

HOME SCHOOLING RESOURCES

SUBJECT: ACOUSTICS

Introduction

This year is the International Year of Sound – so there's no better time to start learning more about it! Let's start with some facts you might not know...

- 1) The speed of sound is around 767 miles per hour
- 2) Sound travels four times faster through water than through air
- 3) The scientific study of sound waves is known as acoustics
- 4) Our eardrums vibrate in a similar way to the original source of the vibration

So, why is sound so important?

Sound is important because it affects every element of our lives in some way or another, without us even thinking about it!

Click on the screens to watch some videos of sound in action... >>



CLICK HERE FOR MORE

Where can an interest in Acoustics take you?

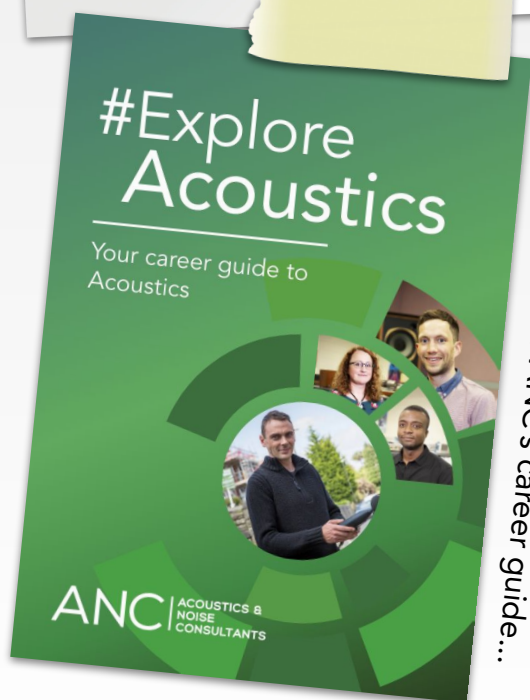
Now you've learnt more about this interesting subject that nobody seems to talk about, why not consider a career in it?

Because Acoustics affects SO many different aspects of everyday life, that means that there are SO many different fields and areas for you to explore as a career. Whatever your job in acoustics, it's bound to throw up a variety of interesting challenges.

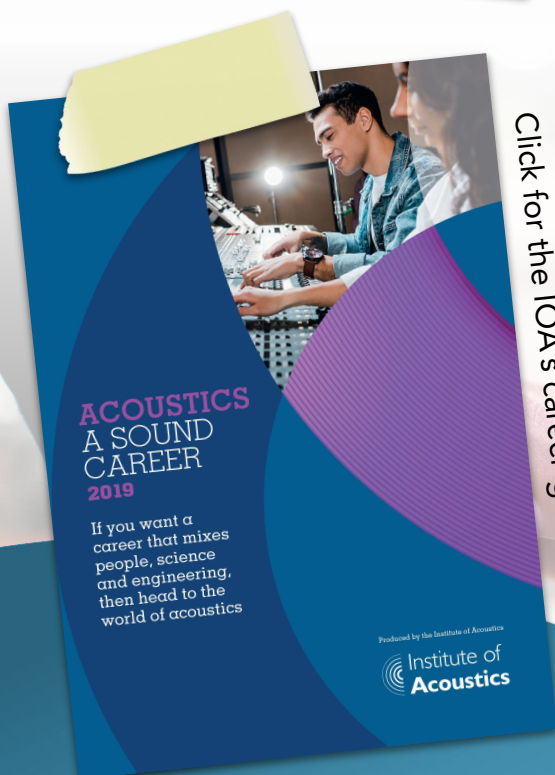
Don't believe us? Why not listen to what the professionals have to say...

VISIT #EXPLOREACOUSTICS

Managing noise is an important, but often under considered option. For the future well-being of society, a new generation of students is needed with expertise in science and engineering to help address future issues.



Click for the ANC's career guide...



Click for the IOA's career guide...

HEAR FROM THE PROFESSIONALS...

Click the images below to watch their interviews.

Vicky Stewart



STEM Ambassador

My career in acoustics has taken me to places I wouldn't have been to otherwise.

Student

The possibilities within acoustics are endless and that's why I love it.

Dominic Bowers



Consultant

There are lots of opportunities for acoustic graduates to develop their expertise.

Jo Miller



Lecturer

The number of acoustic graduates going straight into jobs is extremely high.

Dr Paul Kendrick



Lesson Plans



CLICK HERE FOR WEBSITE

Here are a few examples of lesson plans from an excellent American resource, the Acoustical Society of America (ASA)

Physics

Middle & High School Lesson Plans

SOME SUBJECTS COVERED:

- Anatomy of a Wave
- Investigating How Music is Made
- Traveling and Standing Waves
- Speed of Sound Questions
- Intensity and Intensity Level
- Waves and Harmonics
- Perception

Physical Science

Middle & High School Lesson Plans

SOME SUBJECTS COVERED:

- Sound and Music
- Wave Basics
- Anatomy of a Wave
- Tuning Fork Discovery
- The Doppler Effect
- Sound Measures
- How Loud is too Loud?

Elementary

Middle & High School Lesson Plans

SOME SUBJECTS COVERED:

- Good Vibrations
- Loud Sounds Bookmarks
- Loud Sounds Coloring Sheets
- Activities
 - Speed of Sound
 - Fish Finding Game
 - Sound not Sight
 - 3D Location
 - How Dolphins use Sound

A step further... Apprenticeships

WHAT IS AN APPRENTICESHIP?

An apprenticeship is a real job, with real experience, a salary and most importantly a chance to train while you work. You are treated like anyone else in an employer's organisation.

Key to this approach is complementary experience and education, enabling apprentices to put into practice what they learn and, in turn, learn from their experiences.

The Trailblazer Group, formed of representatives from industry, have taken care to establish an apprenticeship standard that seeks to include the vast array of different professional streams included in acoustics.

The standard and subsequent assessment plan, developed in conjunction with the IOA, aims to establish a course which will form a robust foundation for apprentices to apply acoustic principles to their day-to-day work.

WHAT'S IN IT FOR YOU?

The apprenticeship will provide formal training and experience, culminating in the award of a qualification to take the apprentice forward to a formal degree, degree apprenticeship or other alternative employer based training routes.

The apprentice will also have the opportunity to apply for TechIOA status with the Institute of Acoustics and EngTech accreditation with the Engineering Council. Above all, the apprentice will have compiled a portfolio of actual experience in the acoustics industry, valuable for both them and their employer.

The apprenticeship is expected to be ready in time for the September 2020 intake. Launch events will be taking place in the meantime.



CLICK HERE FOR MORE INFO ON THE APPRENTICESHIP



CLICK ON THE SCREEN TO
VIEW A VIDEO ABOUT A
CAREER WITHIN ACOUSTICS



University of
Salford
MANCHESTER

ACOUSTIC
DEMOS

LESSON
STARTERS

Here are just a few
of the resources we
would highly
recommend using if
you're interesting in
looking into how
acoustics works...

Learn more by clicking on the links...

BBC
Bitesize

STEM
LEARNING

Institute of
Acoustics

HM Government
ENGINEERING
TAKE A CLOSER LOOK

NATIONAL
GEOGRAPHIC
KIDS

SCIENCE
MUSEUM
GROUP

Activity
Book