1.2. Identify and explain the appropriate materials and tools (e.g., hammer, screwdriver, pliers, tape measures, screws, nails, and other mechanical fasteners) to construct a given prototype safely.

1.3. Identify and describe the safe and proper use of materials and fasteners (e.g., glue, screws, nuts, bolts, paper, toothpicks, straws, paper clips) to construct simple structures.

2.1. Identify and describe the appropriate materials and tools (e.g., hammer, screwdriver, pliers, tape measures, screws, nails, and other mechanical fasteners) to construct a given prototype safely.

2.2. Identify and describe the safety measures that should be taken when using materials and tools (e.g., wearing protective gear, using appropriate tools for the task).

2.3. Identify and explain the engineering properties of materials used in structures (e.g., elasticity, plasticity, and stress, strain, and stress-strain relationships).

2.4. Calculate the resultant force(s) for a combination of forces acting on a system.

2.5. Determine the net force acting on a system by subtracting the forces acting in opposite directions.

2.6. Recognize the purposes of using laws and building codes in the design and use of structures.