|  |  |
| --- | --- |
| **Course: TAG**  **Grade Level: 4th Grade** | **Title of Unit: STEM Lesson 2** |
| **Pacing:** 2 class periods |  |
| **Stage 1 - Desired Results** |  |
| **Understandings:** | **Essential Questions:**   * How does a bird eat? * What shape is a beak? * How does a bird’s beak work? |
| **Knowledge:**  Students will know…. | **Skills:**  Students will be able to work with a partner to build the best "beak" using materials chosen to pick up as much food as possible in one try without touching the food in any way with their hands |
| **New Jersey State Standards / Common Core**  **(Note: Include reference to relevant standards in the Content Area as well as technology and 21st century life and careers.)** | SCI.3-5.1.b, SCI.3-5.1.c, SCI.3-5.2.a, SCI.3-5.3.c, SCI.3-4.5.1.4.A.2, SCI.3-4.5.1.4.B.1, |

|  |
| --- |
| **Stage 2-Assessment Evidence** |
| **Performance Tasks and other evidence:** |
| Teacher Observation  Student Participation  “Test” of completed product |
| **Stage 3- Learning Plan** |
| **Learning Activities:** Teachers will divide the students up into pairs.  Students will be told that on the back table are various supplies and materials that the students will be able to choose from in building their solution to today's challenge.  There will be some constraints to the limit of the materials being used to not waste materials but students will be able to choose which items to use.  Students will have dry beans or uncooked pasta (elbow) to pick up as the "food" (this may influence their design in some way).  The students are reminded first by the teachers that they must work through the steps of the Engineering Design process before beginning their design/creation.  After all pairs are done creating and building their "beaks", they will test them out by attempting to pick up the most amount of food without using their hands at all and without dropping any food.  Teachers will allow for student reflection and massive clean-up at the end of the class periods. |
| **Materials**: plastic spoons; toothpicks, craft sticks, pipe cleaners, rubber bands, unsharpened pencils, tape, scissors, bowls, dry beans, elbow pasta, straws |