Earth Science 11 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Blk: \_\_\_\_\_

**ROCK SUPERHERO ASSIGNMENT**

**Task**: To research the properties and characteristics of a specific rock,

and create an superhero/villain that represents that rock.

**PART 1: RESEARCH – Your rock!**

Your Rock’s **name**:

**Reflection 1**: What initial **questions** do you have about your rock?

**What you should research:** *✔Tick the criteria when you have included them in your project!*

* The name(s) of your rock
* Classification (*is your rock* ***igneous****,* ***sedimentary****, or* ***metamorphic****?*)
* **Properties** of your rock:

 - Colour, taste, sound, hardness, weaknesses, patterns, acid reaction

 - Composition *(minerals that make up your rock, felsic/mafic, clasts, fossils…)*

 - Texture *(grain size, crystal size, foliation, banding, glassy, vesicular…)*

* How it is formed (Rock Cycle!)
* Where it is commonly found
* How it is obtained/mined
* What it is used for (industry/commercial/manufacturing/etc…)
* First People’s perspectives and knowledge of your rock
* Your personal connection to your rock
* Other awesome and cool facts about your rock!

**PART 2: COMMUNICATION – Mini-poster!**

**A. Create a superhero/villain** **based on your rock.**

-Use the properties and attributes of your rock to develop your **character’s powers, costume, and personality**! Do they have a catch phrase? Are they part of a team?

**B. Create an illustration of your superhero/villain on a mini-poster**

 -Show **deep understanding** of your rock in and around your character’s drawing.

 -Must be in colour, dynamic, and exciting! Info can be place around the poster!

**C. Create an Origin Story**

-On your mini-poster (or on the back), include an **origin story** for your superhero/villain based on the science of the formation of your rock!

**DUE DATE:**

**Reflection 2**:

a. What **limitations** did you find trying to turn your rock into a superhero/villain?

b. What is your **final opinion** of your rock?

**Summative Assessment Rubric**

*✔Tick the criteria when you have included them in your project!*

|  |  |
| --- | --- |
| **Your Score**  | **Curricular Competencies** |
| * Demonstrate a sustained intellectual **curiosity** about a scientific topic of personal, local, or global interest.  *(Have you shown curiosity about rocks and geology?)*
* Make observations aimed at identifying **your own questions** about the natural world. *(Did you do Reflection 1? Have you asked questions about your rock?)*
* Individually **plan**, select, and use appropriate investigation methods to **collect reliable data** - qualitative and quantitative. *(Did you plan and collect data about your rock? Both numbers and using your senses?)*
* Experience and interpret the **local environment.***(How is your rock part of the local environment?)*
* Apply **First Peoples** perspectives and knowledge, other ways of knowing, and local knowledge as sources of information. *(Have you included Indigenous knowledge of your rock?)*
* Use knowledge of scientific concepts to draw **conclusions** that are consistent with evidence.  *(Did your interpretations of your rock match your observations and data?)*
* Evaluate the validity and **limitations** of an analogy*. (Did you do Reflection 2? Did you describe the limitations?)*
* **Communicate** scientific ideas and information for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations. *(Did your superhero poster communicate a deep understanding of your rock to the class?)*
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|  |  |
| --- | --- |
| **Score** | **What it means** |
| **7** | In addition to Score 5 performance, in-depth inferences and applications that go beyond what was taught. Very few errors. |
| **6** | In addition to Score 5 performance, partial success at inferences and applications that go beyond what was taught. |
| **5** | No major errors or omissions regarding any of the information and/or processes (simple or complex) that were ***explicitly*** taught. |
| **4** | No major errors or omissions regarding the simpler details and processes and partial knowledge of the more complex ideas and processes. |
| **3** | No major errors or omissions regarding the simpler details and processes but major errors or omissions regarding the more complex ideas and processes |
| **2** | Partial knowledge of the simpler details and processes but major errors or omissions regarding the more complex ideas and processes |
| **1.0** | With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes |
| **0.5** | With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes |
| **0.0** | Even with help, no understanding or skill demonstrated |

***Rocks – Sign your name next to the rock you wish to research:***

|  |  |
| --- | --- |
| **Rock** | **Student Name** |
| Granite |  |
| Diorite |  |
| Gabbro |  |
| Peridotite |  |
| Rhyolite |  |
| Andesite |  |
| Basalt |  |
| Obsidian |  |
| Pumice |  |
| Scoria |  |
| Volcanic Tuff |  |
| Volcanic Breccia |  |
| Breccia (clastic) |  |
| Conglomerate |  |
| Sandstone |  |
| Siltstone |  |
| Claystone |  |
| Shale |  |
| Coquina limestone |  |
| Fossiliferous limestone |  |
| Chalk |  |
| Micrite limestone |  |
| Oolitic limestone |  |
| Dolostone |  |
| Rock Salt |  |
| Chert |  |
| Slate |  |
| Phyllite |  |
| Schist |  |
| Gneiss |  |
| Amphibolite |  |
| Ecologite |  |
| Hornfelds |  |
| Serpentinite |  |
| Soapstone |  |
| Quartzite |  |
| Marble |  |
| Metaconglomerate |  |