



Sound ScoutsTM

Hear for your future.

ONCE IS NOT ENOUGH!

Children should have easy access to a hearing test during their early years and their time at school.



HEARING SCREENING CONDUCTED AT BIRTH



But hearing issues can develop at any time due to:

- Viruses
- Trauma
- Genetic disorders
- Ear infections + glue ear



OVER 285 MILLION CHILDREN DISADVANTAGED BY HEARING LOSS



Barrier to education



Barrier to social integration



Depression and cognitive decline

IF A CHILD STRUGGLES TO HEAR, THEY'LL ALSO STRUGGLE TO LEARN

UNDIAGNOSED HEARING ISSUES

Academic disadvantage
Disengaged
Disruptive
Social Isolation
Incorrectly labelled (eg
ADHD or the naughty kid)

VS

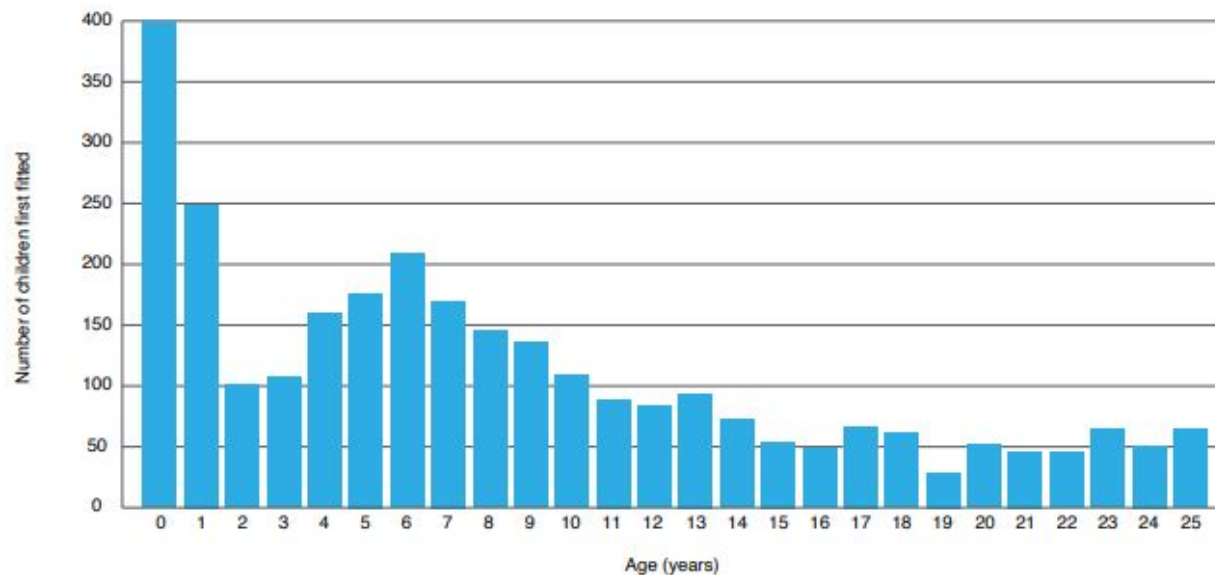
DIAGNOSED HEARING ISSUES

Academic progress
Engaged
Focused
Social Inclusion
Understood and supported

An estimated 1 in 10 children start school with a hearing loss

THE STATISTICS PAINT THE PICTURE

Figure 1. Number of Australians with permanent hearing loss aged 0–25 years first fitted with hearing aids, 2020



Source: Hearing Australia®



team@soundscouts.com.au



USER FRIENDLY

- Easy to set-up and supervise
- Fun to play (it's a mobile game)
- Accessible & accurate

CLINICIAN NOT REQUIRED

*Sound Scouts – the hearing test
that's there when you need it*



BACKED BY SCIENCE

- National Acoustic Laboratories
- Enables a hearing test in any quiet space



- Research published in International Journal of Audiology (IJA) 2018

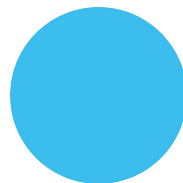
VERIFIED BY CLINICAL TRIALS



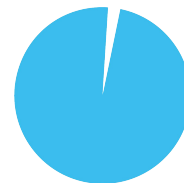
- Trials over 4+ years
- Parallel testing with audiologist on 1,000+ children
- Trial data evaluated by NAL 2014/15
- Approved by NAL for release

Accuracy of results

(Hearing loss of 30db or greater)



Sensitivity **100%**



Specificity **98%**

The NAL logo, consisting of the letters "NAL" in a stylized blue font, with a blue swoosh above the "N".

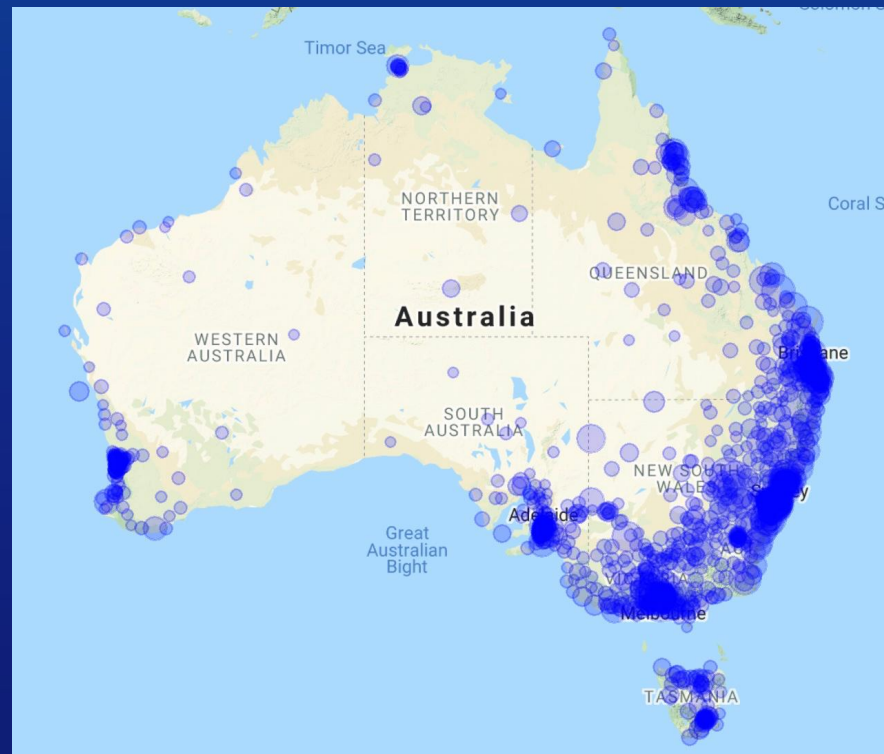
SOUND SCOUTS ADOPTION

2000+ schools now using Sound Scouts

40+% of usage is in regional Australia

85,000+ student tests
(+ 20,000 adult tests)

8.5% of 2021 tests conducted with
Aboriginal & Torres Strait Islander
children





Select a download option



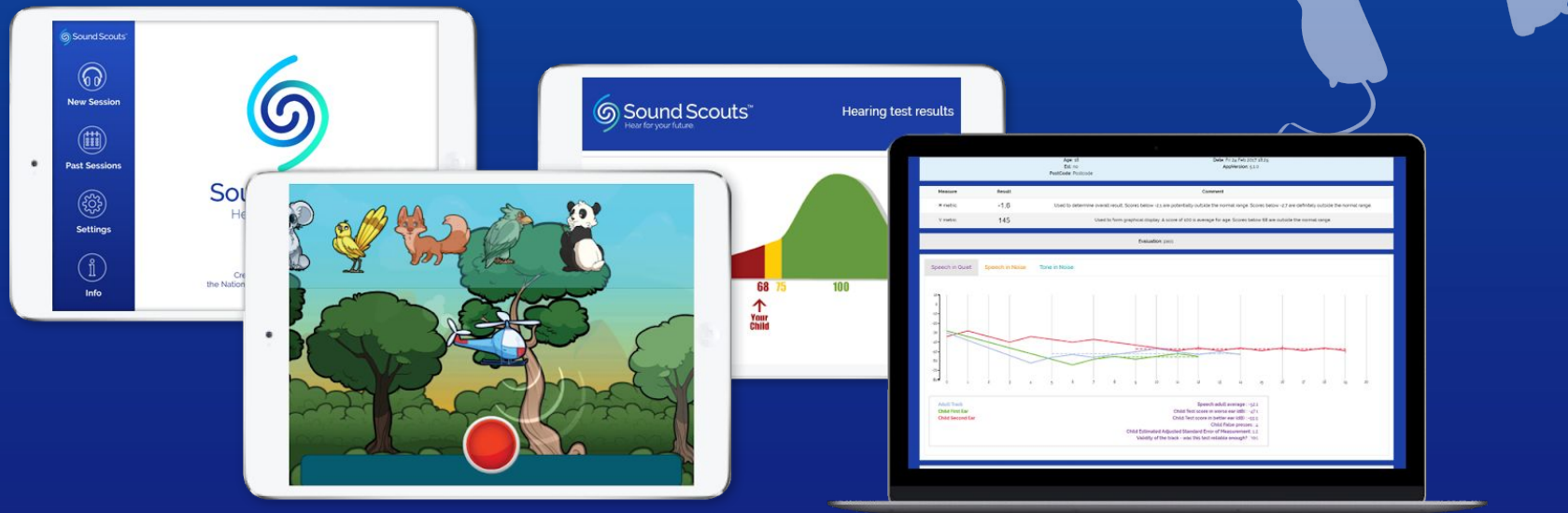
www.soundscouts.com.au

It's an APP

Free of charge
in Australia

Select a download option





REGISTER▶ PLAY▶ RESULTS

HEARING TEST DISGUISED AS A GAME

Delivers:

- Child's attention
- Non-threatening
- Similar to Play Audiometry
- Data capture enabling analytics



SETTING UP SOUND SCOUTS

Supervisor Setup

- Only once per testing session
- Calibrates the app
- Supervisor must have normal hearing
- Lays down a track for comparison

Player Setup

- Can be done on app or via SSIMPL
- Minimal information required

The screenshot shows the 'New Session' setup screen. At the top left is a back arrow, and at the top right is the title 'New Session'. The screen contains two setup items, each with an icon, a title, a status, and a timestamp or age:

- Supervisor Setup:** Represented by a headphones icon. The status is 'Completed' with a green checkmark. The timestamp is 'Modified: 1:16 PM 21/07/2020'.
- Player Setup:** Represented by a person icon. The status is 'Completed' with a green checkmark. The age is 'Age: ~5 years 6 months'.

At the bottom of the screen is a large blue button labeled 'Proceed'.

SOUND SCOUTS TEST ELEMENTS

Age BASED test

1. Test of word recognition threshold in quiet

- used to set the level of rest of test
- comparison with threshold for adult also useful

2. Test of tone perception in noise (mid-frequency tone)

3. Test of speech recognition in spatially separated noise



New Session



Past Sessions



Settings



Info

Trial run can be used by parents/caregivers to review the test and if necessary show younger children how to play each section.

Please choose a language for this trial run:

English - Australia ▼



Speech-in-Quiet

Proceed



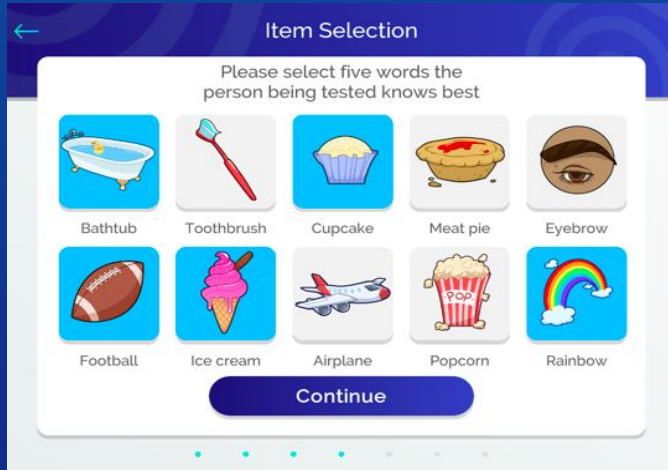
Tone-in-Noise

Proceed



Speech-in-Noise

Proceed



SPONDEE WORDS - supervising adult asks child to select 5 objects (child must identify each picture verbally with the matching written word) – opportunity to engage with child, assess language

Blue line - adults result

Green line - child's 1st ear

Red line - child's 2nd ear



SPEECH IN QUIET (Calibration)



Children listen for special sound and then tap the red button

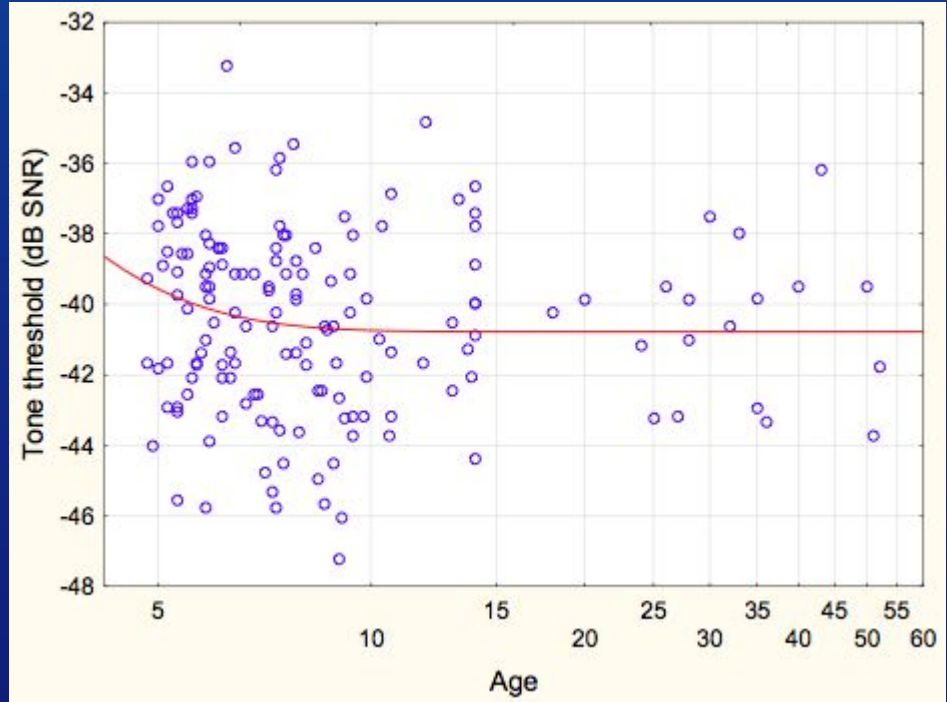
TONE result tracks along normal (grey line represent normal for age)



TONE TEST (tritone target)

Tone Test results

NB: tone results are less dependent on age





Players must focus on the target sounds and drag the matching objects into the screen Eg cheese sandwich

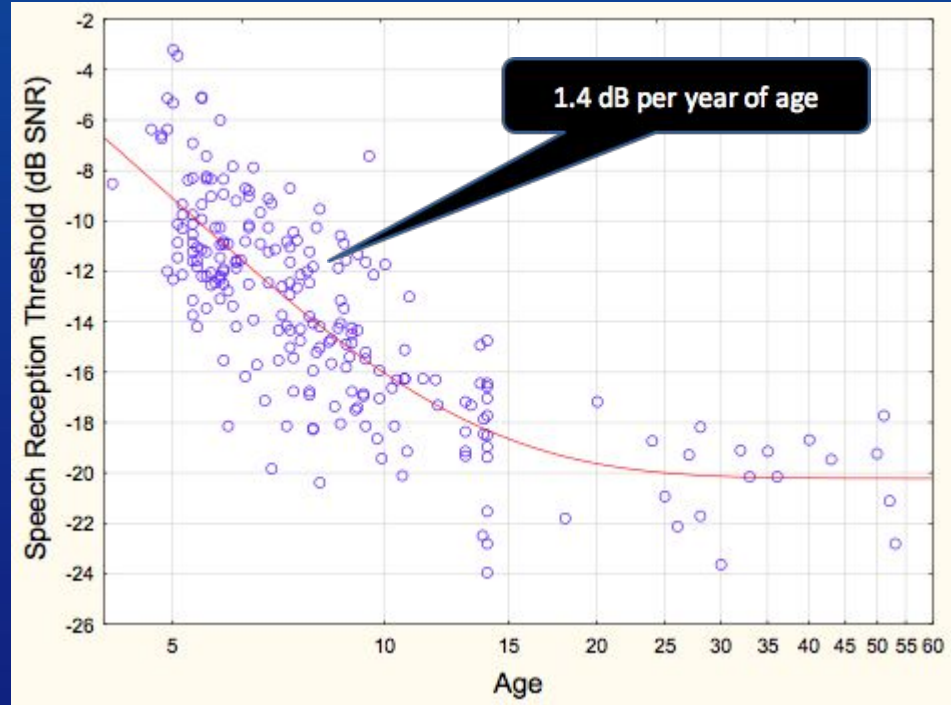
Grey line is age based average (lower is better) - child's results outside normal range



SPEECH IN NOISE

Normative data: 4 to
12 years
Speech-in- noise

NB: our ability to hear in
noise improves each year
as our language develops



SPEECH IN NOISE

- Standard error of Calibration, Speech-in-noise and Tone-in-noise
- Number of false positives (taps) in the tone test
- Excessive linear trend during adaptive track
- Adult hearing poorer than child (checks adults hearing)

RESULTS

PASS

BORDERLINE – if a child has a borderline result they may have a mild hearing loss

FAIL – with an indication of:

- Middle ear issue
- Inner ear issue
- Listening difficulties in noise (caused by a range of issues)

Always do a second test when receiving a **FAIL** / **BORDERLINE** result.

The Report will also indicate if it is bilateral or unilateral

If the tone results are reliable/valid

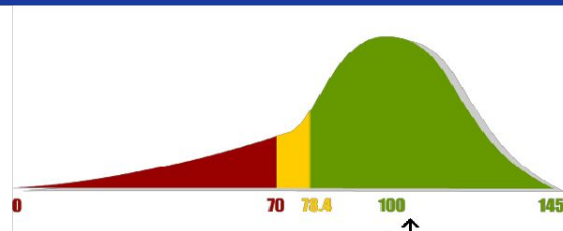
If the adult levels are acceptable (see first paragraph of the report)

RESULTS



Hearing Test results - Annabella

www.SoundScouts.com



Annabella has received a Score of: 104
The average score is: 100

Annabella has passed Sound Scouts. Annabella's hearing is within the normal range on this test. However if you have serious concerns about her hearing, you should contact your doctor who can provide advice on hearing services in your area. Remember also that middle ear infections can come and go quickly, so temporary or intermittent hearing loss could occur in the future.

Sound Scouts is not a replacement for a complete diagnostic hearing assessment carried out by a qualified clinician. It should not be taken as medical advice. Results from Sound Scouts may vary, depending on whether you are in a quiet or noisy environment and whether Annabella has understood the instructions and depending on Annabella's attention during the game. Sound Scouts must be carried out in a quiet environment.

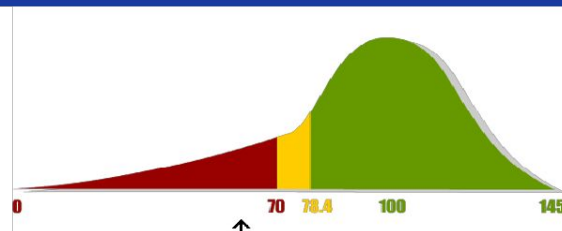
Please note that 'fail' results are reviewed by a Sound Scouts expert and you may be contacted via email if any inconsistencies are identified.

Test conducted on: Monday, 1 July 2019 12:48 PM
The ID for this session is: 623F2842



Hearing Test results - James

www.SoundScouts.com



James has received a Score of: 60
The average score is: 100

James's results appear to be outside the normal range. The test results can be influenced by different factors. If the test was carried out in a quiet place, the headphones were confirmed to be in good working order and if the child paid attention during the test, then the result may be caused by a hearing issue.

A RETEST is REQUIRED (ideally within 7 days) to confirm the results. Please ensure you use decent quality ADULT headphones or earbuds (Apple earbuds are suitable with iOS devices) and test in a quiet space.

In this case the results indicate difficulty hearing in noise. This can be caused by poor attention at the time of testing, a longer term attention issue, an auditory processing disorder, a language disorder, or even just English being the child's second language. To ensure optimum attention the child should be well rested.

If the test was carried out as recommended and the child is proficient in English then it is possible that the child has a mild auditory processing disorder, poor attention, or a language disorder. If so, the child may have difficulty understanding speech when there are other sounds present.

ACTION: Make sure the child's teacher is aware of this potential difficulty as this may impact learning outcomes. You can contact your General Practitioner (GP) for additional assessment and advice.

You may also wish to contact your school learning support team or community health services. An audiologist can provide further hearing assessment, a speech pathologist can provide a language assessment and/or an educational psychologist can provide a cognitive assessment. There is a fee for private services.

Sound Scouts is not a replacement for a complete diagnostic hearing assessment carried out by a qualified clinician. It should not be taken as medical advice. Results from Sound Scouts may vary, depending on whether you are in a quiet or noisy environment and whether James has understood the instructions and depending on James's attention during the game. Sound Scouts must be carried out in a quiet environment.

RESULTS



Activity Details

The following graphs may provide further insights into the Players test results.

Ability to hear a mid-frequency tone (helicopter activity)



Emma Beach's score was within the normal range for this activity.

Ability to hear soft sounds in quiet (balloon and boat activity)



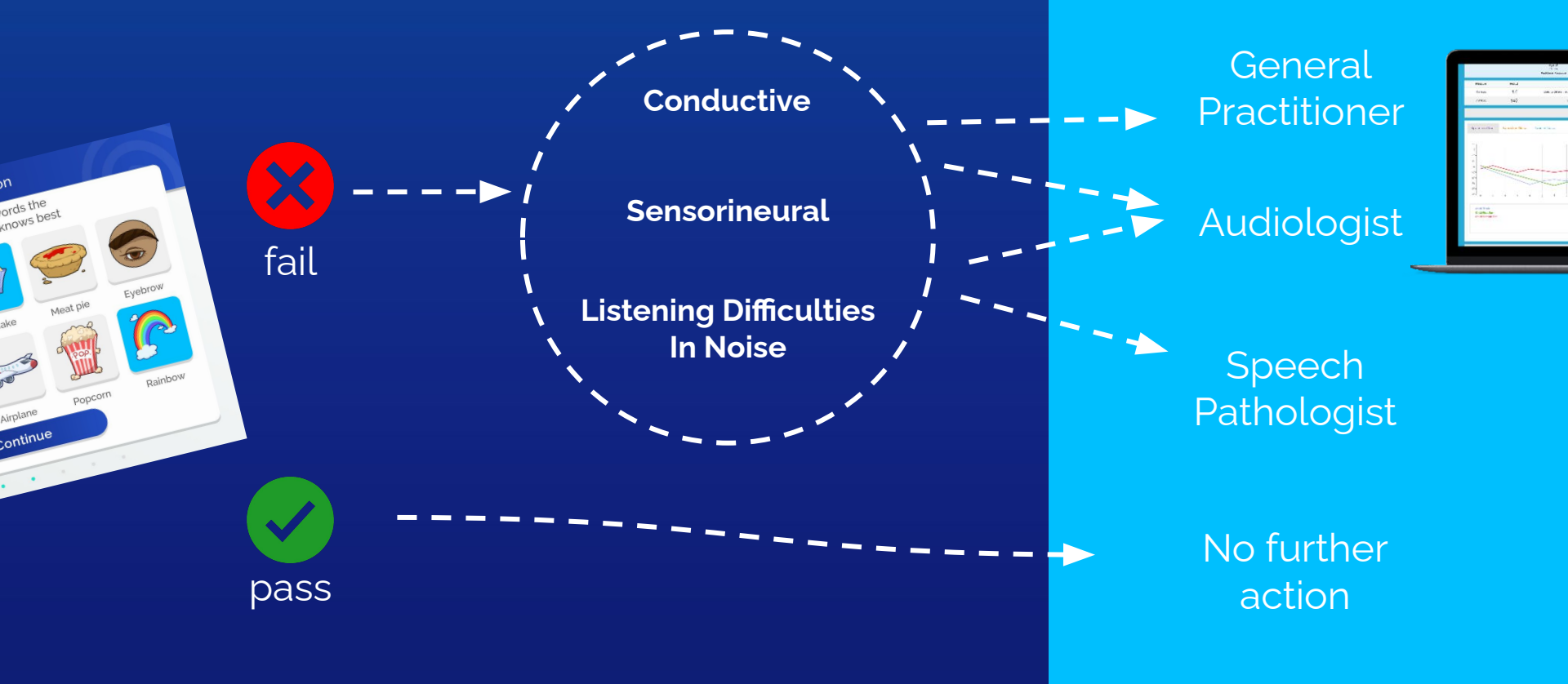
Emma Beach's score was within the normal range for this activity.

A difference between the two ears may trigger a Borderline or Fail result.

Ability to hear and understand speech in noise (park activity)



Emma Beach's score was within the normal range for this activity.



SOUND SCOUTS – ACTS AS AN AWARENESS TOOL

Prompts carers/teachers to consider hearing issues and discuss (such as reinforcing nose blowing practice)

Avenue to engage in discussions with parents

Opportunity to teach children self-advocacy skills

le: asking for help, ask class buddy for help, speak up if they haven't heard.

School Resources PAGE on Sound Scouts Website

Speech in Quiet Test Items



Bathtub



Toothbrush



Cupcake



Football



Eye brow



Ice cream



Airplane



Popcorn



Rainbow



Meat pie



Speech In Noise Test - Target Items



A Rock that Looks like an Egg



Coins



Orange Carrot



Big black and white snake



A Koala in a Tree



A small red torch



Yellow Bird with Long Tail Feathers



White Blanket



Teddy Bear Keychain



Pile of Brown Flowers



A Tree with White Leaves



Blue Mat



Blue flowers on a Bush



Choc Chip Cookies



Big White Ball



A Yellow Banana



Black Camera



A Cheese Sandwich



Brown Bread



Green backpack with a red cross



An Orange Water Bottle



Red Strawberry Jam



Print these badges for students who have been tested with the **Sound Scouts** app

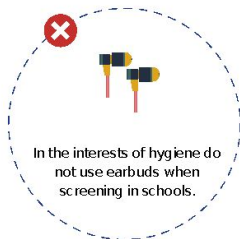
Don't forget to tag us in your socials!

#ScreenwithSoundScouts

@SoundScouts

Choosing the Right Headphones

Choosing the right headphones and using them in the correct way is an important part of ensuring a reliable result when screening with Sound Scouts.

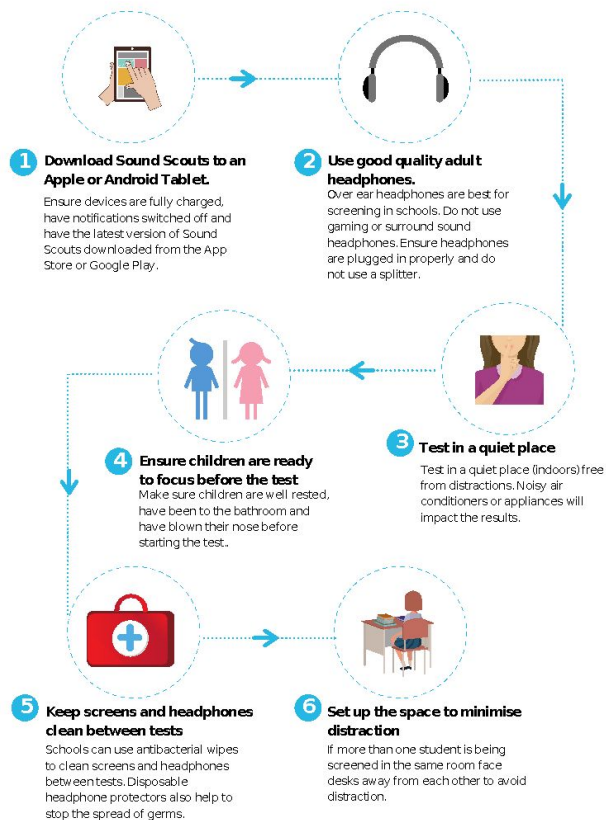


✓ We recommend Sennheiser HD 300s (over ear headphones) for screening and offer these at a discount to schools using Sound Scouts.

Sennheiser HD 300- \$90 plus postage

Email team@soundscouts.com.au to place an order or find out more.

Setting up the Screening Environment



Sound Scouts Product Matrix

SSIMPL

Integrated Management Platform



Create, track, and edit player and testing data across any internet-connected device



Screening



Download on the
App Store

GET IT ON
Google Play

Get it from
Microsoft

Sound Scouts app



Diagnostics

Tools to diagnose
Auditory Processing
Disorder (APD):
LiSN-S, LiSN-U, DDdT



Clinical Portal

Designed for clinicians
and speech pathologists
to take a detailed review
of individual test
results





Sound Scouts™

Hear for your future.

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