**Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_**

**Modeling the Coriolis Effect**

**Materials (per each student pair)**

* 1 Balloon (round)
* 2 Permanent Markers (different colors; visible when applied to balloons)

**Preparation**

1. Divide the class into working pairs.
2. Provide each pair with a balloon and 2 markers.
3. Project the questions on your board so that the students can answer them as they work (optional).

**Procedure**

1. Blow up a balloon.
2. With a marker, draw the equator on the balloon midway between the knot and the top of the balloon. Label the top North Pole and the knot South Pole.
3. Hold the balloon at eye level, by the knot, and rotate it left to right, simulating the rotation of the earth.
4. While 1 partner rotates the earth balloon, the other examines the movement of the earth from the North Pole perspective and from the South Pole perspective. Answer questions 1 and 2.
5. While 1 partner continues to rotate the balloon steadily from left to right, the other slowly tries to draw a line straight from the North Pole, south to the equator, using a second marker. While the earth continues to rotate, 1 partner tries to draw a straight line from the South Pole, north to the equator. Answer questions 3 and 4.

**Answer the following questions by writing in complete sentences and restating the question.**

1. As you look from the North Pole toward the equator, is the balloon spinning clockwise or counterclockwise?
2. As you look from the South Pole toward the equator, is the balloon spinning clockwise or counterclockwise?
3. What happened when you tried to draw a straight line from the North Pole to the equator?
4. What happened when you tried to draw a straight line from the South Pole to the equator?
5. Predict what would happen if you again drew lines in the northern and southern hemispheres but with the earth rotating in the opposite direction.