SOUND AND HEARING

Activity Pack -- FREE Resource

Ages 6-9 | No Prior Reading Required
Classroom, Library and Home Use

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What Is Sound?

Sound is vibration. When a piano string, a drum skin or your voice vibrates, it pushes the air into waves. The waves travel until they reach something: an ear, a wall, a person.

Activity 1: True or False?

Statement	True	False
Sound is made by things vibrating	[ ]	[ ]
Sound travels through the air in waves	[ ]	[ ]
You can hear sounds in outer space	[ ]	[ ]
Hard surfaces soak up most sound	[ ]	[ ]
Soft surfaces soak up sound	[ ]	[ ]

Activity 2: Bounce or Soak?

When sound hits something, it can bounce back or be soaked up. Tick one for each surface.

Surface	Bounces sound	Soaks up sound
Concrete wall	[ ]	[ ]
Curtains	[ ]	[ ]
Glass window	[ ]	[ ]
Carpet	[ ]	[ ]
Foam panel	[ ]	[ ]
Bare wooden floor	[ ]	[ ]

Think About It

* Why can't you hear sounds in space?

* Which room in your home do you think has the most echo? Why?

Measuring Loudness

We can measure how loud a sound is with a sound-meter app. Loudness is measured in **decibels**. Talking is about 60 decibels. A busy classroom is about 70.

Activity 1: Read the Results

A low note and a high note were measured at three spots in a room.

Spot in the Room	Low Note	High Note
Front	**70**	**70**
Middle	**70**	**64**
Back	**70**	**58**

1. Which note stayed the same everywhere? _____

2. How many decibels did the high note lose from front to back? 70 - 58 = _____

3. How many decibels did it lose from front to middle? 70 - 64 = _____

Activity 2: Quietest to Loudest

Number these sounds from 1 (quietest) to 4 (loudest).

Sound	Decibels	Order (1-4)
Busy classroom	70	____
Whisper	30	____
Lawn mower	90	____
Talking	60	____

Think About It

* Why do you think the high note got quieter at the back?

* Where in your classroom do you think it is easiest to hear?

Design a Room for Every Ear

Foam panels stop echoes, but too many in one place can make a 'dead zone' where high sounds disappear. Good room designers make sure everyone can hear clearly -- front to back.

Activity 1: Will It Help?

Tick the ideas that would help everyone hear. Cross the ones that would not.

Idea	Helps	Doesn't help
Move some foam panels to the side walls	[ ]	[ ]
Put a hard, tilted board at the back to bounce sound	[ ]	[ ]
Add even more foam to the back wall	[ ]	[ ]
Use a small microphone and speaker	[ ]	[ ]
Seat people who need to hear most in the clearest spot	[ ]	[ ]

Activity 2: My Room Plan

DRAW A ROOM FROM ABOVE. MARK THE SOFT AND HARD SURFACES AND THE CLEAREST SPOT:

The clearest spot is: _____

Think About It

* Why is it important to know who will use a room before you design it?

* What is one change that would help sound in your classroom?

When It's Hard to Hear

Note to students:
This worksheet explores personal feelings. There are no right or wrong answers -- your thoughts are your own. Sharing is always optional. If any question brings up big feelings, please talk with a trusted adult.

Some people find it hard to hear in a noisy or echoey room. Some use hearing aids or read lips. Lots of people manage quietly, and others might not notice.

Activity 1: Feeling Check-In

Circle the words that show how you feel.

When I can't hear what someone is saying, I feel:
Confused Worried Tired Left out Okay Other: _____

When someone really listens to me, I feel:
Happy Important Calm Proud Other: _____

When I notice someone is left out, I feel:
Sad Worried Ready to help Unsure Other: _____

Activity 2: A Place Where I Feel Heard

DRAW A PLACE WHERE YOU FEEL HEARD AND LISTENED TO:

What makes it feel that way: _____

Think About It

* Why might someone not tell anyone that they are finding it hard to hear?

* How can you show someone you are really listening?

Who Isn't Being Heard?

Good design isn't just about making something work. It's about knowing who it needs to work for. The best way to find out is to ask the people who use it.

Activity 1: Includes Everyone or Leaves Someone Out?

What Someone Does	Includes everyone	Leaves someone out
Turns their back while talking to someone who reads lips	[ ]	[ ]
Faces people when they speak	[ ]	[ ]
Asks, 'What would help you?'	[ ]	[ ]
Only plans for people just like them	[ ]	[ ]
Uses a microphone so the back row can hear	[ ]	[ ]

Activity 2: Design for Everyone

Think of a place you use every day.

The place: _____

Who is it designed for? _____

Who might it not quite work for? _____

One change that would help: _____

Think About It

* Why is it important to ask people what they need, instead of guessing?

* Who else might not be heard at school? How could you find out?

My Listening Detective Goals

Here is a challenge: be a listening detective. Ask someone, 'What would make this work better for you?' -- and really listen to the answer.

Activity 1: My Listening Goals

Write or draw one goal for each time.

Goal Tier	My Goal	How I Will Do It	When I Will Start
THIS WEEK			
THIS TERM			
THIS YEAR			

Activity 2: Listening Detective Tracker

Colour a star each day you do it.

I did it!	Mon	Tue	Wed	Thu	Fri
I listened carefully to someone	*	*	*	*	*
I asked 'What would help you?'	*	*	*	*	*
I faced people when I spoke	*	*	*	*	*
I noticed someone being left out	*	*	*	*	*
I tested a sound experiment	*	*	*	*	*

Think About It

* Where in your life is the question 'Who isn't being heard?' worth asking?

* Write your own listening motto in 10 words or fewer.

Teacher's Companion

No Prior Reading Required
This pack is fully standalone. No book or characters are referenced. Any student can complete these worksheets without prior reading. Suitable for classroom, library, and home learning programmes. This pack is an excerpt of a full book-specific learning pack available with purchase at **learningsmart.au**

Australian Curriculum Alignment

Learning Area	Strand	Year Level	Content Description (summary)
Science	Physical Sciences	Yr 1-3	Sound is produced by vibration and travels as waves; materials reflect or absorb sound (WS1)
Science	Science Inquiry	Yr 1-3	Make measurements and compare results to answer a question (WS2)
Mathematics	Number and Measurement	Yr 1-3	Read data in a table; subtract to compare; order numbers (WS2)
Design and Technologies	Design Processes	Yr 1-3	Plan a design that meets the needs of different users (WS3)
Health and PE	Personal, Social and Community Health	Yr 1-3	Recognise feelings and ways to include others (WS4)
Gen. Capabilities	Personal and Social Capability	Yr 1-3	Show empathy; consider the needs of people with hearing loss (WS5)
Gen. Capabilities	Critical and Creative Thinking	Yr 1-3	Sort ideas and generate design solutions (WS3, WS5)

16 Key Sound and Hearing Lessons

#	Lesson
1	Sound is vibration -- moving air we can hear.
2	Sound travels in waves through the air.
3	There is no sound in space, because there is no air to push.
4	Sound travels through air at about 343 metres every second.
5	Hard surfaces bounce sound back; soft surfaces soak it up.
6	High sounds have short waves and are soaked up more easily.
7	Decibels measure how loud a sound is.
8	Careful measuring turns a hunch into evidence.
9	A 'dead zone' is a spot where some sounds fade away.
10	About one in six Australians has some hearing loss.
11	High sounds are usually the first to become hard to hear.
12	Some people use hearing aids or read lips to help them hear.
13	Good design means knowing who it needs to work for.
14	The best fixes come from asking the people affected.
15	Listening carefully is a way of including people.
16	Big question: Who else isn't being heard?

Answer Keys and Discussion Guidance

WS1 -- What Is Sound? (Answers)
True: vibrating; travels in waves; soft surfaces soak up sound. False: sound in space; hard surfaces soak up sound. Bounces: concrete, glass, bare wooden floor. Soaks up: curtains, carpet, foam panel.

WS2 -- Measuring Loudness (Answers)
1. The low note. 2. 12 decibels. 3. 6 decibels. Order: whisper 1, talking 2, busy classroom 3, lawn mower 4.

WS3 -- Will It Help? (Answers)
Helps: moving panels to the side walls; a hard, tilted board at the back; a microphone and speaker; seating people who need to hear most in the clearest spot. Doesn't help: more foam on the back wall.

WS4 -- Sensitivity Note for Educators
Some students may have hearing loss or other needs they do not wish to share. Do NOT ask students to disclose. Offer drawing or private writing. If a student discloses a concern, follow your school's wellbeing and child safety protocol.

WS5 -- Includes or Leaves Out? (Answers)
Includes: facing people; asking what would help; using a microphone. Leaves out: turning your back on someone who reads lips; only planning for people like you.

WS6 -- Challenge Tracker
There are no correct scores. Celebrate every attempt; any day left blank is a chance for a gentle reminder, not correction.

Upsell Note for Educators
This generic pack is based on the Learning Smart book series. The full book-specific learning pack -- which references the characters, story moments, and adventure narrative -- is available with book purchase or subscription at **learningsmart.au**. Book-specific packs significantly increase student engagement and reading motivation.

Differentiation Strategies

Level	Strategy	Example Application
Below Level (support)	Reduce written output; use sentence starters; allow verbal responses; pair with peer.	WS2: use a number line for the subtraction. WS4: use feeling faces instead of writing.
On Level (standard)	Complete all activities as written. Use discussion partner for Think About It sections.	Standard completion with class debrief of Think About It questions.
Extension (enrichment)	Map the sound in your classroom with a sound-meter app at ten spots and colour the map.	WS1: test materials (book, towel, foil) between a sound and a phone and record the readings.

7 Discussion Questions

1. What is sound -- and what would happen to sound if there were no air?
2. Why might high sounds fade at the back of a room when low sounds don't?
3. Why might a problem go unnoticed for a long time?
4. Think of a place you use every day. Who was it designed for -- and who might it not quite work for?
5. Why is asking people what they need just as important as fixing the problem?
6. How can our class make sure everyone can hear and be heard?
7. What other things are invisible but have a big effect on us?

Classroom Display Ideas

Sound Map: A class map of decibel readings around the room, coloured loud to quiet.

Bounce or Soak Wall: Samples of hard and soft materials labelled from WS1.

Loudness Ladder: A ladder of everyday sounds from whisper to lawn mower, in decibels.

Room for Every Ear: Display the WS3 room plans and vote on the best idea.

Who Isn't Being Heard?: A question wall where students suggest places that could work better for everyone.

Listening Detectives: Students add a sticky note each time they truly listened to someone.

Want the Full Adventure?

This free activity pack is inspired by the **Learning Smart book series** -- everyday adventures about character, confidence and growing into a kind, capable leader.

The Full Book-Specific Learning Pack Includes:

* Worksheets tied directly to the book's characters and story moments
* Story-based Think About It questions that deepen reading comprehension
* A Teacher's Companion with book-specific discussion questions
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