

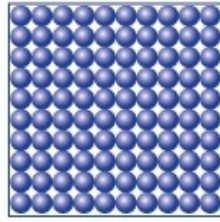
Tuta Data

Directions: Write down the purpose and following the procedures.

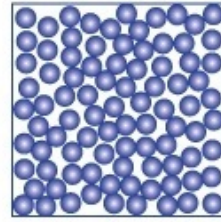
Purpose: Analyze a set of data dealing with the velocity of waves through different materials.

Background Information:

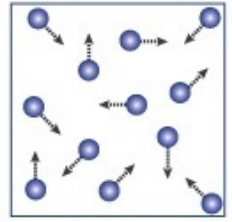
Velocity – the sped of something in a given direction



Solid



Liquid



Gas

Procedures:

1. Copy down the data table below
2. Move the Material to the Y axis
3. Move the Velocity to the X axis
4. Move the state of mater to the Y axis on the RIGHT
5. Click on each of the individual dots and fill in the data table.

Material	Velocity	State of Medium
Air (0°)		
Air (20°)		
Aluminum		
Brass		
Carbon tetrachloride		
Copper		
Diamond		
Glycerol		
Gold		
Helium (0°)		
Hydrogen (0°)		
Iron		
Kerosene		
Lead		
Lucite		
Mercury		
Methyl alcohol		
Pyrex glass		
Rubber		
Sea water		
water		

Analyzing the Data:

1. What are the 3 states that were used in this data collection?
2. Out of the 21 how many where
 - a. Solids –
 - b. Liquids –
 - c. Gasses –
3. Look at the data what is something that stands out to you?
4. Do you notice any trends/patterns/etc...?
5. Which material did sound travel the fastest through (velocity)
6. Which material did sound travel the slowest through?
7. Looking at the data does it look like sound travels faster for gasses or liquids?
8. Back up your answer with evidence from the data table.
9. Does it look like sound travels faster for liquids or solids?
10. Backup your answer with evidence from the data table.
11. Does it look like sound travels faster through gas or solids.
12. Back up your answer with evidence from the data table.
13. Look at the image at the top of the questions. What is something that you notice is different between the 3 boxes?
14. Why do you think a wave can travel faster through a solid than a liquid or gas?