Spinning

Purpose
To separate the suspended parts of a suspension by spinning.

Materials
Hammer
Nail
1-lb. metal coffee can
Tap water
3 feet (1 m) cotton twine
2 tablespoons (30 ml) flour
Clear drinking glass

Procedure
• Use the hammer and nail to make two holes across from each other beneath the top rim of the can.
• Tie the ends of the twine in these holes.
• Fill the can 1/2 full with water.
• Stir the flour into the water.
• Carry the can and the empty glass outside.
• Hold the twine and swing the can around 15 times.
  **CAUTION: Stand in an open area. Do not release the twine.**
• Pour a small amount of the liquid into the empty glass.
  If it looks cloudy, swing 10 more times.
• Continue to swing and test for cloudiness until the liquid stops changing.

Results
The solution clears.

Why?
The mixture of the flour and water forms a suspension. As soon as the stirring stops, the undissolved flour particles start settling to the bottom of the can. Spinning the can produces a strong outward force. This force pushes the suspended flour particles to the bottom of the can. Thus, spinning the can speeds the settling process.