Computing: Audacity

Aim:	**Success Criteria:**	**Resources:**
Select, use and combine a variety of software on a range of digital devices to create content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Children use Audacity software as an introduction to sound recording. I can use software to create my own sounds by recording, editing and playing.	I can name different devices (including input and output) used for sound recording. I can use a digital device to record my own voice I can play back the recording and listen to it. I can delete and re-record sounds.	**Lesson Pack** PC /laptop Speakers/headphones Built-in or plug-in microphone
	Key/New Words: Sound, audio, record, edit, play stop, skip, waveform, input, output.	**Preparation:** Audacity installed on computers Differentiated **Recording Sounds Activity Sheet** - as required **Toolbar Help Activity Sheet** - as required **Track Help Activity Sheet** - as required

Prior Learning:	It will be helpful if children have used a variety of software before this lesson although they do not need prior experience of sound recording.

Learning Sequence

	Digital Recording Devices: What devices are used to record sound? Allow children to discuss and try to extract suggestions including computer, phone, answering machine, digital voice recorders (microphones may well be mentioned and these are one part of some of the afore-mentioned devices). What input and output are needed to record and listen to sound with a computer? Establish the need for a microphone (input) and either speakers or headphones (output).	
	Using Audacity: Audacity is one example of recording software that can be used on a PC or laptop. Specialist software allows a user to record and then edit sounds. More advanced features include: adding effects, changing properties (e.g. speed, volume, pitch) and layering multiple audio tracks.	
	Record and Playback: Show the Audacity toolbar and demonstrate how to use the basic buttons: record, stop and play.	
	Recording Demo: Can children record, playback and edit and sounds? Experiment with first recording using **Recording Sounds Activity Sheet** for prompts. Record, Play, Delete and Save. Use the **Toolbar Help Activity Sheet** or **Track Help Activity Sheet** for further guidance. Experiment with first recording using **Recording Sounds Activity Sheet** for prompts. Also use pause, edit sections of tracks, echo effect and background effects. Use the **Toolbar Help Activity Sheet** or **Track Help Activity Sheet** for further guidance.	
	Play and Share: Play back any clips that children are wanting and willing to share. Are there any original effects or sounds that anyone has made? Can anyone share a feature or process they discovered and teach everyone else how it's done?	

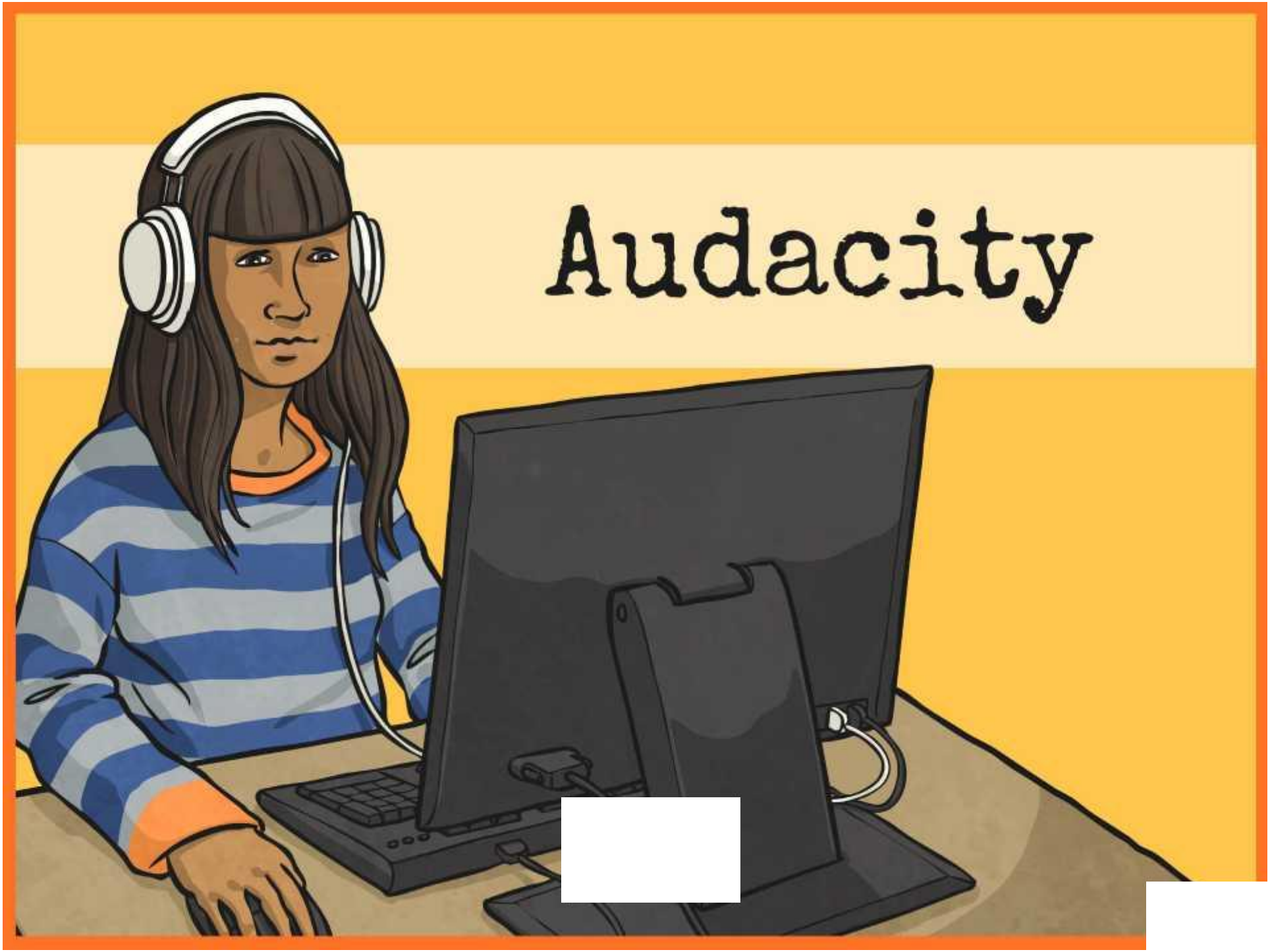
Task*it*

***Record*it:** Record a series of clues about a person or an object. Play one at a time or pause in between to see if someone can else can guess who/what the clues are about.

***Sing*it:** Try recording your own singing track. You could even add your own backing vocals as a separate track!

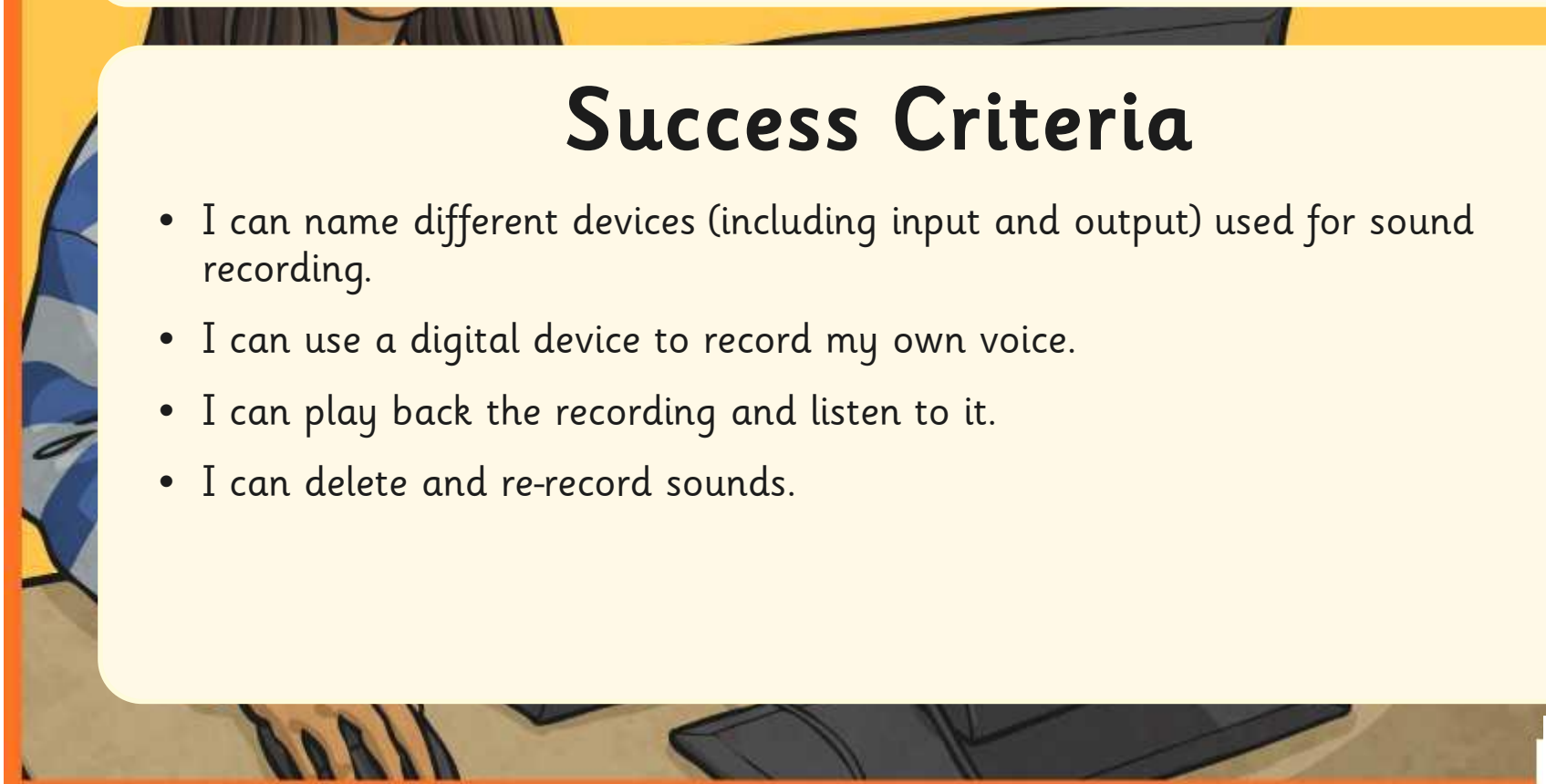
Computing

Radio Station


Audacity

Aim

- I can use software to create my own sounds by recording, editing and playing.



Success Criteria

- I can name different devices (including input and output) used for sound recording.
- I can use a digital device to record my own voice.
- I can play back the recording and listen to it.
- I can delete and re-record sounds.

Digital Recording Devices

What devices are used to record sound?
Suggestions may include:

Computer

Digital voice recorders

Answer machine

Phone

What input and output are needed to record and listen to sound with a computer?

We need a microphone (input) and…

…either speakers or headphones (output).

Using Audacity

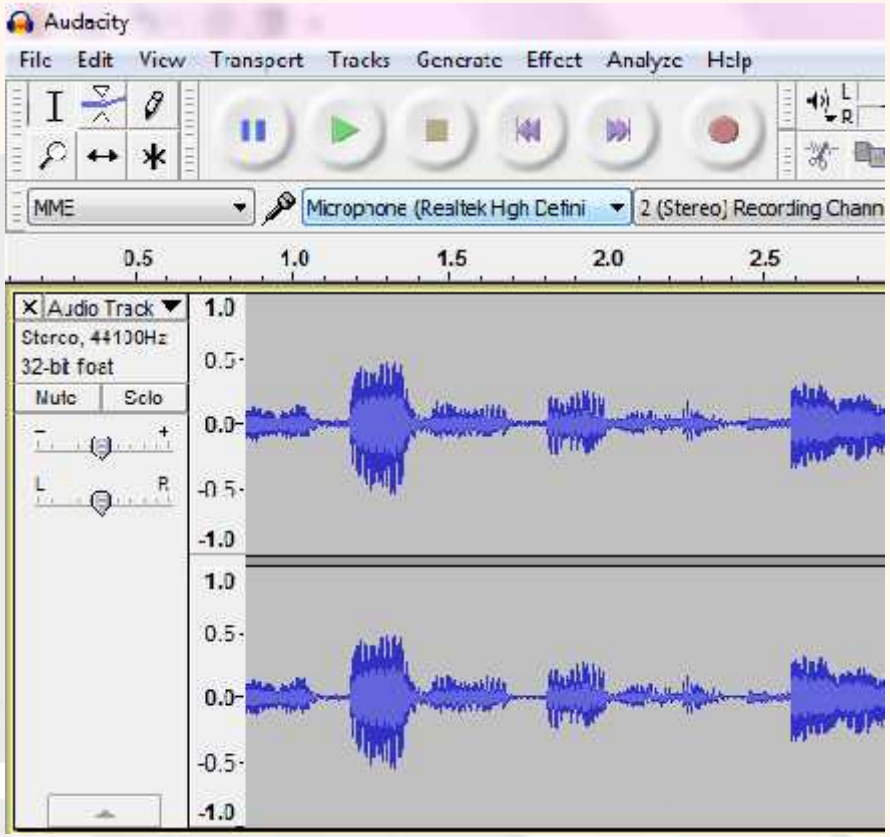
Audacity is one example of recording software that can be used on a PC or laptop. Specialist software allows you to record and then edit sounds.

More advanced features include:

Adding effects.

Changing properties (e.g. speed, volume, pitch).

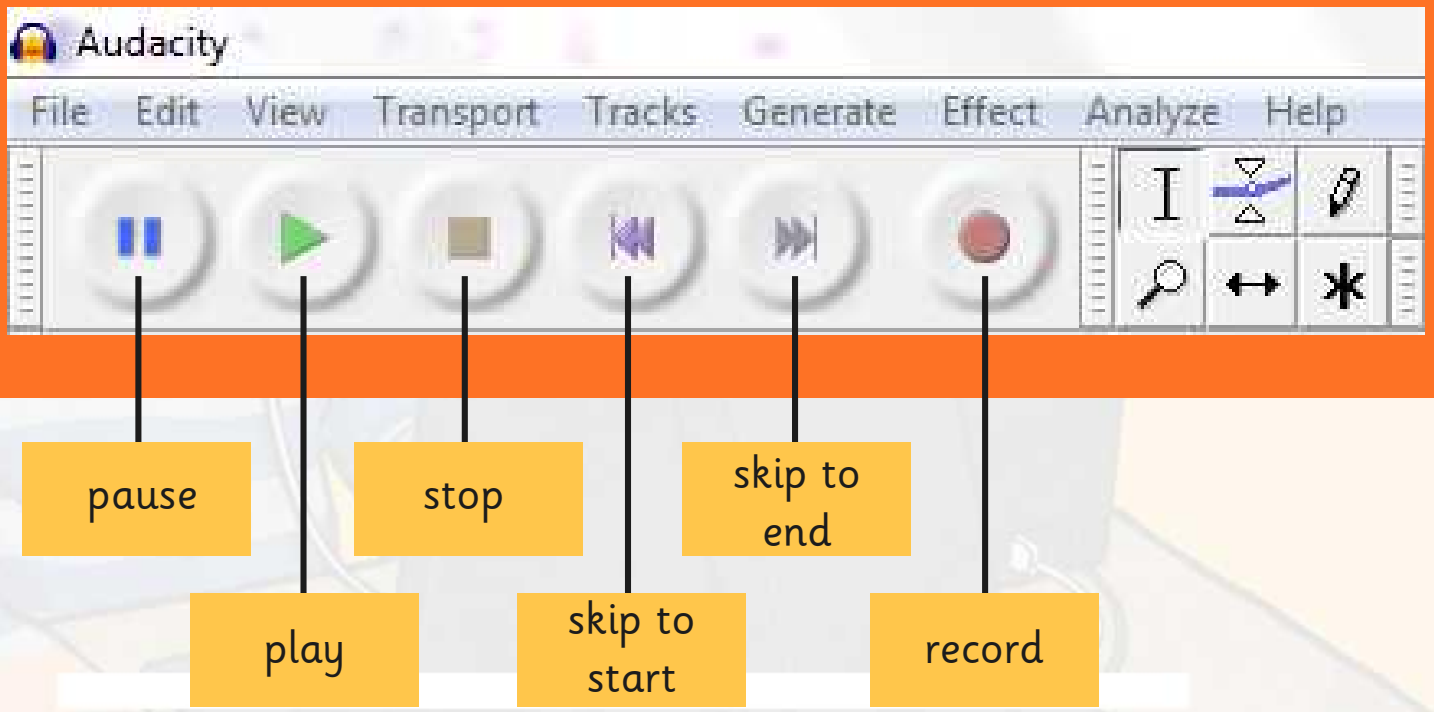
Layering multiple audio tracks.



Record and Playback

This is the Audacity main toolbar.

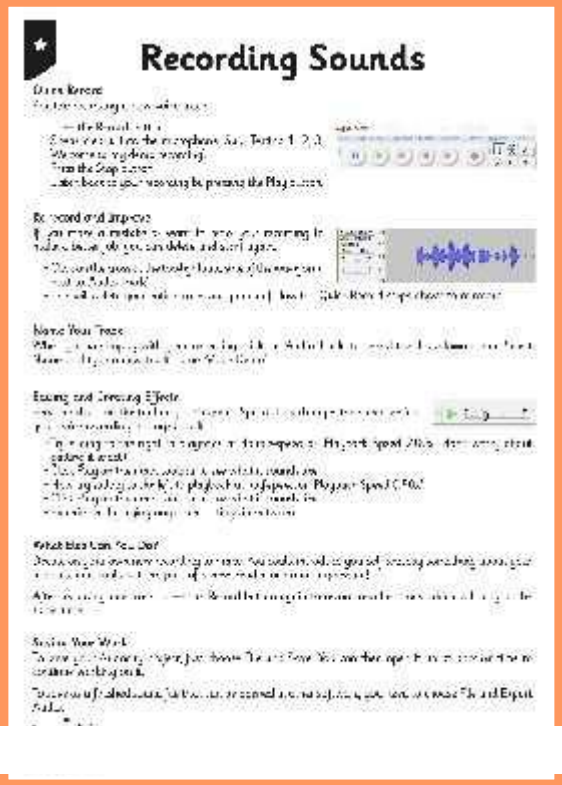
What do you think each of the big buttons are for?

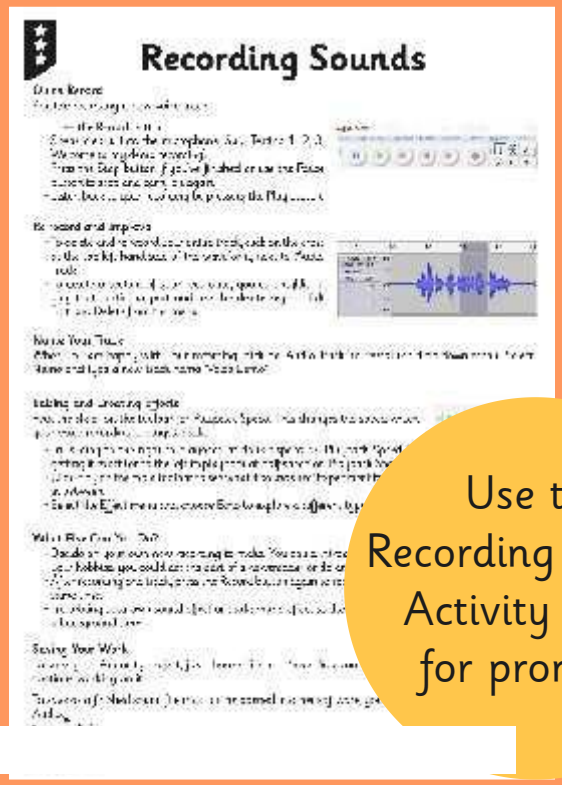


Recording Demo

Try out the features for yourself.

Can you record, playback and edit your own voice and other sounds?





Use the Recording Sounds Activity Sheet for prompts.

Play and Share

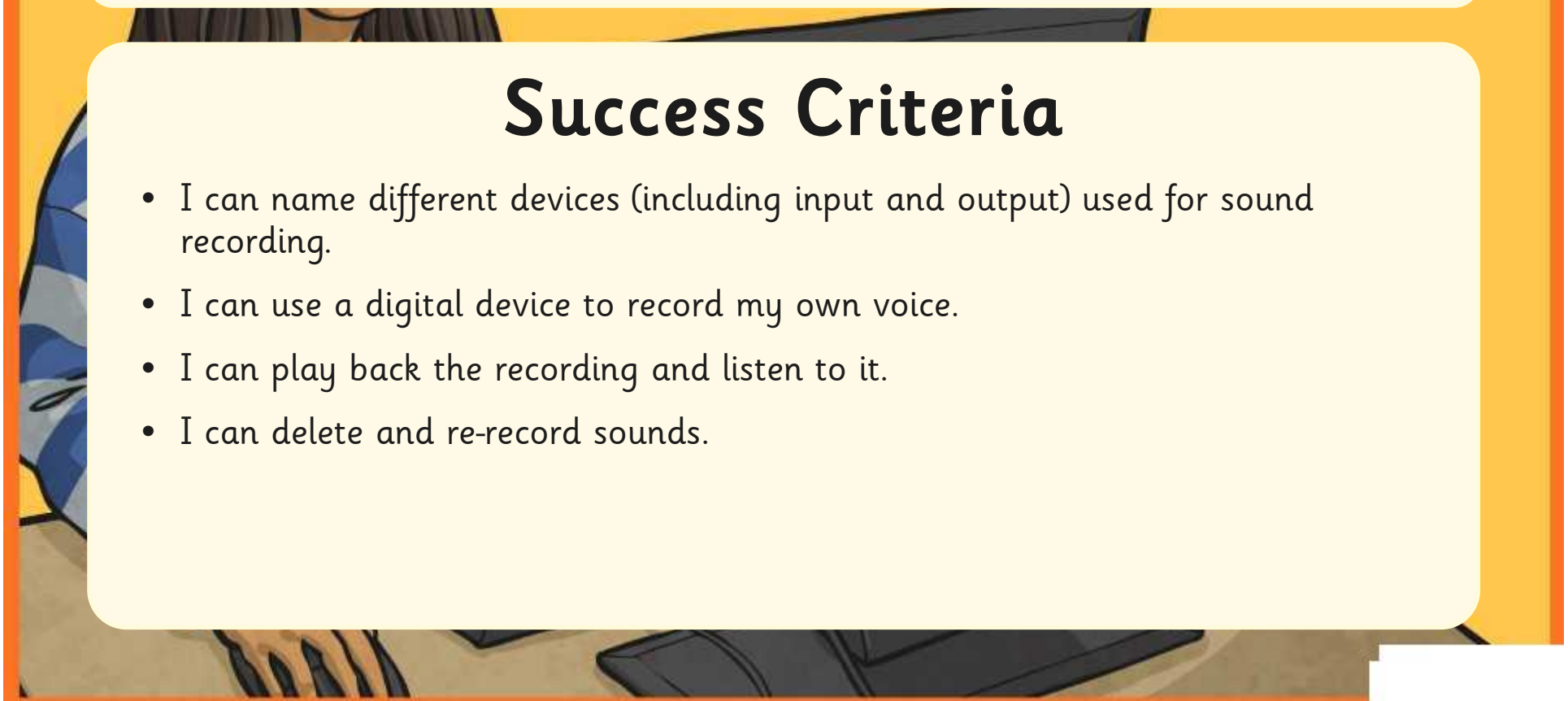
We will play back a selection of clips that have been created.

Can anyone share a feature or process that they have discovered and teach everyone else how it's done?

Are there any original effects or sounds that anyone has made?

Aim

- I can use software to create my own sounds by recording, editing and playing.



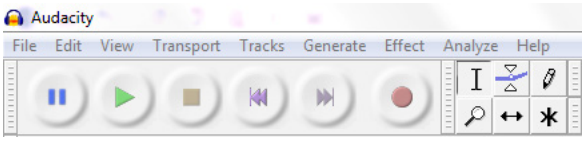
Success Criteria

- I can name different devices (including input and output) used for sound recording.
- I can use a digital device to record my own voice.
- I can play back the recording and listen to it.
- I can delete and re-record sounds.

Recording Sounds

Quick Record

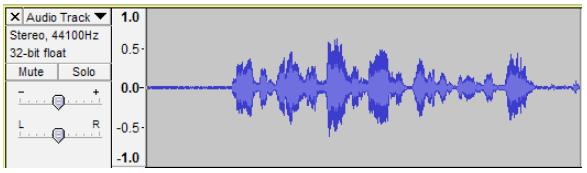
Practise recording a new voice track.



- Press the Record button.
- Speak clearly into the microphone. Say 'Testing 1, 2, 3. Welcome to my demo recording'.
- Press the Stop button.
- Listen back to your recording by pressing the Play button.

Re-record and Improve

If you make a mistake or want to redo your recording to make a better job, you can delete and start again.



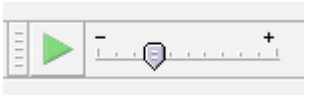
- Click on the cross at the top-left hand side of the waveform, next to 'Audio Track'.
- This will delete your entire track and you can follow the Quick Record steps above to re-record.

Name Your Track

When you are happy with your recording, click on 'Audio Track' to reveal the drop-down menu. Select Name and type a new track name 'Voice Demo'.

Editing and Creating Effects

Find the slider on the toolbar for Playback Speed. This changes the speed which your voice recording is played back.



- Try sliding to the right to playback at double-speed or 'Playback Speed 2.00x' (don't worry about getting it exact).
- Click Play on the main toolbar to see what it sounds like.
- Now try sliding to the left to playback at half-speed or 'Playback Speed 0.50x'.
- Click Play on the main toolbar to see what it sounds like.
- Experiment by trying any other settings in between.

What Else Can You Do?

Decide on your own new recording to make. You could introduce yourself and say something about your hobbies; you could act the part of a newsreader or do an impression!

After recording one track, press the Record button again to record another track which will play at the same time.

Saving Your Work

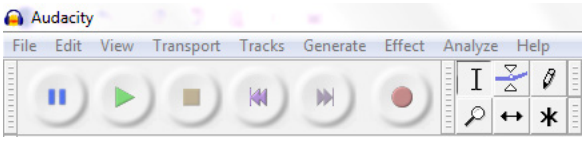
To save your Audacity project, just choose File and Save. You can then open it up at another time to continue working on it.

To save as a finished sound file that can be opened in other software, you need to choose File and Export Audio.

Recording Sounds

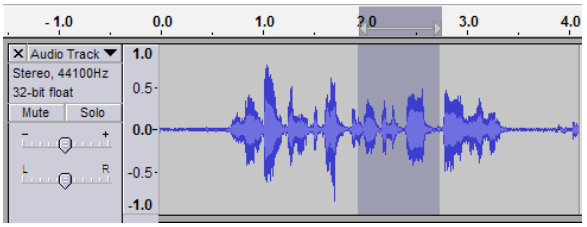
Quick Record

Practise recording a new voice track.



- Press the Record button.
- Speak clearly into the microphone. Say 'Testing 1, 2, 3. Welcome to my demo recording'.
- Press the Stop button if you've finished or use the Pause button to stop and carry on again.
- Listen back to your recording by pressing the Play button.

Re-record and Improve



- To delete and re-record your entire track, click on the cross at the top-left hand side of the waveform, next to 'Audio Track'.
- To delete a section of your recording, you can highlight, play that particular part and use the delete key or click Edit and Delete from the menu.

Name Your Track

When you are happy with your recording, click on 'Audio Track' to reveal the drop-down menu. Select Name and type a new track name 'Voice Demo'.

Editing and Creating Effects

Find the slider on the toolbar for Playback Speed. This changes the speed which your voice recording is played back.

- Try sliding to the right to playback at double-speed or 'Playback Speed 2.00x' (don't worry about getting it exact) or to the left to playback at half-speed or 'Playback Speed 0.50x'.
- Click Play on the main toolbar to see what it sounds like! Experiment by trying any other speed settings in between.
- Select the Effect menu and choose Echo to explore a different type of effect.

What Else Can You Do?

- Decide on your own new recording to make. You could introduce yourself and say something about your hobbies; you could act the part of a newsreader or do an impression!
- After recording one track, press the Record button again to record another track which will play at the same time.
- Try adding your own sound effect or background effect as the second track. You could whistle or hum a background tune.

Saving Your Work

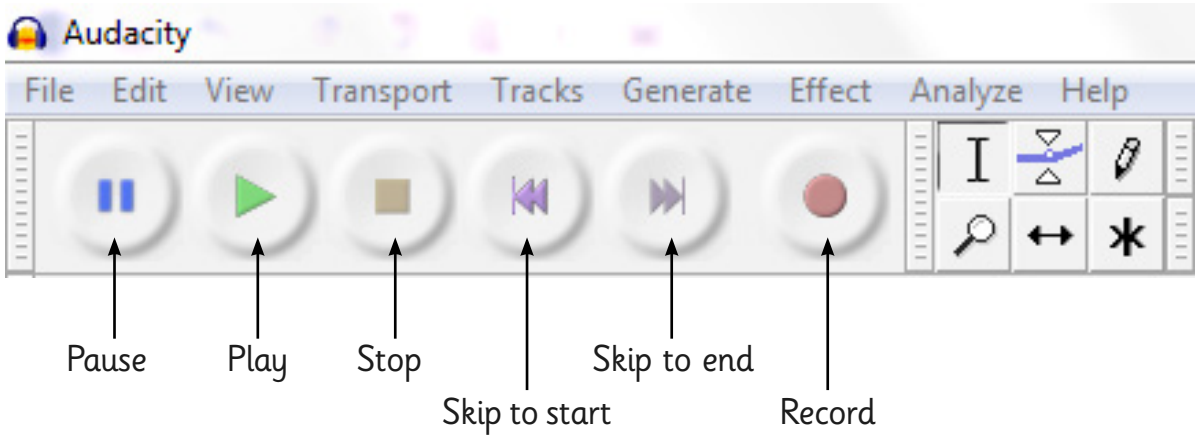
To save your Audacity project, just choose File and Save. You can then open it up at another time to continue working on it.

To save as a finished sound file that can be opened in other software, you need to choose File and Export

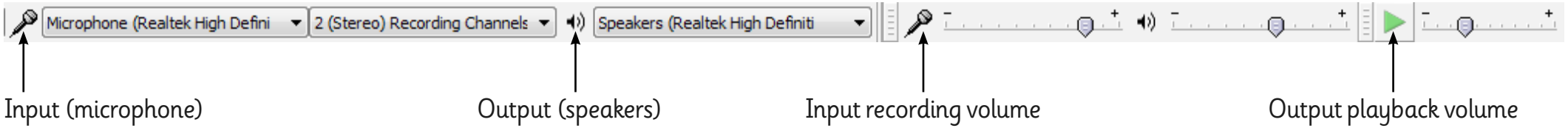
Audacity Toolbar Help

Most buttons for audio devices or software follow a similar convention, so you should easily recognise what they are designed to do.

The main toolbar buttons in Audacity have six basic functions:



The toolbar options also allow you to control your input and output devices and their volume:

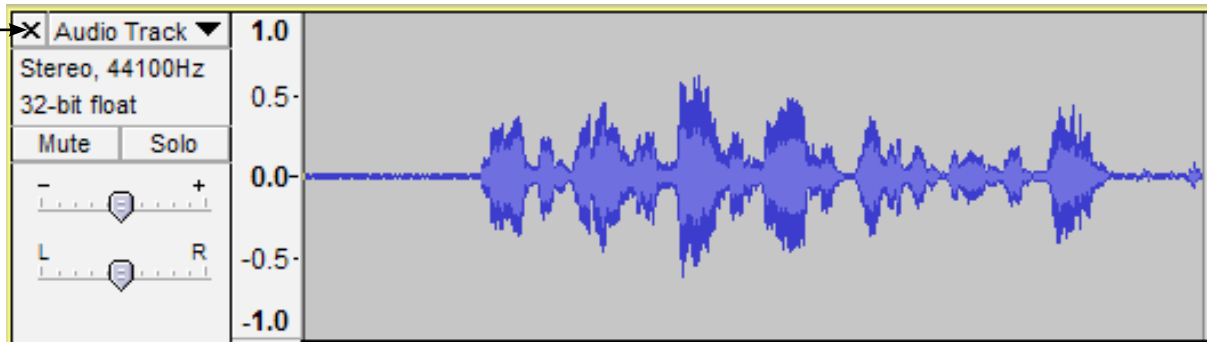


There are other useful toolbar buttons for more advanced features. You can experiment with these if you have time.

Audacity Track Help

All sound recordings are displayed in a visual way known as a waveform. This shows the length and change in volume of the audio track.

To delete the entire audio track, click on the cross.



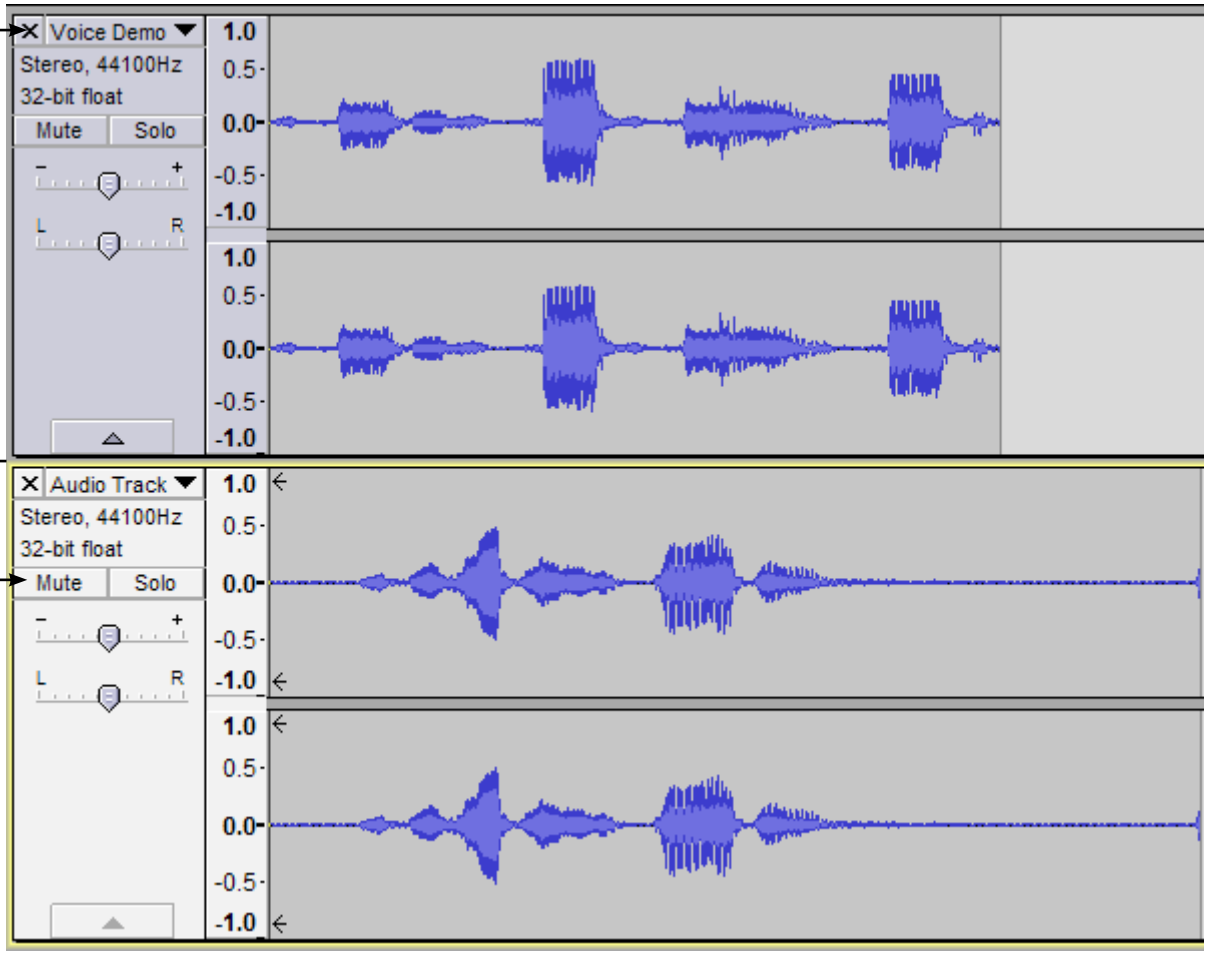
To highlight and select the entire track click anywhere in the grey box at the left hand-side.

To highlight and select part of the track just click and drag over the required section of the waveform.

Change the track name by click on the drop-down menu here

Track 1

Track 2



Two (or more) tracks can be recorded and played at the same time. If you want to hear what one of them sounds like on its own, either click on Solo or Mute.

Adult Guidance

This first lesson of the unit is an introduction and skills-based lesson. The aim is to get children thinking about sound recording, along with the input and output devices required. The main focus of the lesson is then on acquiring the skills of using recording software, in this case Audacity. These skills are vital for use in the following lessons.

Introduction to Audacity

Audacity is a free software package that can be used for recording and editing sounds.

This lesson introduces children to the software and prompts them to begin experiment with first recording tasks. The aim is for children to explore and become familiar whilst learning the basic functions of the software, first by following specific instructions and then with open-ended tasks.

As an alternative, there are other sound recording software options available and children may be able to use tablet devices to achieve some of the same goals.

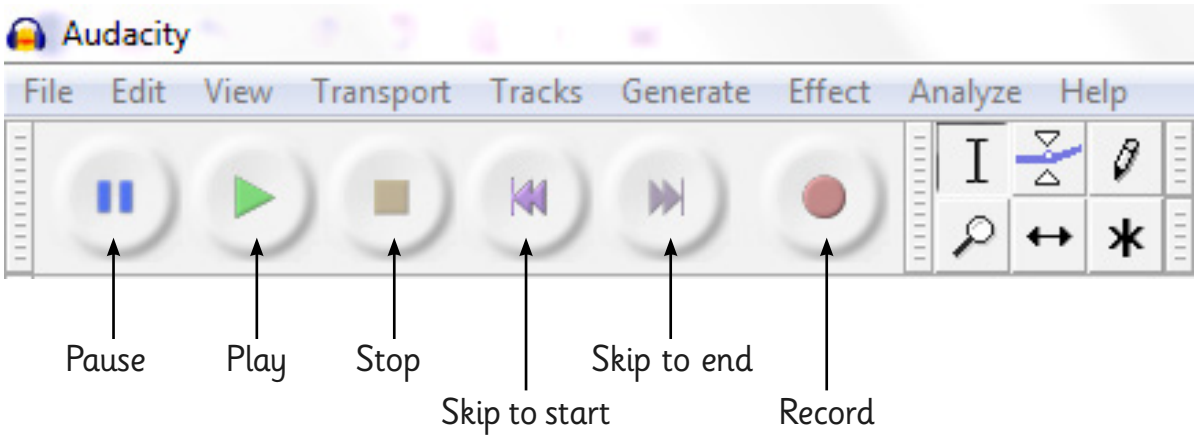
Recording Sounds in Audacity Activity Sheet

The activity sheets are differentiated as follows: for LA children, the prompts cover recording using Record, Stop and Play buttons; deleting and re-recording to improve; naming the track; changing playback speed; and saving work.

For MA /HA children, all of the above is covered plus the addition of using the Pause button; deleting specific sections of a track; adding an additional effect (echo); and creating a background effect.

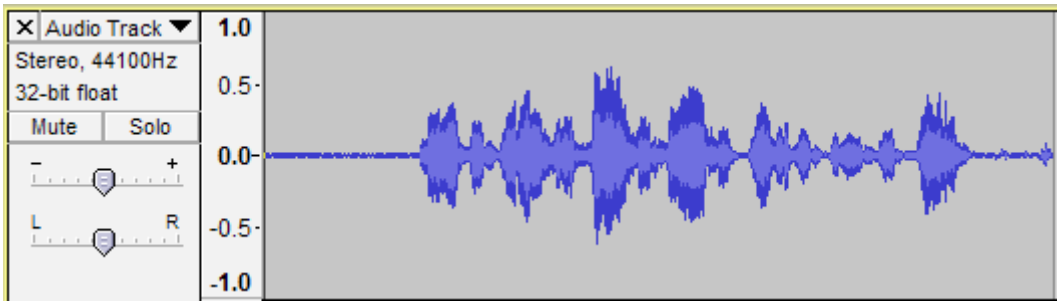
Additional Help Sheets

Two additional sheets are provided for information and can be used by children if required, or additional adults as a guide to using the software. These are the Toolbar Help Activity Sheet and the Track Help Activity Sheet.



Adult Guidance

All sound recordings are displayed in a visual way known as a waveform, showing the length and changing volume of the audio track.



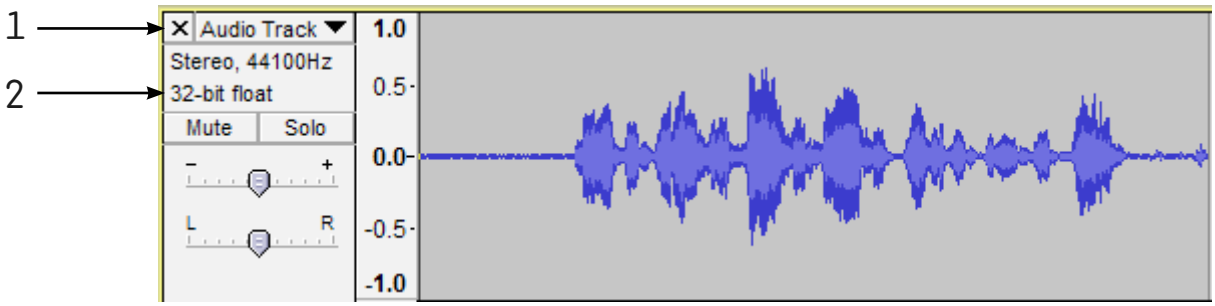
The Zoom In and Zoom Out buttons allow you to zoom in or out of the waveform or sound recording. These will become very useful when trying fine editing or very specific parts of a recording.

Note: All the toolbars can be moved around, so may not appear in the same place. To move them, just click and drag from the edge and then reposition wherever you choose. Children may find they can do this and move toolbars!

Getting Started

Recording and Re-recording (Record, Stop and Play)

To begin recording sound, as soon as Audacity has been opened, just click record. If a microphone is connected, then the audio will begin to record immediately. Click stop when finished and play to immediately play back the recording.



1. To delete the entire audio track, click on the cross. If a mistake was made or a new version is required, the track can be re-recorded straight away.

2. To select the entire track, click on the information area just to the left. Below here, you can also mute the track or play it on its own (solo).

Adult Guidance

Note: if the waveform is touching the top or bottom of the grey area, the sound may be distorted. To correct this, adjust the microphone input recording volume.

Duplicate

Click Edit and Duplicate to make an exact copy of your recording. If the rows for your multiple tracks take up too much room, you can click and drag between them to adjust the height.

By duplicating your track first, you can make changes to one version, whilst still keeping the original.

Effects

When your track is selected, you can click on the Effects menu to apply any of the effects to your track.

Note: If you make a change that you don't like, the quickest way to get rid of it is to select Edit and Undo.

Making Notes

It is a good idea to encourage children to make notes as they experiment with effects and other track changes. This way, if they want to recreate an effect they liked in a future lesson, they may be able to return to their notes for a reminder.

Viewing the Recording

If the track recording length is longer than the width shown on the screen, pressing CTRL-F will fit the entire track onto the screen.

Avery Template: Name Badge Label, 8 per sheet | **Compatible Products**:15395, 25395, 42395, 45395, 48395, 5395, 8395, 88395, 85395.

Radio Station | Audacity

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