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| M. Angileri | **6th grade science** | | **Lesson Plans 9-9-19 Introducing the Scientific Method (1)** | | | | |
| NGSS Standards | **MS-**  **ETS1-1.**  **MS-ETS1-2.**  **MS-**  **ETS1-3.** | | **Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.**  **Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.**  **Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.** | | | | |
| Vocabulary: | | **Scientific Method**: A logical step by step way of solving a problem in science.  **Purpose:** a reason for doing something or existing.  **Procedure**: a series of steps in a definite order, showing how something is done.  **Research**: the collecting of information about a particular subject.  **Experiment** – scientific investigation performed to answer a question or solve a problem.  **Hypothesis**: an educated guess.  **Demonstrate**: to show or prove something clearly by showing examples or evidence. | | | | | |
|  | | **MONDAY** | | **TUESDAY** | **WEDNESDAY**  **Open House**  **Early release** | **THURSDAY** | **FRIDAY** |
| Content Objective: | | 1.SW analyze the paper chain challenge from Friday to identify constraints, design problems and the impacts of their design choices. 2.SW compare their design to the design of others and use the best characteristics for the best solution to the challenge. | | Students will demonstrate knowledge and comprehension of the scientific method by summarizing information in a graphic organizer. | Students will demonstrate application of the scientific method by carrying out the Come Fly me investigation.  Begin Analysis | Students will demonstrate application of the scientific method by carrying out The Great Paper Towel Experiment. | Students will demonstrate application of the scientific method by carrying out the Falling Sticks activity |
| Language objective | | SW write to explain the constrains of the paper chain challenge and use comparative principles to identify the ideal attributes using sentence starters. | | SW orally make connections among the paper chain challenge and information in the article using content specific vocabulary. | SW orally make connections between the scientific method principles and their design to work with team members using complete sentences. | SW write to make connections between the scientific method principles and their design to work with team members using complete sentences. | SW write to make connections between the scientific method principles and their design to work with team members using complete sentences. |
| In class today | | Discuss Challenge  Highlight constraints  View and discuss results and challenges  Acrostic Poem (due Tuesday) | | Article: Scientific Method: Read and discuss (Shoulder buddy)  Graphic Organizer in Notebook | Review S.M. Conduct investigation” Come Fly with Me”  Analyze results | The Great Paper Towel Experiment  Analyze and apply steps of scientific method. | Discuss How to work in a group. Expectations  Falling sticks activity using the scientific method. |
| Learning Target | | I can identify limitations in the activity that affected the outcome of the paper chain challenge. | | I can summarize the steps in the scientific method as it relates to the paper chain activity. | I can apply the scientific method principles to experiment with the come fly with me investigation. | I can apply the scientific method principles to experiment with the Great Paper Towel Experiment  investigation. | I can apply the scientific method principles to experiment with the Falling sticks activity investigation. |