Forces

1. Name three effects that a force can have on an object.

   - The object's motion can speed up.
   - The object's motion can slow down.
   - The object's motion can change direction

2. What is another word for internal force? Stress

3. What is the difference between a live load and a dead load?

   Live Load — The forces acting in or on a structure.
   Dead Load — The weight of the structure itself – caused by gravity.

4. Make a T-Chart and sort the following as either live loads or dead loads: Wind blowing against a tree, the weight of the three, a bird in the tree, the bark on the tree.

Live Load	Dead Load
wind blowing against a tree	the weight of the three
a bird in the tree	the bark on the tree

5. Create a three column chart with the following headings: "Internal Force," "Description," and "Example."
   - Complete the chart by naming the four types of internal force, by describing those forces with one word each and by listing an example action that causes that force.

Internal Force	Description	Example
Tension	Stretching	Pulling on a rope
Compression	Squeezing	Stepping on a pop can
Torsion	Twisting	Turning a door knob
Shear	Ripping	Tearing a piece of paper

6. What is strength? The ability to resist a force

7. What type of strength is being demonstrated in the following examples?
   - The chain holding an anchor to a boat. — Tensile Strength
   - A piece of beef jerky that is hard to bite through — Shear Strength
   - A bolt being tightened by a wrench. — Torsion Strength
   - The legs of your chair. — Compressive Strength