

Section 4

Understanding Earth and Space Systems

EXPLORATION 1

Energy from Hot Air

Experience how hot air can move objects.

Have you ever seen a hot-air balloon floating effortlessly in the sky?



Without wings and a powerful engine to help carry it, how can a hot-air balloon carrying a basket of people plus its own weight fly freely from place to place?

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Hot-air balloons can fly because of the hot air inside the balloons. When air is heated up, it becomes less dense than the air around it. So, hot air rises and cold air sinks. Hot-air balloons use this property of hot air to fly.

A burner in the balloon heats up the air inside the balloon, causing it to rise and lift the balloon upward. The greater the difference between the hot air and the cold air, the higher the hot-air balloon will go.

