

For each lesson please follow the link to Oak National Academy and watch the video, complete any worksheets and exit quiz.

Year 9

Week 1 – SCIENCE – Sound waves

# A Place in Time

Monday

## Lesson 1 – Sound Waves

This lesson looks at the causes of sound, how sound travels and what a sound wave from an oscilloscope trace looks like.

<https://classroom.thenational.academy/lessons/sound-waves-cdhkqc>

**TASKS: -**

1. Watch the video of the lesson
2. Download the worksheet and complete the tasks
3. What have you learnt? Complete the exit quiz

Understanding and accepting that everything exists in time and place, and acknowledging that there are differences between people, places and objects and that things can change over time.

Tuesday

## Lesson 2 – Echoes and Superposition

This lesson looks at how different surfaces can have an effect on sound, what echoes are and how they can be useful and what can happen when waves interact with each other.

<https://classroom.thenational.academy/lessons/echoes-and-superposition-74ukjt>

**TASKS: -**

1. Complete the introduction quiz
2. Watch the video of the lesson
3. Download the worksheet and complete the tasks
4. What have you learnt? Complete the exit quiz

Wednesday

## Lesson 3 – Pitch and frequency

This lesson looks at how pitch is determined by frequency and how this has an effect on wavelength. You will also learn how to interpret oscilloscope traces.

<https://classroom.thenational.academy/lessons/pitch-and-frequency-cgvk6c>

**TASKS: -**

1. Complete the introduction quiz
2. Watch the video of the lesson
3. Download the worksheet and complete the tasks
4. What have you learnt? Complete the exit quiz

Thursday

## Lesson 4 – Amplitude and Volume

This lesson looks at how volume is determined by amplitude and how amplitude is based on the displacement of particles. You will learn how to interpret oscilloscope traces.

<https://classroom.thenational.academy/lessons/amplitude-and-volume-60vkec>

**TASKS: -**

1. Complete the introduction quiz
2. Watch the video of the lesson
3. Download the worksheet and complete the tasks
4. What have you learnt? Complete the exit quiz

Friday

## Lesson 5 – Speed of sound

This lesson explores the speed of sound in the different states of matter and how to fully utilise the speed/distance/time equation.

<https://classroom.thenational.academy/lessons/speed-of-sound-6wr3gt>

**TASKS: -**

1. Complete the introduction quiz
2. Watch the video of the lesson
3. Download the worksheet and complete the tasks
4. What have you learnt? Complete the exit quiz

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Year 9

Week 2 – SCIENCE – Sound waves

# A Place in Time

Monday

## Lesson 6 – Review (Part 1)

This lesson involves a series of recap questions, key word practise and exam-style questions to consolidate learning and improve confidence in application questions.

<https://classroom.thenational.academy/lessons/review-part-1-64t64d>

**TASKS: -**

1. Complete the introduction quiz
2. Watch the video of the lesson
3. Download the worksheet and complete the tasks
4. What have you learnt? Complete the exit quiz

Understanding and accepting that everything exists in time and place, and acknowledging that there are differences between people, places and objects and that things can change over time.

Tuesday

## Lesson 7 – The Ear

This lesson explores how we hear highlighting the role of the various structures within the ear.

<https://classroom.thenational.academy/lessons/the-ear-cmv3gt>

**TASKS: -**

1. Complete the introduction quiz
2. Watch the video of the lesson
3. Download the worksheet and complete the tasks
4. What have you learnt? Complete the exit quiz

Wednesday

## Lesson 8 – Hearing ranges and ultrasound

This lesson explores the hearing range of a variety of organisms, what ultrasound is and its uses.

<https://classroom.thenational.academy/lessons/hearing-ranges-and-ultrasound-crrkcr>

**TASKS: -**

1. Complete the introduction quiz
2. Watch the video of the lesson
3. Download the worksheet and complete the tasks
4. What have you learnt? Complete the exit quiz

Thursday

## Lesson 9 – Sound devices

This lesson looks at how microphones are used to convert sound waves into electrical current and how the opposite is true for loudspeakers.

<https://classroom.thenational.academy/lessons/sound-devices-61h36t>

**TASKS: -**

1. Complete the introduction quiz
2. Watch the video of the lesson
3. Download the worksheet and complete the tasks
4. What have you learnt? Complete the exit quiz

Friday

## Lesson 10 – Case study of James West

This lesson focuses on the integral role Dr James West had on the development of the electret microphone.

<https://classroom.thenational.academy/lessons/case-study-of-james-west-60w68d>

## Lesson 11 – Review (Part 2)

This lesson involves a series of recap questions, key word practise and exam-style questions to consolidate learning and improve confidence in application questions.

<https://classroom.thenational.academy/lessons/review-part-2-6cr66t>

**TASKS: -**

1. Complete the introduction quiz
2. Watch the video of the lesson
3. Download the worksheet and complete the tasks
4. What have you learnt? Complete the exit quiz