NGSS Unit Planning with UbD

Teacher Name: 2nd Grade Team

Date: 3-7-16

School Site: E. Hale Curran

Unit: Garden Unit- Module 4, Brochure

NGSS Covered:

Grade 2

LIFE SCIENCE

Ecosystems: Interactions, Energy, and Dynamics - Students who demonstrate understanding can:

(2-LS2-1.) Plan and conduct an investigation to determine if plants need sunlight and water to grow.

Disciplinary Core Ideas

Interdependent Relationships in Ecosystems

(LS2.A:1.) Plants depend on water and light to grow. (2-LS2-1)

The History of Planet Earth

(ESS1.C:1.) Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1) EARTH AND SPACE SCIENCE

Earth's Place in the Universe - Students who demonstrate understanding can:

(2-ESS1-1.) Make observations from media to construct an evidence-based account that Earth events can occur quickly or slowly.

Crosscutting Concepts

(2-ESS1.CC.1.) Stability and Change

(2-ESS1.CC.1.1.) Things may change slowly or rapidly. (2-ESS1-1)

Earth's Systems - Students who demonstrate understanding can:

(2-ESS2.CC.2.1.) Things may change slowly or rapidly. (2-ESS2-1)

ENGINEERING DESIGN

Engineering Design - Students who demonstrate understanding can:

Science and Engineering Practices

(K-2-ETS1.SEP.3.) Analyzing and Interpreting Data - Analyzing data in K - 2 builds on prior experiences and progresses to collecting,

recording, and sharing observations.

CCSS ELA Covered:

Language Arts Grade 2 Reading Standards for Informational Text Integration of Knowledge and Ideas (RI.2.8.) Describe how reasons support specific points the author makes in a text. Writing Standards Text Types and Purposes (W.2.2.) Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section. Production and Distribution of Writing (W.2.5.) With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing. Range of Writing (W.2.10.) Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. CA Language Standards Conventions of Standard English Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. (L.2.1.g.) Create readable documents with legible print. CA

Note: This module will take between 7 to 10 days

| Understanding by Design NGSS Unit Plan | |
|---|---|
| Stage 1: Desired Results | |
| Understand Living things depend on their habitat to meet their basic needs. Nutrition and eating habits impact a person's overall health and well-being. | Essential Question(s) What types of food does the body need? How do you plan to educate people about the benefits of having a school garden? |
| Stage 2: Evidence/Assess | |
| Know Students will gain an understanding of the importance of growing your own food and how essential it is for human beings to eat healthy. They will also gain insight into the importance of helping people less fortunate by supplying the homeless shelter with vegetables grown from the school garden. | Do Students will create a brochure that will be used as a guide for the STEM expo to help explain their garden unit. The brochure will include the purpose of the garden, the process of creating the garden, the types of vegetables and their benefits, and the ultimate goal of supplying healthy vegetables to the homeless shelter. |
| Stage 3: Learning Plan | |
| How | |

Engage: Go over the brochure video on Defined STEM so students get an idea of what they will be doing. You can keep them in their same teams to create this brochure. Have students write the essential questions in their notebooks and discuss, especially the second one. Have them write down their ideas to discuss later. Talk to them about the criteria for the brochure. Go over the criteria template so they know how to organize their brochure.

Explore: Teams will then gather their data. They can use their former research and may have to conduct new research to find the

health benefits of the vegetables they planted.

Explain: Teams should organize their data according to the criteria for a brochure. Show teams how to access Word and where to find the templates for brochures. Let them pick their template and organize their information. While working on their templates they can save anything they do to their Haiku class under Wiki Projects using their brochure or team name. Then they can just open and continue working on it until done.

Elaborate: Once teams are done with their brochure, have them present their brochures to the class as a way of practicing how they will be using this for the STEM Expo. Other teams can give feedback and suggestions. Then give teams time to revise if necessary. Suggestion: Teams can create QR Codes for their brochure. When parents come to the STEM Expo they can scan the QR Code with their device and have the brochure on their phone, iPad, etc. Pam is doing a Lundi Lunch on April 14 on how to use QR Codes.

Evaluate: When teams are presenting, the other teams should have the rubric and criteria template in front of them to take notes. When a team is done presenting the suggestions should come from the rubric and criteria.

Stage 4: Transfer

Knowledge Transfer

Crosscutting Concepts: Stability and Change: Things may change slowly or rapidly Cause and Effect: Events have causes that generate observable patterns Patterns: Patterns in the natural world can be observed

Students will be able to see how stability and change, cause and effect, and patterns play an important role in life science in the natural world. Challenge them to recognize these three concepts during their brochure writing. Where do they see stability and change, cause and effect, and patterns in their everyday life?