Year 4 – Creating media – Audio production

Unit introduction

Learners will identify the input device (microphone) and output devices (speaker or headphones) required to work with sound digitally. Learners will discuss the ownership of digital audio and the copyright implications of duplicating the work of others. In order to record audio themselves, learners will use Audacity to produce a podcast, which will include editing their work, adding multiple tracks, and opening and saving the audio files. Finally, learners will evaluate their work and give feedback to their peers. This unit uses 'school news' as a context for the podcasts, but this can be changed to suit your curriculum.

Software and Hardware requirements

The resources have been created using the software Audacity, with screenshots of the software included. This unit presumes the use of laptops or desktops (with microphones and headphones) and the use of the free program Audacity. Alternative applications which can be used include Twisted Wave or Audio Mass for Chromebooks, and GarageBand for iPads. It's advisable to use headphones in a classroom setting, as they make it easier for learners to hear their recordings whilst also reducing the overall background noise.

If you've adapted this unit to better suit your school, please share your adapted resources with fellow teachers in the STEM community. Alternatively, if this unit isn't quite right for your school, why not see if an adapted version which better suits has already been shared?

Overview of lessons

Lesson	Brief overview	Learning objectives
1. Recording sound	In this lesson, learners will identify the input devices used to record sound and output devices needed to listen to it. They will then record their voices using a	To identify that sound can be recorded

	computer, and reflect on what makes a good audio recording. Lastly, learners will consider ownership and copyright issues related to recordings.	• I can identify the input and output devices used to record and play sound • I can use a computer to record audio • I can explain that the person who records the sound can say who is allowed to use it
2. Editing audio	In this lesson, learners will record and re-record their voices to improve their recordings. They will edit the recordings, removing long pauses and mistakes. Learners will also listen to a range of podcasts and identify the features of a podcast. They will be introduced to the job of a recording engineer.	To explain that audio recordings can be edited • I can re-record my voice to improve my recording • I can inspect the soundwave view to know where to trim my recording • I can discuss what sounds can be added to a podcast
3. Planning a podcast	In this lesson, learners will record their voices and then import and align sound effects to create layers in their recordings. Learners will learn how to save their work so it remains editable. They will then plan their own podcast which they will work on in future lessons.	To recognise the different parts of creating a podcast project • I can explain how sounds can be combined to make a podcast more engaging • I can save my project so the different parts remain editable • I can plan appropriate content for a podcast
4. Creating a podcast	In this lesson, learners will record the voice tracks for their podcast. They will review their recordings and re-record if necessary. Learners will edit, trim, and align their voice recordings, and then save their project so they can continue working on it in the next lesson.	To apply audio editing skills independently • I can record content following my plan • I can review the quality of my recordings • I can improve my voice recordings

5. Behind the scenes	In this lesson, learners will develop their podcast further by adding content such as sound effects and background music. The audio will be layered with their existing voice recordings and exported as an audio file.	To combine audio to enhance my podcast project ● I can open my project to continue working on it ● I can arrange multiple sounds to create the effect I want ● I can explain the difference between saving a project and exporting an audio file
6. Evaluating podcasts	In this lesson, learners will evaluate their own podcasts and that of others. After looking at the evaluation, learners will decide if they can improve their podcast and then make any changes they have chosen.	To evaluate the effective use of audio ● I can listen to an audio recording to identify its strengths ● I can suggest improvements to an audio recording ● I can choose appropriate edits to improve my podcast

Request a computing ambassador

This unit is ideal for linking to the world of careers, and a computing ambassador can support this. Through the [STEM ambassador platform](#), you can search for a computing ambassador. If you cannot find a computing ambassador with an offer to support this unit, then the following request will help to match you with the right person. You will need to edit the areas in red to ensure the request is right for your school.

Year 4 (ages 8-9) are learning about audio production though the [Teach Computing Curriculum unit of six lessons](#). Within these lessons, pupils will learn techniques to create their own podcast.

*Our lessons are taking place from *date* to *date* and we would appreciate someone with skills in this area to offer some real-world experience to this unit. The unit uses *insert software* on *insert devices* and focuses on the following areas:*
- *understanding inputs (microphones) and outputs (speakers or headphones) to work with sound digitally*

- *recording and editing audio, including adding multiple tracks*
- *evaluating their recordings and podcasts*
- *discussing the ownership of digital audio and copyright implications*

We require an ambassador who can support in any of these areas. We are hoping for an ambassador who would be willing to join us *in the classroom/virtually* to support our learning by *providing some handy hints and tips for our projects/giving us constructive feedback on our final projects/discussing how podcasting or audio editing is used within their profession and in the real-world.*

Subject knowledge and CPD opportunities

You will need to be familiar with the location of built-in microphones if using laptops and should be familiar with using your chosen software to record sound. You should be aware of ways to improve the quality of recorded audio including: low background noise and proximity to the person talking in relation to the microphone. There are numerous skills required in the software, including recording audio, deleting tracks, trimming and aligning audio and importing and saving files. Such skills will be modelled throughout the unit.

Continual Professional Development
Enhance your subject knowledge to teach this unit through the following free CPD:
- Getting started in Year 4 – short course
- Introduction to primary computing remote or face to face

Teach primary computing certificate
To further enhance your subject knowledge, enrol on the teach primary computing certificate. This will support you to develop your knowledge and skills in primary computing and gain the confidence to teach great lessons, all whilst earning a nationally recognised certificate!

Progression

This unit progresses students' knowledge and understanding of creating media, by focusing on the recording and editing of sound to produce a podcast. Following this unit, learners will explore combining audio with video in the 'Video editing' unit in Year 5.

Common Misconceptions

Learners may have the misconception that recording and editing audio is as simple as pressing a button and speaking, however there are many skills that are required. They may believe that the software alone ensures high-quality recording, however the quality is dependent on the microphone, the environment and the techniques used. Learners might expect perfect results from their recordings, but good audio often requires careful editing. They may think that saving their project and exporting audio are the same thing, however saving a project keeps the ability to edit, whereas exporting creates a final audio file that cannot be re-edited in the same way.

Curriculum links

Computing
- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information
- Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Education for a Connected World links
Copyright and ownership
- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it
- I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.

Science – **Year 4 (Lesson 2)**
- **Sound:** Find patterns between the volume of a sound and the strength of the vibrations that produced it
- **Sound:** Recognise that sounds get fainter as the distance from the sound source increases

English – **Years 3 and 4 (Lesson 3)**
- **Writing – composition:** Plan their writing by discussing and recording ideas
- **Writing – draft and write by:** In non-narrative material, using simple organisational devices [for example, headings and subheadings]

- **Writing:** Read aloud their own writing, to a group or the whole class, using appropriate intonation and controlling the tone and volume so that the meaning is clear

Assessment

Formative assessment

Assessment opportunities are detailed in each lesson plan. The learning objectives and success criteria are introduced in the slide decks at the beginning of each lesson and then reviewed at the end. Learners are invited to assess how well they feel they have met the learning objective using thumbs up, thumbs sideways, or thumbs down.

Summative assessment

Please see the assessment rubric document for this unit. The rubric can be used to assess student's work from lesson 6.