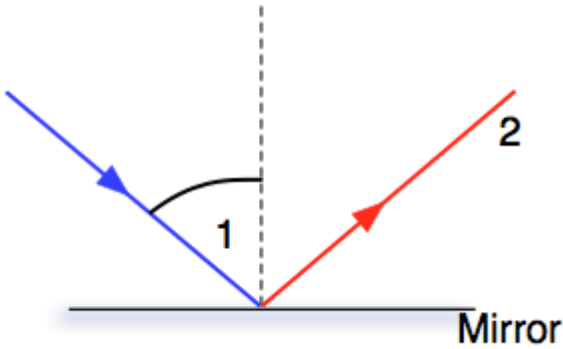
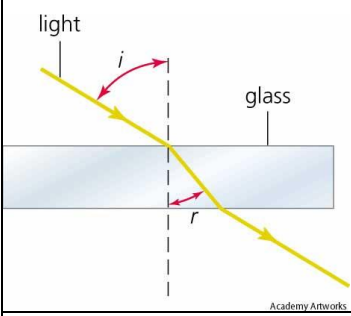


## Year 8 Waves Fact Sheet

Waves	
1. What do waves transfer?	Energy
2. Name 2 types of wave	<ul style="list-style-type: none"><li>• Transverse</li><li>• Longitudinal</li></ul>
3. Give an example of a transverse wave	<ul style="list-style-type: none"><li>• Light</li><li>• All electromagnetic waves</li></ul>
4. Give an example of a longitudinal wave	<ul style="list-style-type: none"><li>• Sound</li></ul>
5. What type of wave is shown here?	Transverse
6. Label the transverse wave	A: crest B: trough C: wave length D: amplitude
7. What type of wave is shown here?	Longitudinal
8. Label the longitudinal wave	A: wave length B: compression C: rarefaction

9. What do we call the number of waves per second?	Frequency
10. What are the units for frequency?	Hertz/ Hz
<b>Sound</b>	
11. What causes sound?	Vibrations
12. A loud sound has a large .....	amplitude
13. A high pitch sound has a high....	Frequency
14. In which state of matter does sound travel the fastest?	Solid
<b>Reflection</b>	
15. What is it called when light hits a surface and bounces back?	Reflection
16. What does this diagram show?	Reflection
 <p>The diagram illustrates the law of reflection. A horizontal line at the bottom is labeled 'Mirror'. A vertical dashed line perpendicular to the mirror is labeled '1' at the point of incidence. A blue ray with an arrow pointing towards the mirror is labeled '1' at the angle between it and the dashed line. A red ray with an arrow pointing away from the mirror is labeled '2' at the angle between it and the dashed line.</p>	
17. What is the name of the dashed line?	normal
18. The angle of incidence = ...	the angle of reflection
<b>Refraction</b>	
19. What is it called when waves appear to bend?	Refraction

<p><b>20. What does this diagram show? (1)</b></p> 	<p><b>refraction</b></p>
<p><b>21. When does refraction <b>not</b> happen? (1)</b></p>	<p>When the wave travels along the normal</p>
<p><b>Electromagnetic spectrum</b></p>	
<p><b>22. All electromagnetic waves travel at the same ..... in a vacuum (e.g. space)</b></p>	<p><b>Speed</b></p>
<p><b>23. List waves in the electromagnetic spectrum, starting with the longest wavelength/ lowest frequency/ least energy</b></p>	<ul style="list-style-type: none"> <li>• Radio waves</li> <li>• Microwaves</li> <li>• Infra-red radiation</li> <li>• Visible light</li> <li>• Ultraviolet</li> <li>• X-rays</li> <li>• Gamma rays</li> </ul>
<p><b>24. State a use of radio waves</b></p>	<p><b>TV and radio</b></p>
<p><b>25. State a use of microwaves</b></p>	<ul style="list-style-type: none"> <li>• Cooking</li> <li>• Satellite communication</li> </ul>
<p><b>26. State a use of infrared</b></p>	<ul style="list-style-type: none"> <li>• Electric heaters</li> <li>• Cooking</li> <li>• Remote controls</li> </ul>
<p><b>27. State a use of visible light</b></p>	<ul style="list-style-type: none"> <li>• Fibre optic communications</li> <li>• Traffic lights</li> </ul>
<p><b>28. State a use of ultraviolet</b></p>	<ul style="list-style-type: none"> <li>• Energy efficient lamps</li> <li>• Sun tanning</li> </ul>
<p><b>29. State a use of X rays and gamma rays</b></p>	<ul style="list-style-type: none"> <li>• Medical imaging</li> <li>• Medical treatments</li> </ul>
<p><b>30. Name 3 electromagnetic waves that can cause cancer</b></p>	<p><b>UV (skin cancer), X rays, Gamma rays</b></p>



