Worksheet 2.4.4 Comparing transverse and longitudinal waves

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1 Key words >

When we’re describing waves, there are certain words we need to understand and use. These definitions have got mixed up; see if you can sort them out:

Draw a line from the word to its definition.

|  |  |  |
| --- | --- | --- |
| a. transverse |  | A type of wave produced by supplying energy in the direction the wave travels in. |
| b. longitudinal |  | The distance from any point on one wave to the same point on the next wave. |
| c. compression |  | The number of waves produced per second. |
| d. amplitude |  | A type of wave produced by supplying energy at right angles to the direction of wave travel. |
| e. frequency |  | The distance from the midpoint of a wave to the top of a crest or bottom of a trough. |
| f. wavelength |  | An area in a longitudinal wave where the medium carrying the wave is squeezed together. |

2 Labelling a compression wave >>

This is a drawing of a slinky with a compression wave travelling along it.



On the diagram, label:

1. areas of compression
2. areas of rarefaction (opposite of compression)
3. distance to measure to find the wavelength.

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3 Labelling a transverse wave >>>

This is a drawing of a slinky with a transverse wave travelling along it.



On the diagram, label:

1. peaks
2. troughs
3. distance to measure to find the wavelength
4. distance to measure to find the amplitude.