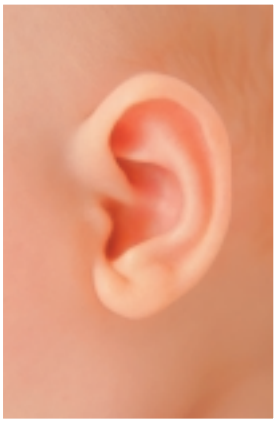
Strange Sounds

Preparation

CLASS LEVEL	**FIRST – SIXTH CLASS**
OBJECTIVE	**Content strand and strand unit** **Energy & forces, Sound** Through investigation the child should be enabled to learn that sound is a form of energy; understand and explore how different sounds may be made by making a variety of materials vibrate SESE: Science Curriculum page 63. In this activity children learn that vibrations produce sounds; observe the effects of these vibrations and then produce different sounds and vary the pitch and volume of these sounds. **Skill development** Investigating; experimenting; observing
CURRICULUM LINKS	**SESE:Science** Living things – use all the senses to become aware of and explore environments **Music** Listening and responding – exploring sounds **SPHE** Myself/ knowing about my body/the ear
BACKGROUND	A session on sound (noting the sounds from the classroom, the school grounds; identifying recorded sounds from a CD, or from a number of different items in wrapped-up containers) would make a good lead-in to this activity.
MATERIALS/EQUIPMENT	**(I)** Seeing sound – Plastic bowl, Cling film, Rubber band, Uncooked rice, Light saucepan, Biscuit tin, Large spoon, Scissors, Sticky tape **(ii)** Feeling sounds - A partner, Balloon **(iii)** Making weird sounds – Drinking straw, Strip of plastic, Balloon.
PREPARATION	Gather materials
BACKGROUND INFORMATION	Sound is caused by vibrations which travel through the air or other medium. Vibrations can be made by (i) blowing, (ii) banging or (iii) plucking a string. Sound cannot travel through a vacuum because there is nothing to pass on the vibrations.



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Activity

SETTING THE SCENE	Brainstorm on sound – what is it? What would the world be like without sound? How would people communicate with each other? Discuss speech as one of the forms of communication. What other forms are there?
TRIGGER QUESTIONS	What are vibrations? Why do you need air or some other substance for sound to travel? How are sounds made? Can you always hear sounds? Can you see sound? TRY AND SEE
DEVELOPMENT OF ACTIVITY	Ask the children to put their fingers on the outside of their throat when they are talking – do they feel anything? Ask the children to tap the desk and listen; then to tap the desk again, this time listening with their ear touching the desk. Do they notice any difference? Does sound travel better through the air or through the desk?
SAFETY	**Care with cutting the straws.**
ACTIVITY	**(i) Seeing sound:** Cut the piece of cling film so that it is bigger than the top of the bowl. Stretch the cling film over the top of the bowl and secure it with the rubber band. Tape the cling film down to keep it stretched. This is your 'drum'. Sprinkle a few grains of rice on top of the 'drum'. Hold the saucepan near the 'drum' and hit it sharply with the spoon. What do you notice? **(ii) Feeling sound:** Blow up the balloon and hold it against your ear. Ask your partner to press their lips against the balloon and speak; then swap around. What do you notice? **(iii) Making weird sounds:** a. Hold a strip of plastic tightly between your thumbs and the heel of your hands and blow hard across the strip. b. Press one end of the straw flat; cut the sides to form a point, put the pointed end of the straw in your mouth and blow hard. c. Blow up a balloon and hold the neck to stop the air escaping. Grip the neck of the balloon and stretch it vertically and horizontally. What happens as the air escapes?

Strange Sounds

Review

REVIEW

What have you found out about sound?

(i) Seeing sound

Does the loudness of the sound affect the way the rice dances?

Does the distance between the saucepan and the 'drum' affect the way the rice dances?

(ii) Feeling sound

Is there any difference in what you feel when your partner speaks loudly and softly?

(iii) Making weird sounds

Try different lengths of straw. Does this make any difference to the sound produced?

ASSESSMENT

The children could be asked to make a sound tape. They could make their sounds and explain them on tape or video-tape.

FOLLOW-UP ACTIVITIES

How could you use what you have learnt about sound to investigate a musical instrument?

What vibrates when playing a drum?

What vibrates when playing a guitar or a flute?

Design and make a musical instrument. How can you vary the sound produced by your instrument? Why does this affect the sound?

Can you make strange sounds?

The children could be asked:

- What else would you like to find out?
- How would you find it out?

This would encourage them to design their own investigation.