**Patricia & Phillip Frost Art Museum**


Inspired by artist, Carlos Estevez and his exhibit: *Celestial Traveler.*


**Objective:**
Inspired by artist, Carlos Estevez’s art exhibit and based on theorist, John Dewey’s, hands-on approach,

- The student will engage in a creative hands-on science and engineering assemblage project.
- The student using experimental learning will use his critical thinking skills to design and build their own three-dimensional “My Dream Machine” that helps humanity.

**Grades: (K-2)**

**Artist Background Information:**
Artist Carlos Estevez’s exhibit is named *Celestial Traveler* after one of his artworks showing a detailed kite representing the connection between heaven and earth. His art is his way of looking for his dreams and expressing his own spiritual and family journey through life. Estevez asks many questions about why humans exist, their power, their weakness and their mission in the universe. Estevez’s FIU Frost Art Museum exhibition contains art with mechanical (robotic) animals and people. His art collection also contains 15 telephone sculptures built with different objects and 82 bottles with special messages and images.

**Pre-Reading Connections:** Read a story about how machines help people. Two Notable Children’s Books:
* **Demolition.** By Sally Sutton. Illus. by Brian Lovelock. Candlewick. (Through a mix of rhyming text, sounds, and onomatopoeia, and large gritty illustrations, children are introduced to what machines do at a construction site.)
* **Machines Go to Work in the City.** By William Low. Illus. by the author. Holt. (Elegant illustrations portray a variety of gritty, urban machines in all their burly glory as they work under, through, and above the city.)

**Questions:** What kind of dream machine would you create to help people do their work easier?
**Questions:** Would your dream machine (robot) look more like a person or an animal? Why?

**Museum Visit / Fieldtrip:** Take a trip to the Patricia & Phillip FIU Frost Museum to see the art exhibit of Carlos Estevez.
**KWL Chart – Topic: Machines/Robots**

**What we know** about machines/robots? – Machines are made by humans to make their work easier. Robots are machines.

**What we want** to learn about robots: Can a machine (robot) think or dream?

**What we learned** about machines (robots): There are simple machines like scissors that cut paper or more complex machines like a Roomba that cleans and vacuums the floors.

**Vocabulary:**
- **Dream:** Something one imagines or thinks about doing
- **Robot:** A machine that helps make people’s work easier
- **Assemblage:** A collection of persons or things
- **Complex:** Multipart, opposite of simple
- **Humanity:** human race, people, civilization
- **Engineering:** The branch of science and technology concerned with the design, building, and use of engines, machines, and structures.

**Pre-Planning:** Have students bring in recyclable items from home to be added to the teacher’s collection for the “My Dream Machine” assemblage.

**Art Activity: “My Dream Machine”**

The student will engage in a creative, fun hands-on science and engineering assemblage project, relating to structural construction & engineering designing their own “Dream Machine”.

**Time:** *Art Assemblage activity* can be completed between 30 minutes to 40 minutes.

**Materials:** Almost anything recyclable. (Plastic color tops, paper plates, plastic straws, toothpicks, tape, plastic sporks, buttons, Popsicle sticks, cardboard.) Scissors, tacky glue, metal fasteners, white tag board & color markers.

1) Inspired by the images of Carlos Estevez, tell the students to build a robotic structure that meets the following criteria: 1) Looks like their favorite animal or person 2) Size of Assemblage: 8 inches x 11 inches. 3) Must appear to have movable parts using buttons, plastic tops, etc. 4) Dream Machine design must somehow be helpful to other people.
2) Give each student the same amount of materials (55 pieces) and set them free to build their machine (robotic) looking assemblage.

**Writing Connection Options:**
Student will write 1-4 sentences describing their dream machine and how it will help other people and the world (humanity) become a better place.

**Math Connection Options:**
Students will incorporate math by using a ruler to measure their assemblage (art activity). Students will use addition to calculate: How many recyclable items were used to create their individual assemblage? How many total recyclable pieces were used all together by the class? Optional: The teacher can give each student a $15 credit line to be able to buy up to 15 additional $1 recyclable items if needed to complete their assemblage.

**Closure:** Each student can show their classmates their robotic assemblage construction and read their descriptive “My Dream Machine” sentences.

**Assessment - Rubric to include:** 1) Student completed structure construction of an Assemblage. 2) Student stayed within 11”x 8” size dimensions. 3) Student indicated movable parts. 4) Student wrote descriptive sentences about: “My Dream Machine” and how it is helpful to other people.

**Theorist Connection:** In this lesson, John Dewey’s hands on approach places the student in the center of learning. Dewey’s belief with experiential learning values problem-solving as an opportunity for engaging children in mental processing and understanding. *(Engaging Young Children in Museums* by Sharon E. Shaffer)*

**NGSSS:**

**Language Arts Connection:**
LAFS.K.W.3.8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
LAFS.K.L.3. Vocabulary Acquisition and Use
LAFS.1.SL.2.5. Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

**Science:**
SC.K.P.8.1 Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.
SC.K.P.9.1 Recognize that the shape of materials such as paper and clay can be changed by cutting, tearing, crumpling, smashing, or rolling.
SC.1.P.8.1 Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light), texture, and whether objects sink or float.

SC.2.P.8.1 Observe and measure objects in terms of their properties, including size, shape, color, temperature, weight, texture, sinking or floating in water, and attraction and repulsion of magnets.

Math:

MAFS.K.G.2.6 Compose simple shapes to form larger shapes.

MAFS.K.G.2.1 Describe, sort and re-sort objects using a variety of attributes such as shape, size, and position.

MAFS.K.MD.1.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the height and items used to build two different assemblages, which is taller/which as more items/which has less items.

MAFS.1.MD.1.a Understand how to use a ruler to measure length to the nearest inch.

MA.1.G.3.1 Use appropriate vocabulary to compare shapes according to attributes and properties such as number and lengths of sides and number of vertices.

Visual Arts:

VA.K.C.1.1 Create and share personal works of art with others.

VA.1.S.3.1 Practice skills and techniques to create with two- and/or three-dimensional media.

VA.1.C.1.1 Create and discuss works of art that convey personal interests.

VA.1.H.3.1 Identify connections between visual art and other content areas.

VA.1.S.1.3 Create works of art to tell a personal story.