
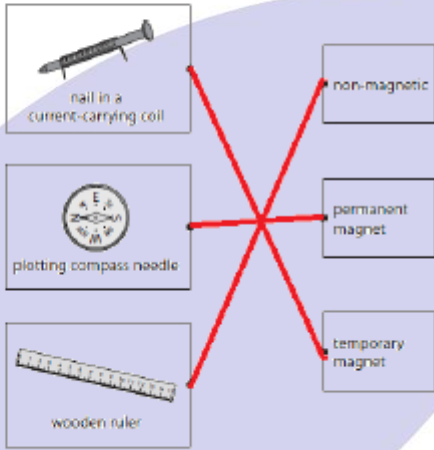
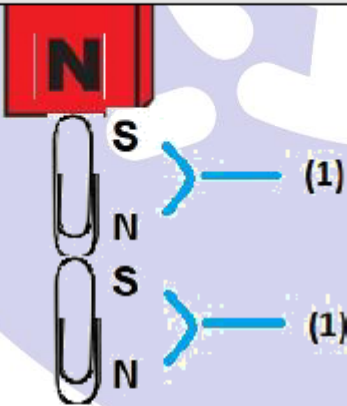


Q1.

Question number	Answer	Additional guidance	Mark
	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>object</p>  </div> <div style="text-align: center;"> <p>description</p>  </div> </div>	<p>three links correct (2)</p> <p>one link correct (1)</p>	(2) AO1

Q2.

Question number	Answer	Additional guidance	Mark
(i)		<p>both poles needed for each mark (either side of paper clip, right or left)</p> <p>allow just S at the top of the pair and N at the bottom of the pair for 1 mark</p> <p>ignore the third paper clip after these two (given in question)</p>	(2) AO1

Question number	Answer	Additional guidance	Mark
(ii)	induced (1)		(1) AO1

Question number	Answer	Additional guidance	Mark
(iii)	iron / steel / nickel / cobalt (1)	ignore 'metal'  do not allow any other named metal	(1) AO1

Question number	Answer	Additional guidance	Mark
(iv)	<p>description including <b>two</b> from</p> <p>use a (plotting) compass (1)</p> <p>(plotting compass) shows a change in direction / needle moves</p> <p>OR</p> <p>bring the paper clips together (1)</p> <p>seeing if they attract / repel (1)</p> <p>OR</p> <p>use of iron filings (around the paperclips) (1)</p> <p>see a pattern (1)</p>	<p>sees repulsion / repelling</p> <p>bring the paper clips near to a magnetic material ignore 'magnet' for this marking point</p> <p>do not accept 'attracts to a magnet'</p> <p>accept for two marks bring a magnet close to a paper clip to test for repulsion</p>	(2) AO1

Q3.

Question Number:	Answer	Additional guidance	Mark
	a description to include:  remove the magnet (from the paper clips)(1)  paperclips no longer attracted to each other (1)	accept no longer magnetic	(2) AO 3 1a AO 3 1b



Q4.

Question Number:	Answer	Additional Guidance	Mark
	<p>a description to include:</p> <p>method of producing temporary induced magnetism (1)</p> <p>method of demonstrating the magnetic properties of the temporary magnet (1)</p> <p>method of demonstrating magnetic effect is temporary (1)</p>	<p>place iron near / in contact with magnet / in magnetic field</p> <p>OR</p> <p>use magnet to pick up one paper clip</p> <p>OR</p> <p>use magnet to make iron a temporary magnet</p> <p>paper clip(s) attracted to iron</p> <p>OR</p> <p>use first paper clip to pick up another paper clip</p> <p>remove magnet and paper clips no longer attracted / fall off</p> <p>OR</p> <p>wait some / short time and iron bar no longer picks up / attracts paper clips</p>	<p><b>(3)</b> AO 1 2</p>