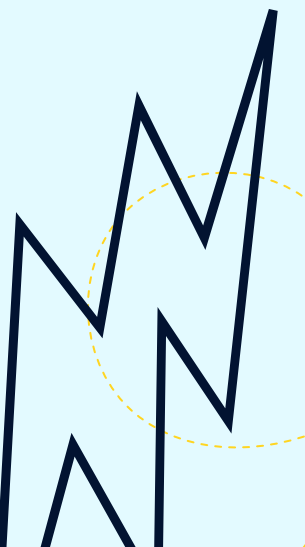
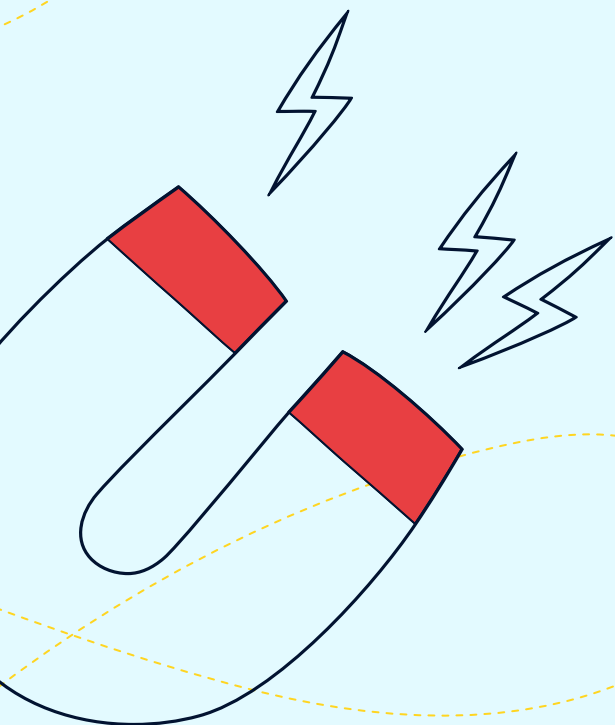
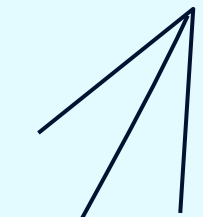
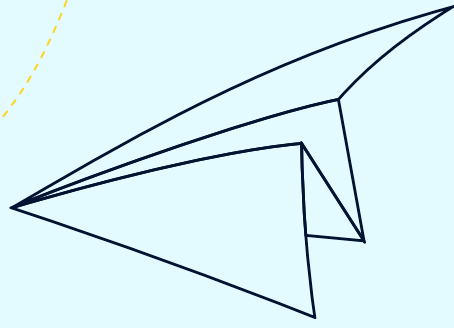
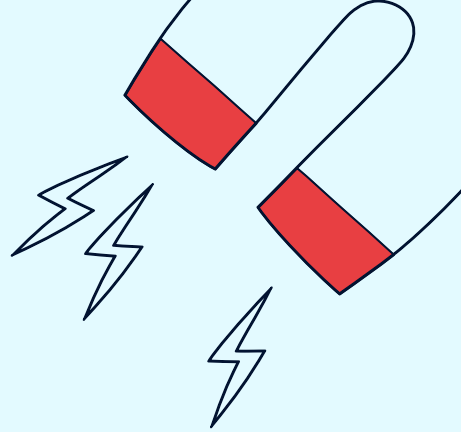
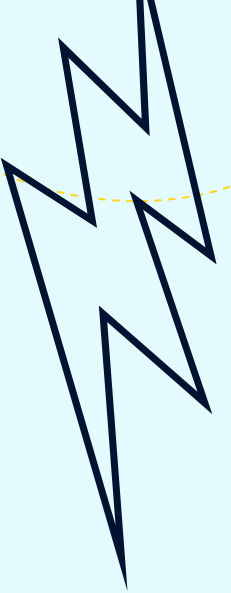


Catapult Making

And the energy behind it!



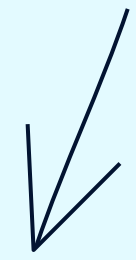


Introductions:

**My name is Saanvi Shah and I will be
guiding you today!**

Your turn:

**My name is [...] and my favorite ice
cream flavor is [...]**



Outcome:



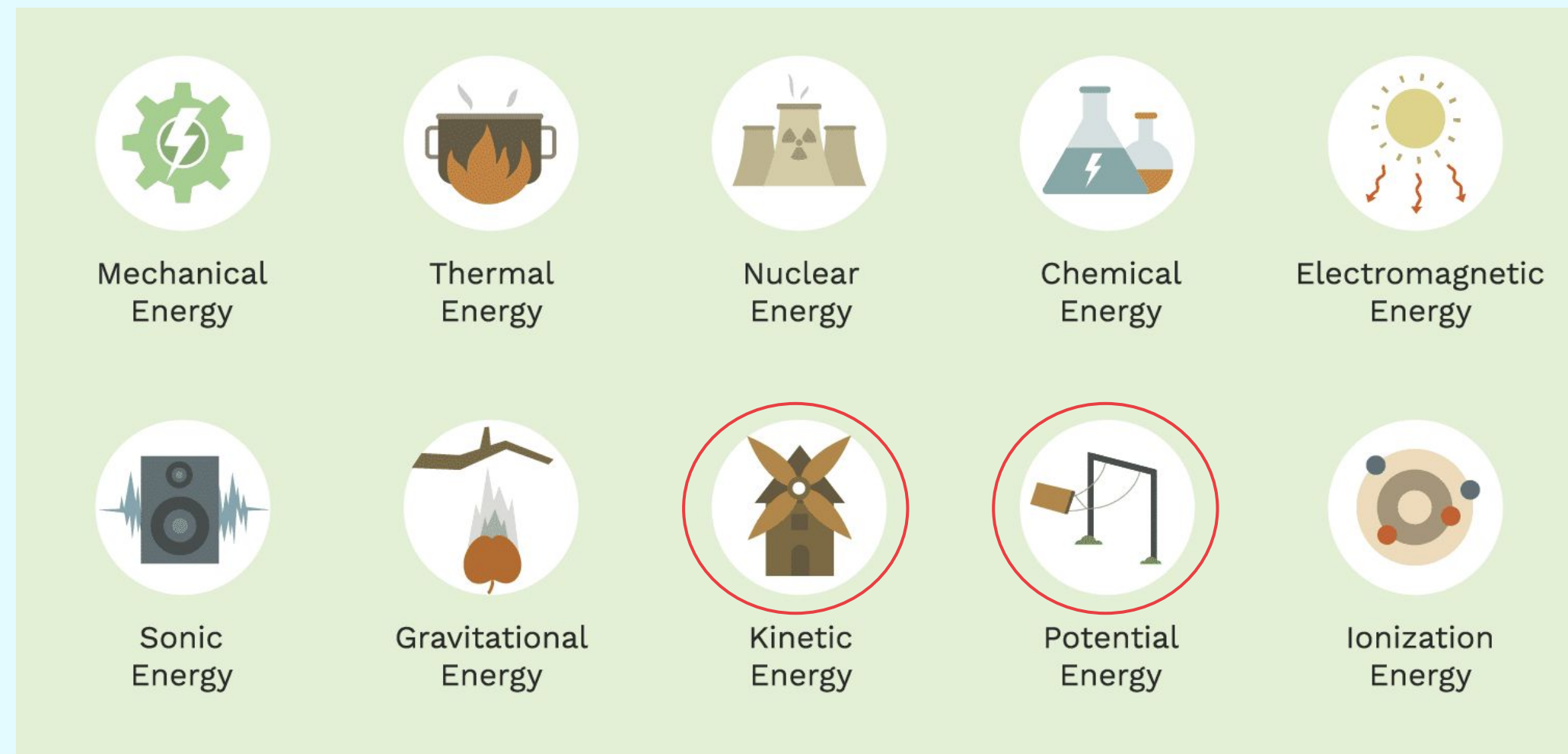
What is a Catapult?

- A catapult is a simple machine that uses a lever mechanism to launch objects.
- Our catapult uses popsicle sticks and rubber bands to store and release energy.
- In this experiment, we'll explore the roles of potential energy and kinetic energy



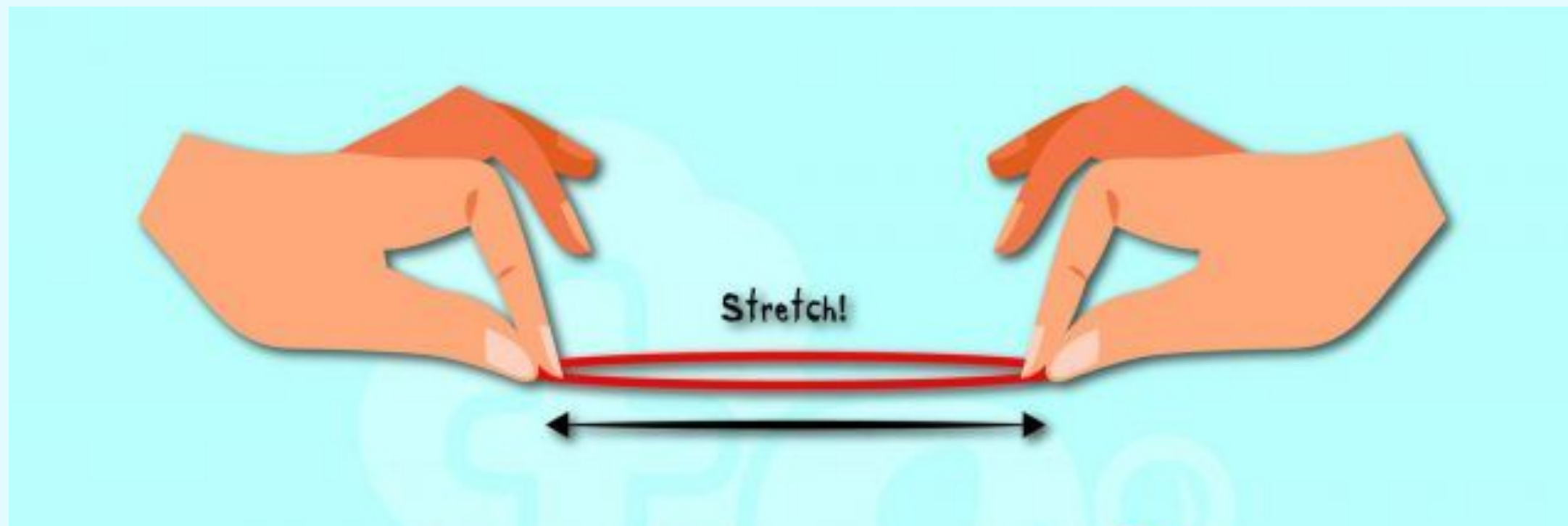
What is energy?

- **Energy** is the ability to do work or cause change.
- It is what makes things happen and allows objects to move, change temperature, or do other tasks.



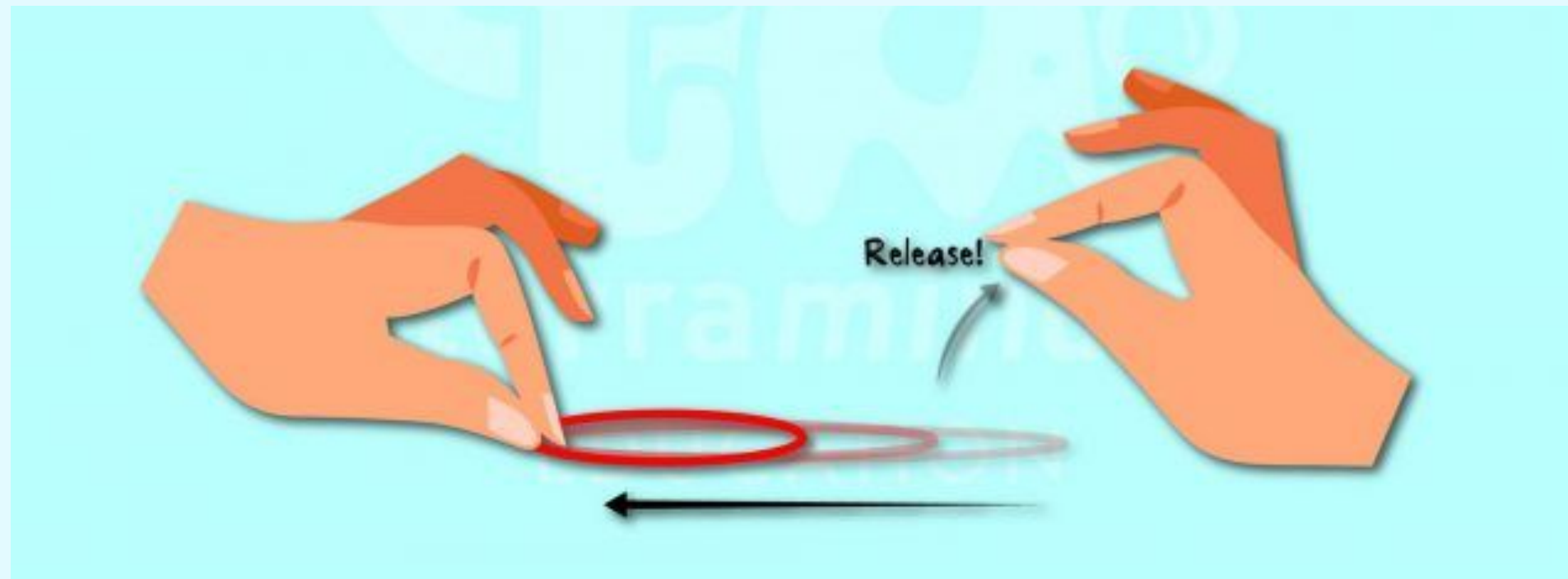
What is potential energy?

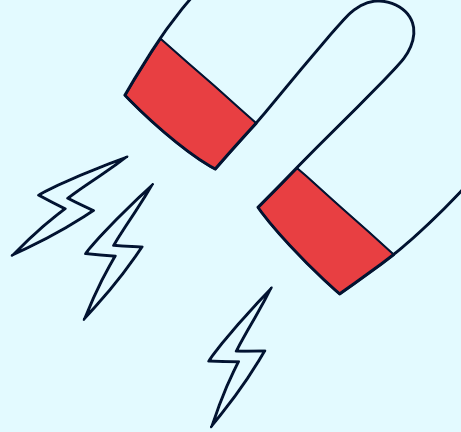
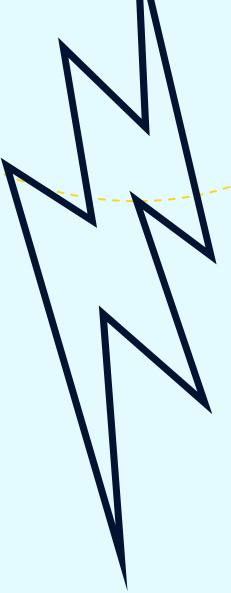
- **Definition:** Potential energy is stored energy that has the potential to do work.
- **Example in Catapult:** When we stretch the rubber bands, we are storing energy in them.
- The more we stretch the rubber bands, the more **potential energy** they have.



What is kinetic energy?

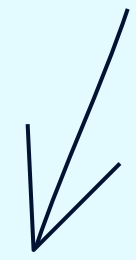
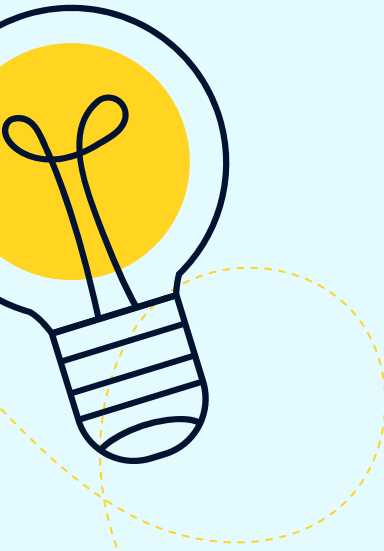
- **Definition:** Kinetic energy is the energy of motion.
- **Example in Catapult:** When the rubber bands snap back to their original position, they release the stored energy.
- This energy is transferred to the catapult arm, launching the projectile.





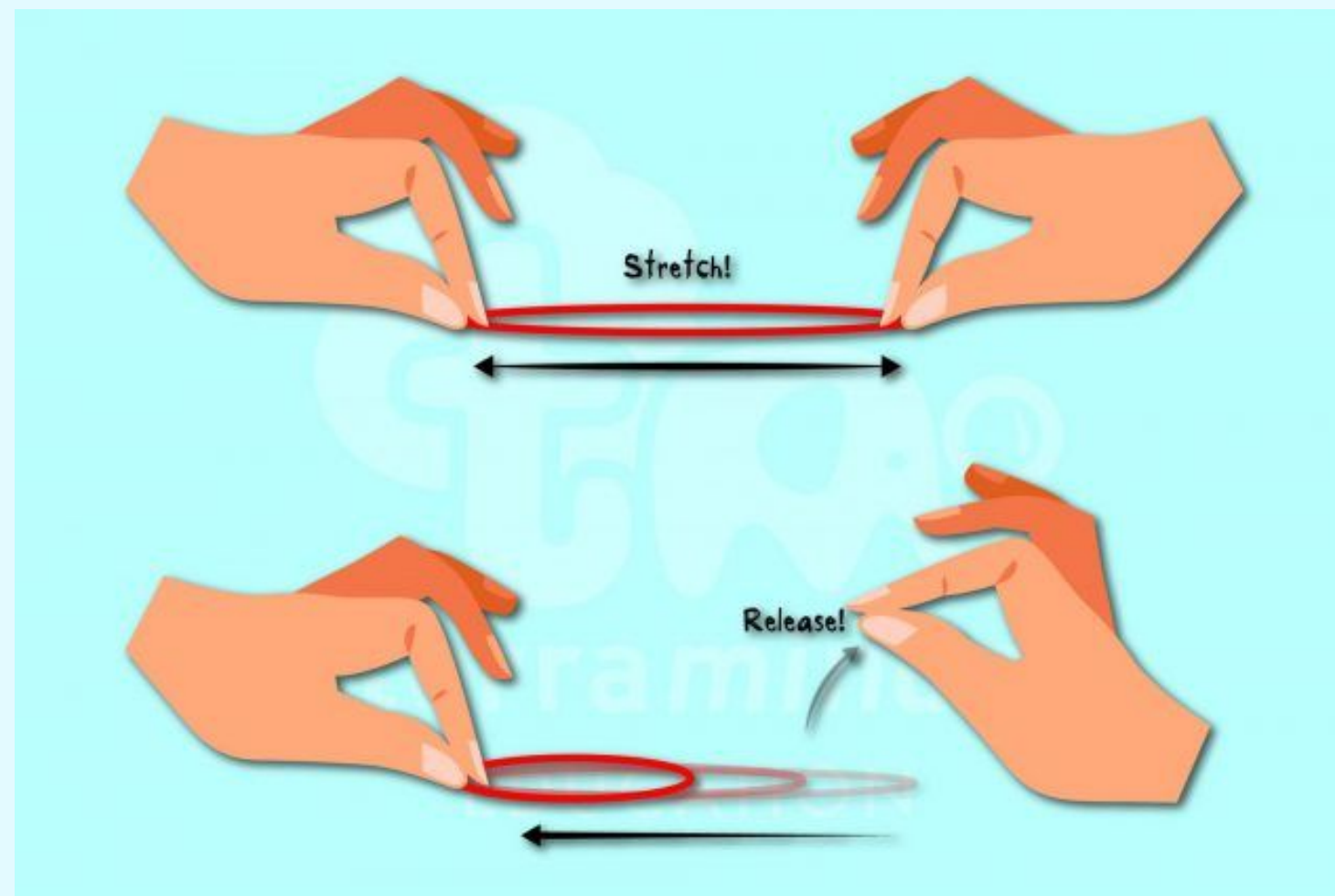
**What type of energy is being used
when I bend the arm back?**

**What type of energy is being used
when I let go of the arm?**



Energy Transformation

- **Stretching the Rubber Bands = Storing Potential Energy.**
- **Releasing the Rubber Bands = Converting Potential Energy into Kinetic Energy.**
- The **kinetic energy** is transferred to the catapult arm, launching the object



How to make the catapult!



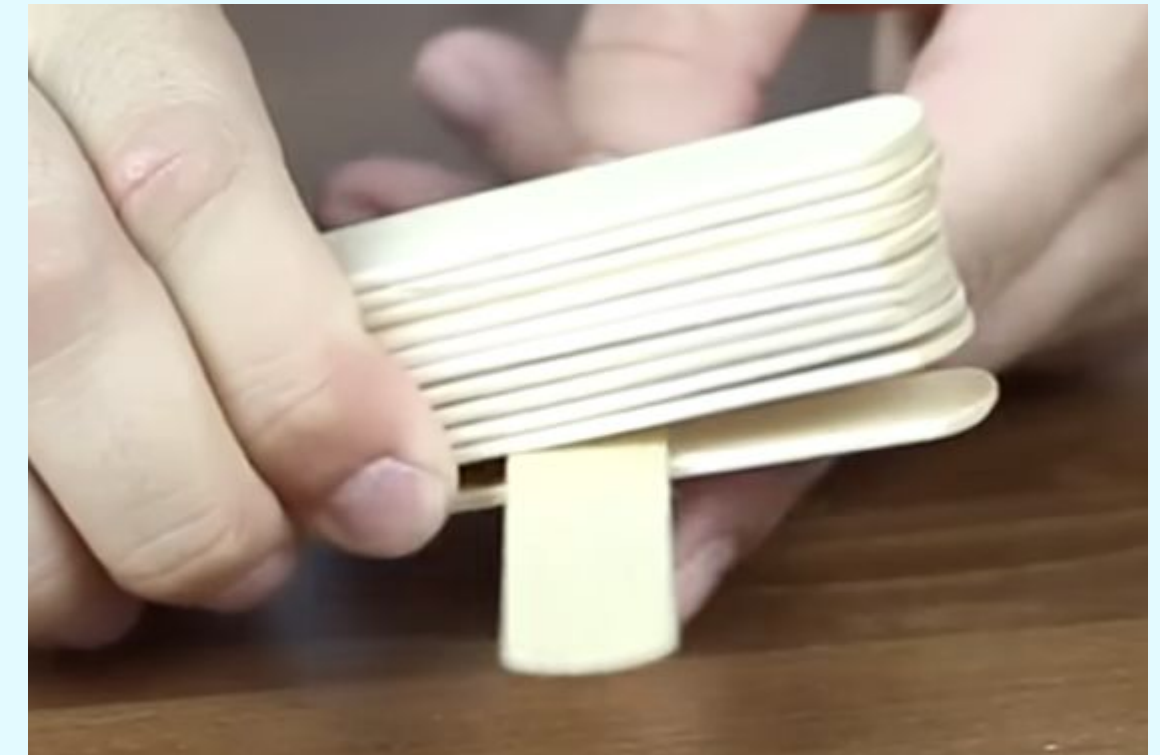
First Step:

Grab 12 thick
popsicle sticks!



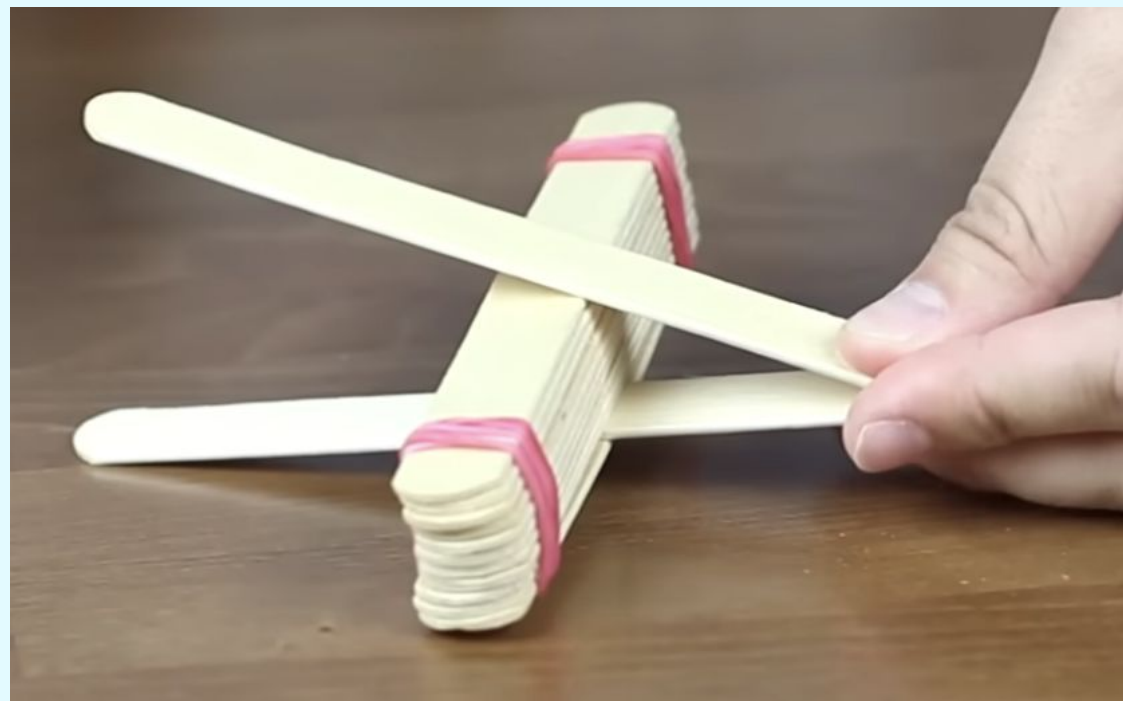
Second Step:

Tie both sides of
the stack with
rubber bands!



Third
Step: Insert another
popsicle stick in the
last level.

How to make the catapult!



Fourth Step:
Place another
popsicle stick
ontop!



Fifth Step:
Tie the popsicle
sticks together
here!



**Sixth
Step:**
Glue a bottle cap at
the end of the stick!