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**Fulton County STEM Connect**

**Kindergarten Design Brief**

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| **Challenge**  **Marble Maze** | **Unit**  **Gravity** |

**Standard:** Prioritized Standard: SKP2.a Obtain, evaluate, and communicate information to compare and describe different types of motion. (While not explicit, the concept of gravity is incorporated into SKP2 when students are investigating the motion of objects in relation to the application of a force.

Students should follow the engineering design process.

**Background/Problem:** Six Flags has a lot of roller coasters. Why do they travel at different speeds depending on the direction they are going? Can you help design a faster roller coaster?

**Design Challenge:** Students will create a maze for a marble. They should brainstorm a design plan before they start/glue.

**Criteria:** Your marble must travel only by tilting the box top.

Your maze should have a starting point and a stopping point.

Your maze needs to have at least four turns in it.

Your straws should be at least two different lengths. (Advanced students may be able to measure the lengths, 4,6,8, and 10 centimeters.)

**Constraints:** You can only use the materials provided. If your marble falls out of the box you need to restart.

**Options**: Test your maze three times by setting a timer. What is your fastest time? Decorate your maze with paint, markers, or crayons.

**Materials:**

Shoe box top or any other top with sides

6-10 straws

1 marble

**Tools:**

Glue

Tape

Scissors

Rulers

Pencil

Paper

**Optional:**

Markers

Paint

Crayons

