

: assess the impact on society and the environment of simple machines that allow movement; investigate and describe different kinds of movement; investigate the structure and function of simple machines; use technological problem-solving skills (see page 16), and knowledge and skills acquired from previous investigations, to design, build, and test a mechanism that includes one or more simple machines; describe different ways in which objects move ; identify ways in which the position of an object can be changed ; identify the six basic types of simple machines – lever; inclined plane; pulley; wheel and axle, including gear; screw; and wedge – and give examples of ways in which each is used in daily life to make tasks easier; describe how each type of simple machine allows humans to move objects with less force than otherwise would be needed; identify simple machines used in devices that move people investigate, through experimentation, the effects of pushing, pulling, and other forces on the shape and stability of simple structures; define a structure as a supporting framework, with a definite size, shape, and purpose, that holds a load

measure and compare, quantitatively and/or qualitatively, the force required to move a load using different mechanical systems , and describe the relationship between the force required and the distance over which the force moves; use appropriate science and technology vocabulary, including , , , and , in oral and written communication; explain the advantages and disadvantages of different types of mechanical systems

investigate the work done in a variety of everyday activities and record the findings quantitatively; use scientific inquiry/experimentation skills (see page 12) to investigate mechanical advantage in a variety of mechanisms and simple machines; use appropriate science and technology vocabulary, including and , in oral and written communication; Identify the purpose, inputs, and outputs of various systems; Identify the various processes and components of a system that allow it to perform its function efficiently and safely; understand and use the formula  $\text{work} = \text{force} \times \text{distance}$  (  $W = F \times d$  ) to establish the relationship between work, force, and distance moved parallel to the force in simple systems; calculate the mechanical advantage ( $MA = \text{force needed without a simple machine} \div \text{force needed with a simple machine}$ ) of various mechanical systems



Portion & Timing	Grouping:	Introduction:	Materials
	W S I	Teacher introduces to students - (ppt slides 1-3) Perform demonstration for class by lifting various weights - Discuss the <a href="#">Mocomi</a> video	