



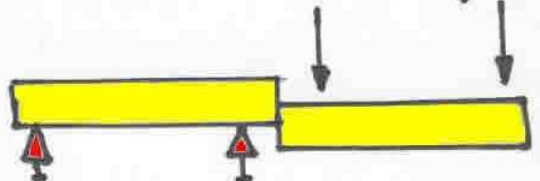


Lesson 2 - Mechanical properties of materials

Task 1

Work out which kind of stress is exerted in each case (tension, compression, torsion, bending, shearing):

	1.
	2.
	3.
	4.
	5.






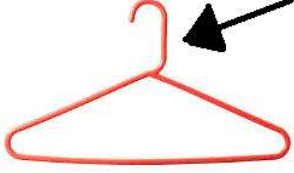

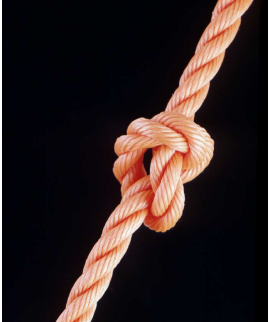
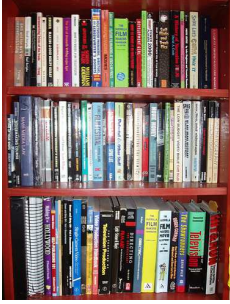
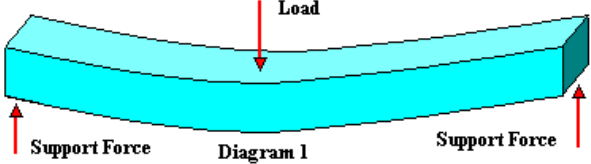
Task 2

Match up the following lists with arrows:

- | | |
|---|--|
| <ul style="list-style-type: none"> ✓ A material that breaks easily when it drops ✓ A material that doesn't change after a sudden blow ✓ A material easily scratched ✓ A material which surface remains smooth after being scratched | <ul style="list-style-type: none"> is hard is brittle is soft is tough |
|---|--|

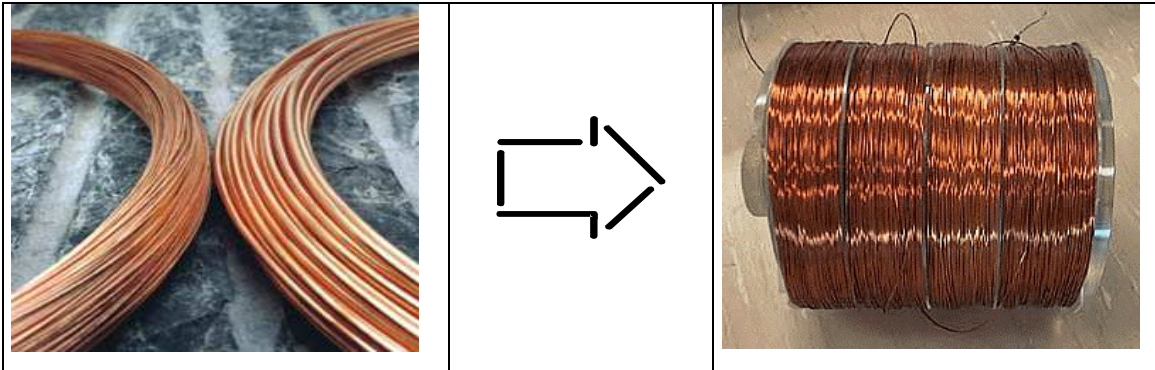
Task 3

Work out which kind of stress is exerted in each case (tension, compression, torsion, bending, shearing):

			
<p>1. A pair of scissors:</p>	<p>2. The column of a bridge:</p>	<p>3. The seat of a stool:</p>	<p>4. The legs of a stool:</p>
			
<p>5. a knob:</p>	<p>6. a seat:</p>	<p>7. This piece of a hanger:</p>	<p>8. Soles of shoes:</p>
			
<p>9. Tightened rope:</p>	<p>10. A shelf with books on it:</p>	<p>11. a beam of a bridge:</p>	

Task 4

- a) We exert a force on a piece of material. No deformation occurs. We keep exerting a force until the piece of material breaks. The material is _____
- b) We exert a force on a piece of material. A deformation occurs. When the force is removed, the material returns to its original shape. The material is _____
- c) We exert a force on a piece of material. A deformation occurs. When the force is removed, the material doesn't return to its original shape. It keeps deformed. The material is _____
- d) A very thick copper wire can be drawn into a very thin wire. Copper is a _____ material



- e) A thick aluminium plate can be converted into a very thin aluminium foil. Aluminium is a _____ material

