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The Coriolis Effect Worksheet

Part I. Modeling the Coriolis Effect Observations

Part II. A Model for the Coriolis Effect and Ocean Currents Observations

Post-Lab Questions

Part I. Modeling the Coriolis Effect

1. What does the spinning pan used in this activity represent? What does the chalk line represent?
2. Were the chalk lines that were drawn straight or curved?
3. Describe the differences between the chalk lines that resulted from both the clockwise and counter-clockwise spinning of the plate. Which way was each chalk line deflected?
4. What happened to the chalk line when the plate was spun at a faster rate of speed? What would happen to objects if the Earth were to spin at a faster speed?
5. Would an airplane departing from Ft. Lauderdale, FL to Chicago, IL, appear to be deflected to the right or to the left as it flies through the air?
6. Which way would a ship travelling from Melbourne, Australia to Santiago, Chile be deflected? What about the same ship travelling back to Australia from Chile?

Part II. A Model for the Coriolis Effect and Ocean Currents

7. In what manner/direction did the dye move initially when it left the cup?
8. What type of pattern did the blue dye eventually form toward the edge of the pan? Why did this pattern appear?
9. How is the motion of the water in the pan similar to ocean currents?
10. *Optional:* Why is the force associated with the Coriolis Effect sometimes called an "imaginary" force?

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