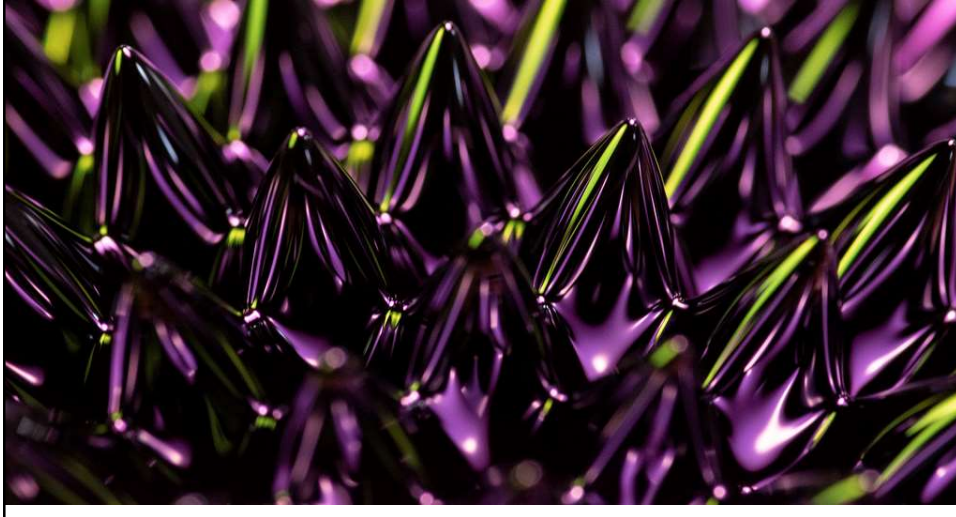


Lesson 3: Magnetic Fields



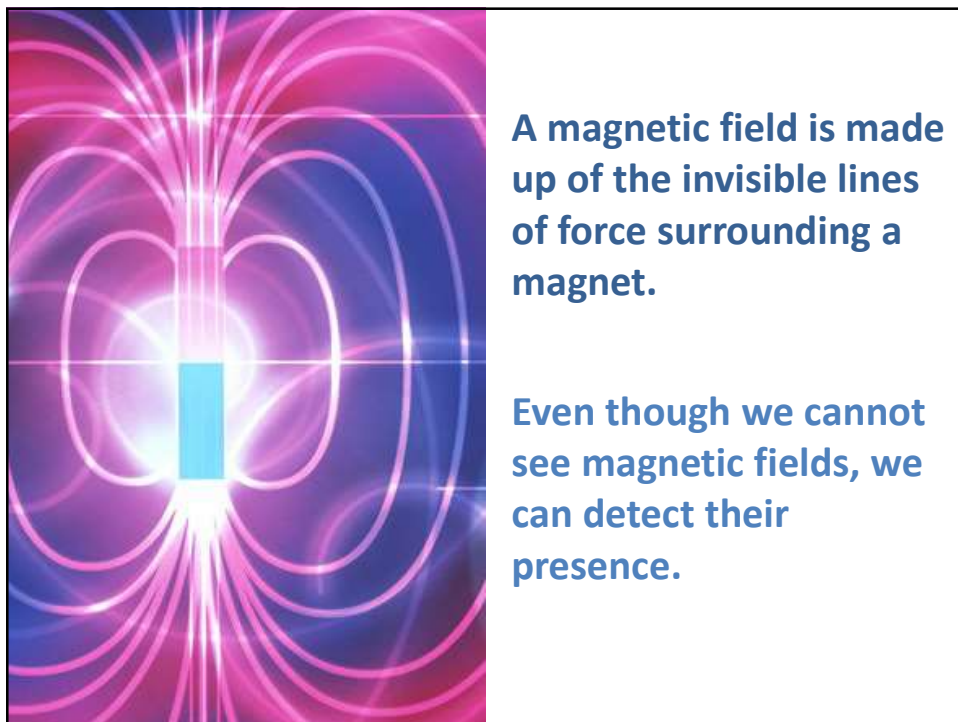
1

Characteristics of Magnets

1. **An object that produces a magnetic field**
2. Pulls on other ferromagnetic materials
3. Attracts or repels other magnets



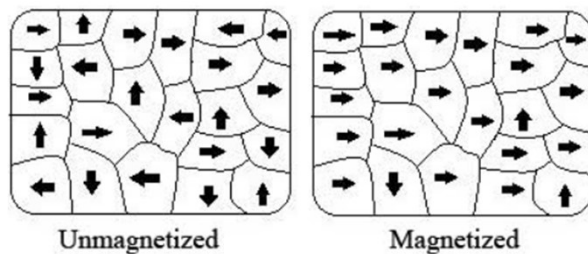
2



3

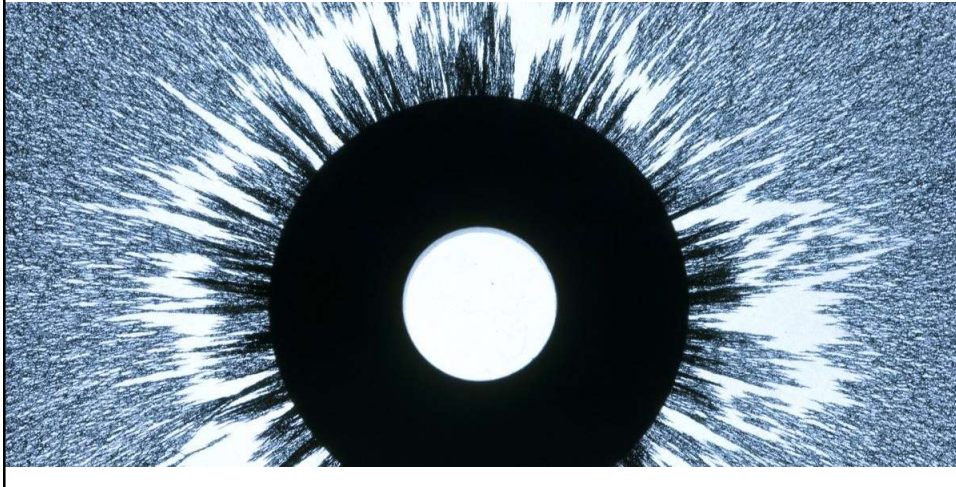
Magnetic fields are formed when the magnetic domains of the atoms that make up a substance line up in the same direction.

The more of these magnetic domains that are aligned, the stronger the magnetic field will be.



4

By using iron filings (small particles of iron) or other ferromagnetic particles, we can observe the shape and intensity of a magnetic field.



5



Ferrofluid is a ferromagnetic liquid containing iron oxide that can be attracted by a magnet and used to observe the presence of magnetic fields.

6

Magnetic Fields: Key Questions

- 1. What is a magnetic field?**
- 2. How can we determine whether an object produces a magnetic field?**
- 3. Do you think that the magnetic field for every magnet would look the same? Explain.**