

# All About Sound

Investigation Data Sheet



## Seeing Sound Waves

Sound is a form of energy that travels in invisible waves. It is created by objects that are vibrating, or moving back and forth.

### Objective

Observe how sound waves move and how things react to them.

### Materials

- a clothes hanger
- thread
- scissors
- ten puffed rice kernels
- a rubber band
- a helper

**Safety Notice:** All applicable laboratory safety rules must be followed. Students should not perform any experimental activity without the teacher's supervision and express permission. Students must follow safety guidelines and wear appropriate protective gear.

### Procedure

1. Cut the thread into ten lengths of 10–15 cm.
2. Carefully tie one piece of the thread around each of the kernels.
3. Tie the other end of each piece of thread to the clothes hanger and suspend the kernels from the hanger, keeping them close to one another.
4. Hang the clothes hanger in a location that allows the cereal to move freely.
5. Stretch a rubber band between your fingers and pluck it near the pieces of rice. (Keep it close but make sure it's not touching the kernels.) Record your observations about what you hear as well as what you see.

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- Can you explain what is happening to the rice?

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6. Now try plucking the rubber band harder and softer and see how the rice kernels react. Record your observations.

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### Conclusions

- How do sound waves affect the things they bump into?

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- How are you able to hear the sounds produced by the rubber band?

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