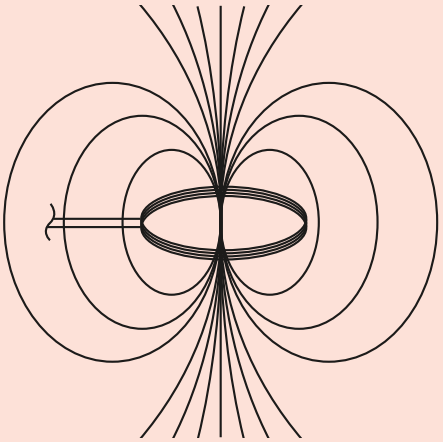
ELECTROMAGNETIC FIELDS

Electric fields are created by differences in voltage: the higher the voltage, the stronger the resultant field. *Magnetic fields* are created when electric current flows: the greater the current, the stronger the magnetic field. An *electromagnetic field (EMF)* can be thought of as a combination of the two.



Electromagnetic fields are present everywhere in the environment but are invisible to the human eye. Electric fields are produced by the local buildup of electric charges in the atmosphere and associated with thunderstorms. The earth constantly emits a magnetic field. It is used by birds and fish for navigation and causes a compass needle to orient to the north.

2. Connect one leg of a 220-ohm resistor to each negative LED leg, and insert the other resistor leg in the GND rail of the breadboard (see Figure 6-2). Connect each positive LED leg to digital pins 2 through 11 in turn.

LEDS	ARDUINO
Positive legs	Pins 2–11
Negative legs	GND via 220-ohm resistors