Common Core Standards:

**Kindergarten Geometry:** Describe objects in the environment using names of shapes and describe the relative positions of these objects using terms such as *above, below, beside, in front of, behind, and next to.*

Objectives:

1. Learn and practice relative positions terms.
2. Develop familiarity with the properties of a Rubik’s Mini
3. Practice using position terms that are relative to a Rubik’s Mini

Materials:

1. Rubik’s Mini (one per student, or partners)

Background Knowledge:

In order to solve a Rubik’s Mini students need to have a good understanding of the terms *right, left, top, up, down, front and back.*

Procedure:

**Before class:**

Decide whether your students will work one-on-one or in partners with their Rubik’s Mini.

**With students:**

1. Give each student or partner group a Rubik’s Mini. Allow students 2-3 minutes to become familiar with the cube. Students should practice gently twisting the faces of the Rubik’s Mini.
2. Begin by showing students the top and bottom of a Rubik’s cube. Explain to students’ that these faces are referred to as the “Up Face” and “Down Face”.
3. Model how to turn the “Up Face” clockwise and counter-clockwise (inverse). Have students practice moving the “Up Face” of the Rubik’s Mini clockwise and counter-clockwise. You may want to relate the motion to the twisting on and off of a jar lid.
4. Have students turn to a partner and show their partner how to turn the “Up Face” of the cube clockwise and counter-clockwise.
5. Repeat steps 3 and 4 using the “Down Face” of the cube.
6. Once students have mastered rotating the “Up” and “Down” Faces of the Rubik’s Mini, both clockwise and counter-clockwise, model how to turn the “Front” and “Back” faces of the Rubik’s cube in a clockwise and inverse direction. You may want to relate the motion to the turning of a doorknob.
7. Once your students have practiced turning all of the faces of the Rubik’s Mini in a clockwise and counter-clockwise motion have students practice moving all of the different faces. Call a face (ex. “Front Face”) and direction (clockwise). Monitor students to be sure they are turning the correct face in the correct direction.

Notes to Teacher:

Monitor students’ use of vocabulary as they turn the correct faces of the Rubik’s Mini.