30. When volcanoes erupt, does this wreck or change animals adaptations or roaming patterns? If so how, and how can we fix this problem?  31. How are volcanoes related to the future formation of land on earth?  32. Why do volcanoes around the world erupt more frequently than the volcanoes in Canada?  33. How have the minerals provided by volcanoes shaped the world today?  34. Why does earth have a core that makes volcanoes erupt?  35. Do volcanoes on the seafloor affect people on earth as much as the volcanoes on land do? How and why?  36. How are volcanoes today different than older volcanoes?  37. What effects do explosive volcanoes have on nearby occupants?  38. What are the effects to sea life and the underwater landscape when a volcano erupts under the ocean?  39. Why do some people still live near volcanoes even though they are dangerous?  40. How would scientists study volcanoes if they could go into the volcanoes themselves with proper equipment? (Where would they look, what equipment would be used, what to study...etc.)  41. How would humans be able to use volcanoes to their advantage in the future?  42. How can people make sure volcanoes don’t hurt people? Can the patterns be changed?  43. If humans were able to live deep beneath the earth's crust, how would volcanoes benefit them? Why?  44. How can people figure out a way to stand near and erupting volcano without getting hurt?  45. Are there any active volcanoes on other planets? Is so where? |

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| **Choose *one* question that will guide your research – this is the question the final presentation would answer.** | 16. How ready is British Columbia for a volcanic eruption on the North American Plate? What would the effects be? (Economically, financially, danger risks…etc.)  \*Example: Mount St. Helens |
| **Tell why you chose your question.** | Our group chose this question because it would help us learn more about volcanoes, and it would also relate to us because we live in British Columbia. It would be a good idea to know what effects volcanoes could have on British Columbia if one happened to erupt because we could get prepared for it in advance. This information could save lives. |

**Gathering Information**

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| **What information – facts and evidence -- will help you answer your question in a convincing way?** | **How will you find that information? (Where will you look? What tools will you use?)** | **How will you check to make sure your information/facts are accurate and useful?** |
| Information on the time periods between each eruption on the North American Plate would help us find out how frequently volcanoes erupt in this area. Additional facts on the devastation volcanoes cause to nearby residents, how volcanoes erupt (explosively or slowly), and the effects of a volcano eruption on British Columbian economy would all help answer our question in a convincing way. We’d also have to search up how prepared British Columbia is if a volcano erupted on the North American Plate. How could we prepare for a volcanic eruption if we’re not ready? Adding some history on volcanic eruptions could also strengthen our answer. | We can use multiple websites on how volcanoes affect the environment (air pollution, ash, fires…etc.), what damage volcanoes cause, the frequency of volcanic eruptions happening on the North American Plate (explain what the North American Plate is), and what British Columbians can do to prepare themselves in the event of a volcanic eruption on the North American Plate. Reading books and articles on the history of volcanic eruptions, how they affect human populations, and detailed info on how volcanoes work would help our group further understand the concept of volcanic eruptions and the effect they have on things around them. | By checking if the source of our information has reliable authors, citations posted, and can be verified by other sources, we will know if the facts and information we gathered was useful, accurate, and reliable or not. The information also has to be up to date and recent in order for facts to relate to our question. We would have to gather many sites/sources of information to check if everything is true/accurate, recent, reliable, and most of all, helpful towards answering our question. |

**Working together**

What are some jobs group members will need to do? How will you divide up the work?

List some of the main jobs, with the names of which group members might do them.

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| **Some main jobs we will need to do** | **Who will do them** |
| Research and gather info/notes (including citations and contacting experts):  Finalizing notes (piecing the info into a report): | Jessica/ Anthony/Kyra  Anthony |
| Gathering pictures and media (videos, music…etc.) for both the movie and website: | Katrina |
| Presenting in movie (speaking):  Filming, getting clips for movie: | Jessica  Kyra |
| Constructing the Inquiry Website (piecing up and editing):  Constructing the Inquiry Movie (piecing up and editing): | Anthony  Anthony, Jessica, Katrina, Kyra (each does a little bit) |

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| **How will you make sure you *work together well* as a team? Or how will you deal with problems that arise between group members?** | We will work well together as a team when we split up the work evenly, hand in each of our parts on time, and always listen to others’ ideas so everyone has a say in discussions. Making sure the people missing can have less work, and the arguments solved peacefully by proposing an idea that everyone agrees on can solve problems such as people missing or arguments. |

**Tools**

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| **List any technology and other tools you will use.** | Our group can use our laptops to type up info and make the iMovie and website, read books in class or from the library (school or local) to find out facts, go through articles on the Internet for info, and watch movies or videos from the Internet to learn about volcanoes. |
| **List any *new* tools or skills you will need to learn?** | We need to learn how to research reliable and up to date information by checking the dates, authors, and info multiple times. We would also have to learn how to properly ask an expert for information to answer our question. Learning other things such as how to do websites, make movies, gathering video clips, and editing and piecing up info would all help us finish our project. |

**Making your work interesting and unique**

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| **What could you do to make your project especially interesting and different from any other groups’? (Think creatively!)** | By adding in additional and interesting info that other groups don’t have, our group can make our project different and unique from other groups. Inserting cool and flashy pictures or video clips to go with our movie could further increase the creativity of our project. The website would also have to include interesting and possibly interactive information to make our group unique from other groups. |

**Presenting your findings and conclusions**

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| **Who might be interested in learning about your work?** | Scientists and students researching and learning about volcanoes might be interested in our work because we are putting together a presentation on volcanoes. Teachers and parents in British Columbia might also be interested in our project because our presentation includes information on how prepared BC is if a volcano erupted somewhere on the North American Plate. People would want to get prepared and informed if a volcanic eruption ever happened near their area. Government officials and industrialists in Canada might be interested in our project so they can educate people on volcano eruptions and strengthen our economy. |
| **How could you present your work so others can clearly understand it?** | We could put everything in kid words (and our own words) so people can clearly understand it. Using color coding, representative pictures, and easy to understand words and videos could all make our project easier for others to understand. |
| **What could you do to make your presentation memorable for your audience?** | Putting in some of the worst volcanic eruptions in history and the devastation/destruction they caused could make our presentation unique and memorable. Finishing with a powerful message or scene could also make the audience remember our presentation. |