****

**Findley Oaks STEM Connect**

**1st Grade Design Brief**

|  |  |  |
| --- | --- | --- |
| **Month**  **November** | **Challenge**  **Changing Seasons Paper Dolls** | **Unit**  **Weather**  **Patterns** |

**Standard:**

Students should follow the **Engineering Design Process.**

**Background/Problem:** We have been learning about the four seasons - winter, spring, summer, and fall. We learned that we wear different clothing depending on the season and the weather.

**Design Challenge:** Working with a partner and using the materials and tools provided, design and create one free-standing paper doll with a lever operated moving part and four outfits. One for each of the four seasons that will stay on the paper doll with out falling off. Observers must be able to name the season your doll is dressed for without being told.

**Criteria:**

Your paper doll must:

* Be free standing.
* Have a lever operated moving part.
* Have four outfits, one for each of the four seasons.
* The four outfits must stay on without falling off.
* Observers must be able to name the season your doll is dressed for without being told.

**Constraints:** You can only use the materials provided.

**Materials: (per group of 2)**

Cardboard

Cardstock

Construction paper 1 new

Paper in the scrap box

Pipe cleaners

Craft sticks

Twist ties

Rubber bands

Ribbon

2 paper fasteners

Fabric scraps

**Tools:**

**Glue**

Markers and / or crayons

Scissors

Crazy scissors

Hole punch

Paper (For design planning)

Pencils

Options – have the students pick their favorite season and make one set of clothing. Have each group make a boy and a girl.







