The Smithsonian Wants You to “HOP” to It!

(A 5th-Grade Science Project-Based Learning Experience)

Common Core and Essential Standards:

Science – (5.L.2) UNDERSTAND the INTERDEPENDENCE of plant and animals with their ECOSYSTEMS

L. Arts - (5.RL.7) ANALYZE how visual and multimedia elements contribute to meaning, tone or beauty of a text (Pourquoi tales)

Social Studies - (5.H.1.1) EVALUATE the relationships between European explorers (French, Spanish and English) and American Indian groups, based on accuracy of historical information (beliefs, fears and leadership).

Introduce PBL:

A box containing a variety of frogs was discovered by the Smithsonian Institute. Several herpetology teams were called in to help save these frogs. Your team, being herpetologists or frog experts, was chosen by the Smithsonian Institute to return one of the frogs to its correct ecosystem. They also asked that while you are in the ecosystem to document other animals and plants you see. Additionally, the Smithsonian Institute wants to add to their pourquoi stories collection and has asked your team to find natives from that ecosystem and record their story of how they think frogs got their hop. You will also need to record information about the natives you encounter to substantiate the pourquoi tale you submit.



Create rubric with students:

5th Grade Rubric – PourQuoi Tale PBL

|  |  |  |  |
| --- | --- | --- | --- |
| Task | 3 | 2 | 1 |
| Pourquoi Tale –story | Explains how the frog got its hop and is consistent with the ecosystem | Explains how the frog got its hop but can be a story told in any ecosystem | Explains how the frog got its hop and does not relate it to the ecosystem |
| Pourquoi Tale – setting | Setting clearly identifies the chosen ecosystem | Setting shows some factors related to the chosen ecosystem | Setting shows few to no factors related to chosen ecosystem |
| Pourquoi tale – characters | The animal characters are consistent with animals found in this ecosystem | The animal characters are mostly animals found in this ecosystem | Only some of the animal characters are found in this ecosystem. |
| Mat – ECOSYSTEM | The mat shows at least 3 animals (including frog); 2 plants, and 1 water source specific to the ecosystem | The mat shows at least 2 animals (including frog) and 1 plant specific to the ecosystem | The mat is missing inclusion of other animals, plants, or water source |
| Frog Robot | Frog robot is complete, looks like the chosen frog for the ecosystem and can move forward | Frog robot is complete and can move forward | Frog robot is complete but is not programmed to move |
| Native American research | A PowerPoint slide gives information on a specific Native American tribe/tribe of chosen ecosystem; information includes name, location and at least 2 interesting facts | A PowerPoint slide gives information on a specific Native American tribe/tribe of chosen ecosystem; information includes name, location and at least 1 interesting facts | A PowerPoint slide gives information on a specific Native American tribe/tribe of chosen ecosystem; information includes name and location |
| Animal and Plant Research | Completes PPT slides showing and describing at least 2 animals, the frog, and 2 plants from that ecosystem | Completes PPT slides showing and describing at least 1 animals, the frog, and 1 plants from that ecosystem | Completes PPT slides showing and describing at least the frog, and 1 plants from that ecosystem |
| Creativity | Shows creativity in tale, mat and robot frog | Shows some creativity in tale and robot frog | Shows little creativity in tale and robot frog |
| Teamwork | Work together without arguing and complete PBL on time | Work together with a little arguing and complete PBL on time | Work together with a little arguing and doesn’t complete PBL on time |
| Presentation to K/1st grade class | Presents story with storytelling voice that is easily heard and includes expression of feelings | Presents story with storytelling voice that is easily heard | Presents story with storytelling voice that is heard most of the time |

\*\*\*Alternative to robot is to make an origami frog from index cards - <http://www.wikihow.com/Make-an-Origami-Jumping-Frog-from-an-Index-Card>