



Year 1-4

# Hovering Butterflies

## Equipment

Shoebox  
Thread (dental floss is good)  
Magnets  
Tissue paper  
Paper clips



## Instructions

1. Lay a shoebox on its side.
2. Cut a piece of thread longer than the height of the box.
3. Tie a paperclip to one end of the thread.
4. Cut a butterfly shape out of the tissue paper and tape it to the paper clip.
5. Hold the butterfly in the box, almost touching the top. Pull the thread tight and tape it to the bottom of the box.
6. Lay a magnet on the top of the box, directly above the point where the thread is taped to the bottom of the box.
7. Hold the butterfly inside the box near the magnet so the thread is tight and then let go. The butterfly will hover in the air by itself.
8. Try moving the butterfly away from the magnet. Does it still hover? How far can you move it? Why?
- 9.

## Why does it do that?

Metal paperclips are made from steel, which contains iron. The attraction between the magnet and the iron is strong enough to pull on the paperclip, even without touching it. The thread stops the paperclip from being pulled onto the magnet. The stronger your magnet the further away you can move the paperclip and still make the butterfly hover.

