Lesson Plan for Henrico 21 Awards

Lesson Title: Animal Habitats
Lesson Submission Number:
Target Grade/Subject: 1st and 2nd Grades/Science and Language Arts
Length: 4 Weeks

Summary: *This project was part of a quarter long interdisciplinary unit on plants, animals and habitats. With the end goal of creating a museum to teach others about animals and habitats in mind, students embarked on a journey of questioning, researching, and creating. There was great enthusiasm in the process because they were going to be the animals in the exhibit! Using the knowledge that students learned through their research, they collaboratively worked in small groups to create artifacts of a specific habitat. Students planned, designed, and constructed a habitat that included an expository piece, food web, scientific illustration, realistic mask, and artifacts that met the needs of their animals. Multiple community members and resources were used to complete this project including online databases, internet sources, applications, and print materials. In conclusion, students reflected as a class on what worked and why, as well as areas that needed improvement for the next project-based study.*

Essential questions: (*What are the foundational questions that students should be able to answer after this lesson?)*

- *How are plants and animals interdependent?*
- *What are the parts of a habitat that are essential for survival?*
- *How do habitats and animals change over time?*
- *How are plants, animals, and humans interconnected?*
- *How can we be caretakers of the environment?*

Lesson Development:
Process/Tasks/Assessment: *(Describe what the teacher and students are doing during this lesson. Include details about particular tasks and essential resources/tools. Include a description of the artifact that you will collect as evidence of content/skill mastery and state how you will communicate your assessment expectations to the students.)*

Students worked at their own pace but followed the steps outlined below.

Prior Knowledge
Students had an understanding of animal needs and the components of a habitat. They also had experience with conducting research.

Step 1
Teachers introduced the concept of creating a museum to teach others about plants, animals,

and habitats. As a whole group, we brainstormed potential animals that could go in the museum for the woodlands and/or oceans. We brainstormed research questions that the students determined were important for visitors to learn. Then, as a whole group, students developed research questions that they thought would fulfill knowledge needed in a habitat museum.

Step 2
Teachers introduced a teacher-created research graphic organizer, which utilized student generated questions, to help students organize their research information. Teachers reviewed database options: *PebbleGo, NatGeoKids, Britannica, and books*. Students began researching independently.

Step 3
Students continued independent research.

Step 4
Teachers modeled how to draw and label detailed scientific illustrations of their animals. Then, students utilized media to find their preferred photograph to help guide their observations and independently create their illustrations.

Step 5
Teachers modeled synthesizing information and writing a rough draft using the research organizer. Students synthesized information to independently write rough drafts of their research reports. As students completed their rough drafts, teachers held one-on-one revising and editing conferences. Students publish their reports.

Step 6
Teachers modeled creating a food web, using Pixie, and reviewed the flow of energy in a food web. Students used their research information to create a food web using Pixie.

Step 7
Using pictures of their animals and examples of other artists' masks, students designed and created their own animal masks with the help of community volunteers.

Step 8
The class brainstormed artifacts needed in the museum to accurately display the habitat for example bat cave, water source, plants specific to the area. Students created their animal habitats in the classroom using raw materials. As the artifacts were created, the class had check-ins to see if additional artifacts were needed to completely convey the habitat. Also as part of the check-ins, students shared their process and formed small collaborative groups to complete the tasks.

Step 9
Students with extra time created additional expository pieces for the exhibit. Ideas for additional pieces were brainstormed during class check-ins to effectively convey information that museum visitors would need to further their understanding of habitats and the class' process with the project. Examples include explanations of food webs, predators and prey, plant life cycles and

importance, and components of a habitat.

Step 10
As a class we discussed the interrelationship of the animals in the museum and created a giant food web display using only the museum participants and artifacts. Students enjoyed the discussion of their predator/prey relationships and were in awe of all of the connections made.

Step 11
In pairs or small groups, students practiced performing as the museum animals in their exhibits.

Step 12
Students presented their research to other classes and the community.

Step 13
Students reflected independently in writing, reviewing what they believed they did well, as well as the areas they would like to improve upon during our next unit of study. Students shared their writing, which led into a class discussion that elicited further reflection on collaboration, research, and focus. As a class we generated a list of goals for future units, which will be reviewed prior to and during our next unit of study.

TIP Chart Assessment:
(Using the TIP Chart, identify which level (e.g. entry, developing, approaching, ideal/target) your lesson falls in for each of the categories below and write a brief statement to describe what the students are doing as it relates to the indicators on the TIP chart.)

Categories:
Research and Information Fluency: Ideal/Target
Students were able to perform at the Ideal/Target level because of their prior experience with researching in a highly structured setting. Therefore, they were able to transfer their skills to this independent research project. Students were given a variety of databases to procure information. They were also provided with a teacher-created Symbaloo to find additional information where there were gaps in the databases. Students used Pixie to create their animal's food webs.

Communication and Collaboration: Ideal/Target
Students collaborated in small groups to create products that represent their animals' habitats. Students performed as an interactive museum exhibit for the K-5 classes at Sandston, as well as the greater Sandston community after school. In addition, students recorded their reports and products to be uploaded on ThingLink. As a whole group, students reflected on their collaborative work.

Critical Thinking and Problem Solving: Ideal/Target
Students were presented with the challenge of designing a museum exhibit to teach guests about animal habitats. Students generated open-ended questions that were purposeful to the

creation of the end product. These questions could, in turn, lead guests' learning by providing them with questioning sheets to use during their visit. Students reflected on their questioning and thinking to generate further questions to elaborate on their projects.

Creativity and Innovation: Ideal/Target
Using raw materials and art supplies, students collaboratively created habitats and masks based on their research. Students also took on the roles of their animals to teach guests about their behaviors.