Ice Hockey

Bending the stick against the ice is like compressing a spring. It packs the stick full of potential energy. Hockey sticks, like springs and rubber bands, are elastic objects, which means that they're flexible. When the hockey stick is in its usual position, which is straight, there's no stored energy. The hockey stick can be bent some without breaking (this is called deformation), but when it's bent, it will try to go back to its normal position. When the stick strikes the puck, that potential energy turns into kinetic energy, sending the puck speeding away.

Try This!

1. Get a plastic spoon that can bend about an inch backwards without breaking (biodegradable spoons tend to be more flexible than other plastic spoons).

2. Make a tight wad of paper about half an inch in diameter.

3. Hold the spoon from just the handle and load the wad onto the dip in spoon. Fling the spoon forward and observe how the wad travels through the air.

4. Now, do the same thing, only this time, pull back on the top of the spoon so that the handle bends. Release the spoon and observe how the wad travels through the air. How does this launch compare to the first? How can you explain this?

Explanation: When you bent the spoon, the wad travelled faster and farther through the air. Bending or deforming the spoon gave it more potential energy, which turned into more kinetic energy after you released the spoon.