

1 About this unit

Software: JamStudio / GarageBand / FL Studio / LMMS, Audacity®, MuseScore

Outcome: A piece of backing music to accompany work in another medium

Introduction

How many children in your class play an instrument? How many of them like singing, or simply enjoy listening to music? Just as the computer makes it easy for children to produce written work or pictures that they're really proud of, revising and improving work as they go, it's easy for children to produce music on a computer that's just right for whatever purpose they choose.

Assessment

This unit covers AF1 and AF3. For a more detailed analysis of the assessment focuses addressed and suggestions for progression, please see page 28.

Curriculum and Framework links

Primary Framework

- Mathematics: Counting, partitioning and calculating

ICT PoS

- Developing ideas and making things happen (2a)
- Exchanging and sharing information (3a)
- Reviewing, modifying and evaluating work as it progresses (4a, c)

Suggested subject links

- Music: There are clear links here with the music curriculum, and with any music activities (singing, playing or listening) that children engage with across or beyond the school curriculum.
- Numeracy: The unit provides opportunities for links with times tables if the idea of 'beats per bar' is discussed.
- Aspects of geography, history and religious education might provide a context for children's compositions.

Every Child Matters

- Enjoy and achieve

Learning expectations

Working together in a group, children create and refine, through editing, a piece of backing music to accompany work in another medium. This music is then played alongside the work for which it was created as part of a performance or presentation.

By the end of this unit, children will have achieved the following learning objectives:

- To use one or more music or sound editing programs
- To develop an understanding of the process of creating and developing their composition, refining their ideas through reflection and discussion
- To develop collaboration skills, as they share in the process of composing, recording and editing music
- To develop an awareness of how their composition can enhance work in other media

Variations to try

- This unit works well when the children have a clear purpose for the music they're composing. You could link this with a topic they're studying elsewhere in the curriculum, such as creating music to fit into a particular historical context; to link with a celebration studied in their RE lessons; or to link with other units, such as making a jingle for the weather broadcast in Unit 4.2 – We are meteorologists.
- Children could create a musical accompaniment for work in drama or dance, which again might be linked to another curriculum area.
- Alternatively, children could create music to provide backing for a slideshow of their art or of photographs taken by them or sourced from the Internet.

2 Getting ready

Things to do

- Read the *Core* section of *Running the task* on pages 26–27.
- Decide on the most appropriate software. A range of software should be made available to children to explore, including digital music workstation software (such as JamStudio, GarageBand, FL Studio or LMMS), audio recording software (Audacity® is recommended) and, as an option, music notation software (e.g. MuseScore).
- Look at appropriate software tutorials.
JamStudio: www.youtube.com/watch?v=WpRHpnI3rVk
GarageBand (OS X only): <http://help.apple.com/garageband/interface/index.html#button-0>
FL Studio (Windows): www.fruity-loops-tutorials.com/post/FL-Studio-Basic-Introduction.aspx
LMMS (Windows and Linux): www.youtube.com/watch?v=-OK6YXDHrvU
Audacity®: <http://audacity.sourceforge.net/manual-1.2/tutorials.html>
(Optionally) MuseScore: <http://musescore.org/en/download-handbook>
- Spend 120 minutes familiarising yourself with the software / tools that are most accessible / appropriate for use with your class.
- Read the *Extensions* section of *Running the task* on pages 26–27. Do you want to use any of the extras provided?
- Identify a suitable piece of work for which children can create backing music or accompaniment (see *Variations to try* on page 24).
- Invite children to bring in musical instruments or resources (including music CDs for reference) that they would like to use.

Things you need

- Book laptop trolley or ICT suite and other hardware, if necessary.
- Arrange for your chosen software to be installed on computers, if necessary.

Useful links

Before you start, you might want to refer to these weblinks:

- JamStudio (web-based): www.jamstudio.com
- GarageBand (OS-X): www.apple.com/uk/ilife/garageband/
- FL Studio: <http://flstudio.image-line.com>

- Arrange for any accounts to be created.
- Ensure that you have enough microphones and headphones to go round.
- Arrange access to musical instruments.

Think about ...

- You may wish to explore specially adapted musical instruments or other assistive technology to meet the individual needs of some children in your class.
- Natural sounds might be recorded for inclusion in children's work (some sound effects are provided on the CD-ROM).



e-safety

- If children use web-based services to compose music, ensure care is taken regarding personal details for registration. Email addresses are required for JamStudio accounts, so this service should only be used if your school policy allows.
- Children's compositions and public performances may be uploaded to the learning platform. Uploading to external websites should only be allowed if this is in accordance with school policy and any relevant permissions are obtained.
- There is an opportunity here to discuss illegal downloading and file sharing of copyrighted music, as well as more positive ideas, such as collaboration, re-mixing and creative commons licences.
- The use of copyrighted music recordings in UK schools is allowed by law if used as part of the curriculum and if no parents or other visitors are present. A licence must be obtained for other purposes. These are presently administered by the Centre for Education & Finance Management. See www.cefm.co.uk/school.aspx.

- LMMS (Windows and Linux): <http://lmms.sourceforge.net/download.php>
- Audacity® (Windows, OS X, Linux): <http://audacity.sourceforge.net>. (To create MP3 files using Audacity®, the LAME encoder needs to be installed. See <http://audacity.sourceforge.net/help/faq?s=install&item=lame-mp3> for details.)
- MuseScore (Windows, OS X, Linux): <http://musescore.org/>.

3 Running the task - We are musicians

Software: JamStudio / GarageBand / FL Studio / LMMS, Audacity®, MuseScore

Outcome: A piece of backing music to accompany work in another medium

Core



Step 1

- > Discuss the context for which the children will be creating a musical accompaniment, possibly beginning this work within another subject area or project, depending on the area chosen and the organisation of your school.
- > Spend some time looking at examples of musical accompaniment or backing tracks, from television or film, or ask children to look out for examples as a homework task for discussion in a subsequent lesson.
- > In groups, children brainstorm appropriate styles of backing music for their task. Provide a few musical instruments to allow children to explore ideas practically.
- > Consider the composition of groups for this project, ideally including children with some technical and musical expertise in as many groups as is practical.



Step 2

- > In groups, children start using microphones and Audacity® to capture their own music on traditional, analogue instruments, singing or speech, and ambient sounds that they might wish to include in their composition.
- > Children review their recordings using headphones, re-recording until satisfied with the results. Clips don't have to be long, as FL Studio, LMMS or other software allow short clips to be edited and re-used. In Audacity®, children should explore the effects available, and experiment with layering clips together or subtly changing clips as they're repeated. Try to have multiple locations available for this step, as a whole class attempting to record and edit audio in the same room at the same time can be quite tricky to manage.



Step 3

- > Children explore some of the aspects of digital audio workstation software. JamStudio is the easiest of the suggested programs, but more limited in its

Extensions

- > You might like to invite children to bring in examples of CDs (or MP3s) from home, which they might consider appropriate for the given context.
- > This might be an opportunity for those who take part in musical activities outside school to bring in instruments or share something of what they do.

- > The use of portable digital audio recorders would strengthen this step, freeing children from having to record sound near their computers and also allowing them to gain practice in uploading and managing files. These devices would further facilitate the use of ambient sounds as part of children's compositions.
- > Children with appropriate equipment could be asked to bring in sound files recorded at home.

- > An alternative to using digital audio workstation software, particularly suitable for any children already familiar with music notation – but by no means limited to them – would be computer-based music notation software, such as MuseScore, which allows children to compose music using the traditional format of music notation, including for multiple instruments.
- > Midi keyboards or other digital instruments may be connected to the computer to allow children to compose their music by playing these rather than composing on screen. If the hardware is available, children might like to explore both.

functionality; be willing to adapt ideas here to suit your class and the software available.

- There are a number of approaches that the children can adopt when working with this sort of program. Often it is easiest to start by setting up a basic rhythm for the music, using percussion instruments, before layering on a basic melody and then adding in additional instruments gradually – perhaps only for some sections of the music.
- Children who aren't familiar with traditional music notation will probably find it easiest to work in 'piano roll' mode, where the pitch and duration of each note is represented by a bar. Encourage children to experiment with the software – it's easy to start again from scratch or to edit things gradually until the desired effect is achieved.



Step 4

- The children bring together their learning to create or complete their composition. It's advisable here to step back, providing support if needed, and perhaps giving feedback on music as it's produced, making suggestions for improvements that could offer the children a further challenge. Encourage children to work together as a team on this task.
- While the children might have developed a preference for one program, it's worth encouraging them to move between the two approaches, perhaps exporting work from the digital audio workstation software into Audacity®, or recording and editing sound in Audacity® before importing it as a loop file to the workstation software, if that facility is available.
- Children evaluate the success of their backing music, using the self-assessment prompts on the back of the Pupil Task Cards, as well as providing some feedback to one another.

➤ An additional possibility here would be to allow children to sample audio from pre-recorded music, re-mixing this to create their own compositions. Limiting source material to creative commons licensed music would be wise, and would provide an opportunity to discuss aspects of copyright in relation to music, particularly downloading and file sharing.



Step 5

- Children combine their backing music with the work it was intended to accompany, performing this to their classmates and / or others. Provide opportunity here for children to give feedback to one another.
- Invite groups to discuss, or reflect on, the process of working collaboratively and of learning to use what, for most, will have been unfamiliar software.

➤ Uploading children's compositions, perhaps with recordings or copies of the work they accompanied, to the school learning platform or website would provide a wider audience for children's work.

➤ Some groups might wish to share their compositions globally via creative commons music sharing sites, such as ccMixer or Jamendo, subject to the relevant policies and permissions.

4 Assessment guidance

Use the text below to relate the ICT skills children demonstrate to the assessment focuses and National Curriculum levels.

AF1 Planning, developing and evaluating your work

AF3 Finding, using and communicating information

Children working at LEVEL 2 should be able to:

- › Import recorded sound
- › Talk about how successful their group composition was
- › Use digital audio workstation software to create and edit a composition
- › Discuss how they've used software to develop their work
- › Work with multiple audio files, keeping these organised
- › Work with both recorded and digitally synthesised sound
- › Work with others to develop their ICT work

Children working at LEVEL 3 should be able to:

- › Record and edit music to provide appropriate accompaniment to the given task
- › Comment on how successful their group composition was for the given task
- › Develop their composition over a period of time, using the editing tools available
- › Describe the stages they've followed to create their composition
- › Choose appropriate source files or samples for their given task
- › Combine recorded and digitally synthesised sound
- › Have an awareness of the need to respect copyright conditions when working with music files

Children working at LEVEL 4 should be able to:

- › Combine their own recordings with pre-prepared audio, or apply filters and effects to their composed music
- › Evaluate the quality of their work
- › Compare their work with that of professional musicians using digital tools or creating background music for TV or film
- › Experiment with a range of source files and samples
- › Combine recorded and digitally synthesised sound to best suit the given task
- › Respect the copyright conditions of music files, and acknowledge the source of the materials they use

Progression

The following unit will allow your children to develop these skills further:

- › Unit 5.5 – We are advertisers

5 Taking it further

When you've finished, you might want to extend the project in the following ways.

- Ask children to listen out for some of the techniques they've practised themselves as they listen to music.
- Invite children to consider the way background music is used in television and film, perhaps focusing particularly on occasions when it enhances atmosphere.
- Look for ways in which music might be used across the curriculum, or where backing music might further enhance projects in ICT.
- Provide opportunities for children to share their musical activities with their classmates, if you don't already do this.

6 Cross-curricular ideas

Practical suggestions to bring this unit alive in the classroom.

Classroom ideas

- Look for opportunities for the children's music to be performed alongside the work it was intended to accompany, such as in a school assembly, perhaps inviting parents to visit.
- Consider using background music while your class are working.

Weblinks

- There are some useful links for digital music in primary education at <http://digitalmusiceducator.wordpress.com/2010/02/08/15-resources-for-elementary-music-teachers/>.
- This unit could provide an opportunity for discussing copyright and file sharing with the children. BBC resources at www.bbc.co.uk/learningzone/clips/hey-thats-mine/5816 and www.bbc.co.uk/learningzone/clips/catching-the-copycat/9567 are aimed at older children, but may be useful.
- Teachers TV have a couple of programmes on music technology in secondary schools at www.teachers.tv/videos/ks3-ks4-music-working-with-music-technology-1 and www.teachers.tv/videos/ks3-ks4-music-working-with-music-technology-2.
- Legal music-sharing sites include ccMixer, <http://dig.ccmixer.org/> and Jamendo www.jamendo.com/en/, on to which you might

like to encourage children to upload their final compositions.

- News on creative commons licensing for music and other audio is available at <http://creativecommons.org/audio/>.

Visits

- Your local city technology centre, or a nearby secondary school or FE college, might have a music technology suite that you can visit with your class.
- Local musicians, perhaps from among your school's parents, might be receptive to an invitation to visit the school, to talk about their work.

Books

There seem few, if any, books written for young people about digital music making, but you may find some of the following titles of interest if you wish to pursue this area in more detail.

- Hewitt, M. (2008). *Music Theory for Computer Musicians*. Delmar.
- Hewitt, M. (2009). *Composition for Computer Musicians*. Delmar.
- Strong, J. (2009). *Home Recording for Musicians for Dummies*. John Wiley and Sons.
- White, P. (2001). *Home Recording Made Easy: Professional Recordings on a Demo Budget*. Sanctuary Publishing Ltd.