

			nuts.	
<p>3. Levers</p> <p>Inquiry skills: Observing, hypothesizing, inferring, drawing conclusions. Manipulating materials, collecting and recording data.</p>	<ul style="list-style-type: none"> • Describe how a lever makes work easier • Label the fulcrum, load and effort of simple levers • Classify levers as first class, second class, or third class • Work cooperatively in groups to manipulate materials to demonstrate the three types of levers 	<p>Exploration: Students manipulate the objects, draw their methods in their books, discuss solutions and record their ideas.</p> <p>Explanation: Different types of questioning to from a realization of the concepts and the definition formation of a lever. Identify the three classes of levers.</p> <p>Expansion: Students group pictures according to the class of levers to which they belong.</p>	<p>Six planks of wood and six triangular prisms. Six weighted objects (blocks, books, metal pieces). Charts. Pictures of first, second and third class levers in the environment.</p>	<p>Give students pictures of a hammer, a nail extractor and a wheel barrow and ask them to:</p> <ol style="list-style-type: none"> 1. Identify the fulcrum, the effort and the load of each item by labelling. 2. Classify each item according to the class of lever to which they belong by labelling.

<p>4. Gears</p> <p>Inquiry skills: Observing, hypothesizing, inferring, drawing conclusions, manipulating materials, and collecting and recording data.</p>	<ul style="list-style-type: none"> Describe the relationship between the input gear and the output gear Work cooperatively in groups to manipulate materials to demonstrate a gear system Name machines that use gears 	<p>Exploration: Students manipulate the objects and answer the questions to discover parts of a gear system.</p> <p>Explanation: Students turn the input gears to see the effect it has on the output gear. Students answer the questions and come up with rules based on their observations.</p> <p>Expansion: Ask the students to think of some machines at home or at school that use gears</p>	<p>18 gears in three different sizes and colours, 2 gear mats, axles, pictures of machines which use gears, pictures of gears, a geared clock, and a geared toy car.</p>	<p>Students will be given a worksheet to test their knowledge about the relationship between the input gear and the output gear.</p>
<p>5. Pulleys</p> <p>Inquiry skills: Observing, inferring, drawing conclusions,</p>	<ul style="list-style-type: none"> Describe how a pulley makes work easier Label the load and effort forces of a pulley 	<p>Exploration: A students uses manipulatives to demonstrate the use of a pulley.</p> <p>Explanation: Discuss how pulley systems transfer motion. Identify the forces required in several pulley</p>	<p>A rope tied to a large bottle of water, pictures of two wells, chart, pictures of a crane, a flag pole</p>	<p>Ask students to draw and label any pulley system of their choice to indicate the effort and the load forces.</p>