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| Day | Activity Overview | Science | Mathematics | Literacy |
| 1:20-30 mins | Read Twenty-One Elephants and Still Standing discussing elements of the plot. Photo sort of bridges. Discussion connecting shapes and structures of bridge designs to function. | K-2-ETS1-2 | CCSS.MATH.CONTENT.2.G.A.1 | Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot. CCSS.ELA-Literacy.RL.2.7 |
| 2: 20-30 mins | Explore *The Visual Encyclopedia of American Landmarks* to select a landmark to research. Tracing the cables on a suspension bridge. | K-2-ETS1-2 |  |  |
| 3: 60-75 mins | Use geometric shapes to build truss bridges as a physical model to understand function.Research selected landmark. | Developing and using models K-2-ETS1-2 | CCSS.MATH.CONTENT.2.G.A.1 | Understand key details through who, what, where, when, why, and how. CCSS.ELA-LITERACY.RI.2.1Use text features to locate key facts.CCSS.ELA-LITERACY.RI.2.6 |
| 4: 30-45 mins | Presentation and class discussion of the “21 Elephants” design challenge. Ask questions and gather information to define a problem.Calculating the weight of 21 “Elephants” using multiplication strategies. Research selected landmark. | Asking questions and defining problems Using mathematics & computational thinkingK-2-ETS1-1 | SMP 6: Attend to precision CCSS.MATH.CONTENT.2.OA.C.4 |
| 5-6: 1.5-2 hrs4 | Brainstorming, sketching, and discussing bridge designs in groups. Write informative piece on selected landmark. | Developing and using modelsK-2-ETS1-2 | SMP 7: Look for and make use of structure | Use informative/ explanatory writing to present selected landmarkCCSS.ELA-LITERACY.W.2.2Gather research for a projectCCSS.ELA-LITERACY.W.2.7 |
| 7-8: 2-2.5 hrs | Constructing bridges from sketch designs attending to precision. Be able to justify the design and any changes. Create and craft presentations on landmarks. | Constructing explanations and designing solutions | SMP 6: Attend to precision | Use proper conventions. CCSS.ELA-LITERACY.L.2.2Use images to contribute to presentation text. CCSS.ELA-LITERACY.RI.2.7 |
| 9: 1.5-2 hrs | Testing bridges. Analyzing bridge designs and taking notes to gather data. Presenting landmarks to the class. | Analyzing and interpreting data | SEP 5: Use appropriate tools strategicallyCCSS.MATH.CONTENT.2.MD.A.1 | Present:Describe key ideas and facts using clear sentences while speaking. Gather research for a projectCCSS.ELA-LITERACY.SL.2.4 |
| 10: 45-60 mins | Whole class discussion and analyzing bridge performances using data and evidence. Presenting landmarks to the class. | Engaging in argument from evidence Analyzing and interpreting data K-2-ETS1-3 | SMP 3: Construct viable arguments and critique the reasoning of others |