

Chapter 9

Use with Section 1

ENRICHMENT**● What is magnetism?****Which way is north?**

When you get home from school, your mom tells you she has a surprise for you. When you ask what it is, she gets a big smile on her face and says, "To get your surprise, you must solve a problem first." She has a golf ball with a small bar magnet inside, and she wants you to find a way to determine which end of the magnet is the south pole and which end is the north pole.

- Using complete sentences, describe how you would determine the north and south poles of the magnet. Can you think of more than one way to find them?

While you are working on your solution, your dad comes home and asks you what you're doing. Finally, you share your solution with your mom and dad, and you ask for your surprise. This time your dad tells you that you must solve another problem before you get your surprise. Using the golf ball from the earlier problem, you must decide which would be faster; to use another magnet to pull the golf ball three meters, or to use another magnet to push the golf ball three meters. If you choose to push the golf ball with the other magnet, the golf ball and the other magnet cannot touch each other.

- Explain your choice in complete sentences. You may include the properties of magnets that you learned about in this section.

- Obtain two bar magnets from your teacher. Set them on a hard surface such as a counter top, or a tiled floor. Using a meter stick, measure three meters. Mark a starting point and an ending point. Test your answer to Question 2 above. Which way is quicker?
