

## 3-D Magnetic Fields

**Gallery:** My Big Back Yard

**Course Name:** Magnet Mania

**Grade Level:** 3rd

**Activity:** Pre

**Approximate Time Required:** 30 minutes

**Vocabulary:** **MAGNET, ATTRACT, REPEL, MAGNETIC FIELD, NONMAGNETIC, POLE, NORTH POLE, SOUTH POLE, PREDICTION**

### **Objective:**

Investigate to find common objects that are attracted to magnets.  
Investigate how magnets attract and repel each other.

### **Materials Needed:**

Two bar magnets that have North and South poles marked. (If not marked use a compass to determine these)  
Small jar  
Iron filings  
Cooking Oil

### **Procedure:**

1. Fill small jar with cooking oil and some iron filings.
2. Cover jar and shake.
3. Immediately hold the two magnets on either side of the jar with opposite poles touching the jar.
4. Have students draw magnetic formed by iron filings in jar.
5. Have students repeat steps 2, 3, and 4 with like poles touching the jar.

### **Observations:**

Have students share and compare drawings.

### **Evaluation:**

Check student drawings for accuracy.

### **Modifications:**

For advanced students, touch a horseshoe magnet and refrigerator magnet to the jar.

**Georgia Standards:** S3P2a, b, S3CS1, SS3CS3a, c, S3CS4b, S3CS7