

Convection

Hot air rises:



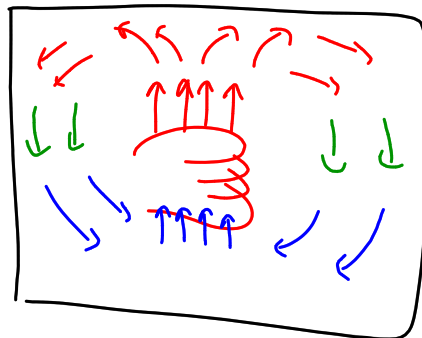
The hand is warmer than the air, so heat is transferred from the hand to the air. The warmer air rises, making the propeller turn.

Why does warmer air rise?

When air is heated the particles move faster. The spacing between the particles increases, so the air expands. This means it becomes less dense.

The warmer air is less dense than the surrounding cooler air, so the warm air floats upwards - i.e. it rises.

Cooler air from the surroundings flows in to take its place.



Convection speeds up the process of heat transfer from the hot object to the surroundings.