1. The lists show two groups of words about waves: a **start** of a sentence and an **end** of a sentence.

Draw **one** line from each **start** of the sentence to the matching **end** of the sentence.

Start	End
Amplitude	is an electromagnetic wave.
Light	is the maximum displacement of a wave.
Wavelength	is the distance between one wave peak and the next wave peak.

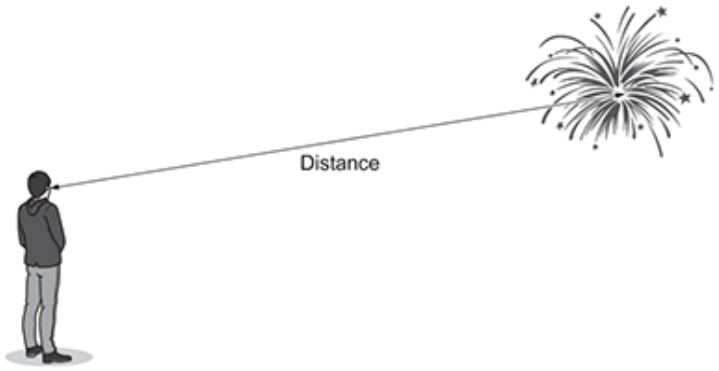
[2]

2. Which statement about electromagnetic waves in air is **always** correct?

A High frequency waves have a higher velocity than low frequency waves.
B High frequency waves have a longer wavelength than low frequency waves.
C Low frequency waves have a longer wavelength than high frequency waves.
D Low frequency waves have a lower amplitude than high frequency waves.

Your answer ☐ **[1]**

3. A child is watching a firework display.



The speed of light in air is 3×10^8 m / s.

Explain why the child sees the firework **before** they hear it.

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[1]

4(a).

This question is about electromagnetic waves.

Draw lines to connect each **wave** with its correct **use or property**.

Wave	Use or Property
Gamma-rays	Can cause sunburn
Infra-red	Highest frequency
Radio	Used in TV remotes
Ultra-violet	Longest wavelength

[3]

(b).

i. Which type of wave is the most dangerous?

Tick (✓) **one** box.

Infra-red ☐
Microwaves ☐
X-rays ☐

[1]

ii. Identify **two** reasons for your answer to **(i)**.

1 _____

2 _____

[2]

END OF QUESTION PAPER