

Materials:

Petri Dish
Tape
Bowl

Light weight bar magnet
Water
Compass

Methods:

- 1) Obtain $\frac{1}{2}$ of a petri dish (top or bottom).
- 2) Draw perpendicular lines to divide the space into four equal spaces.
- 3) Label the four contact points where the line meets the circle as North (N), South (S), East (E) and West (W).
- 4) Attach a light weight bar magnet to the petri dish using tape. Place the magnet on the north-south line. Ensure that the South end of the magnet is pointing toward the North mark.
- 5) Use a bowl that is larger than the petri dish and fill it with water.
- 6) Place the petri dish with the bar magnet in the bowl, making sure that the petri dish is floating.
- 7) Once the petri dish stops rotating, determine where north, south, east and west are.

