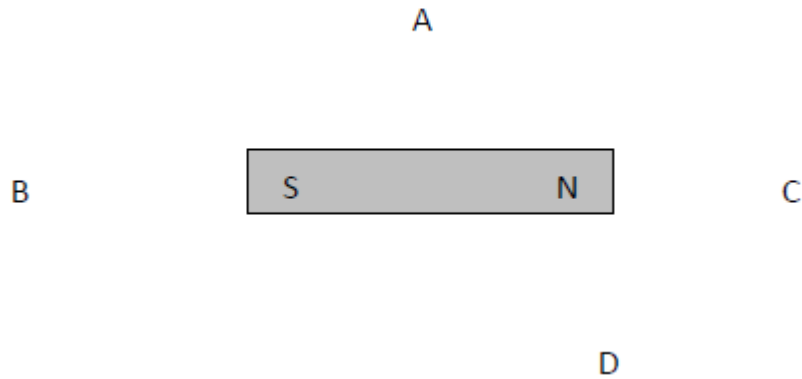


## Faraday's Electromagnetic Lab

Name: \_\_\_\_\_ Group: \_\_\_\_\_

### Predictions (these will not be graded for correctness – only effort)

1. A bar magnet is shown below. At points A, B, C and D label the direction a compass would point.



2. Compare and contrast a bar magnet to an electromagnet.

3. What do you think you would have to do to make a light bulb light using a magnet? Use words and pictures in your explanation.

Open the PhET (phet.colorado.edu) simulation **Faraday's Electromagnetic Lab**. Investigate the simulation and use the simulation to answer the following questions.

1. Draw the shape of the magnetic field around a bar magnet.



2. Draw a compass similar to the one in the simulation.

3. What does the compass needle point to? In other words, what is it attracted to?

4. Does the red end of the compass point towards the white end of the magnet or the red end of the magnet? Please explain why you think this is.

5. Make a list of ways to make a light bulb light.

6. How can you make the light bulb brighter?

7. What is an electromagnet?