



Raspberry Pi

Year 3 – Stop-frame animation

Unit introduction

Learners will use a range of techniques to create a stop-frame animation using tablets. Next, they will apply those skills to create a story-based animation. This unit will conclude with learners adding other types of media to their animation, such as music and text.

It is recommended that you use a tablet for this unit as this makes it simpler for learners to take the photos and do the editing. However, you could use stop-frame animation software on a desktop or laptop if this is what you have available. This unit uses screenshots from iMotion which is an iPad app, but you could also try Stop Motion Studio if you have Android tablets.

Overview of lessons

Lesson	Brief overview	Learning objectives
1 Can a picture move?	Learners will discuss whether they think a picture can move. They will learn about simple animation techniques and create their own animations in the style of flip books (flick books) using sticky notes.	To explain that animation is a sequence of drawings or photographs <ul style="list-style-type: none"> ● I can draw a sequence of pictures ● I can create an effective flip book—style animation ● I can explain how an animation/flip book works

2 Frame by frame	In the previous lesson, learners created their own flip book–style animations. In this lesson, they will develop this knowledge and apply it to make a stop-frame animation using a tablet.	To relate animated movement with a sequence of images <ul style="list-style-type: none"> ● I can predict what an animation will look like ● I can explain why little changes are needed for each frame ● I can create an effective stop-frame animation
3 What’s the story?	Remind the learners of the animations that we created last week and tell them that next week we will use tablets to animate some of our own stories. Tell the learners that during this lesson they will create a storyboard showing the characters, settings and events that they would like to include in their own stop-frame animation next week.	To plan an animation <ul style="list-style-type: none"> ● I can break down a story into settings, characters and events ● I can describe an animation that is achievable on screen ● I can create a storyboard
4 Picture perfect	In the previous lesson, learners planned out their own stop-frame animations in a storyboard. This lesson, they will use tablets to carefully create stop-frame animations, paying attention to consistency.	To identify the need to work consistently and carefully <ul style="list-style-type: none"> ● I can use onion skinning to help me make small changes between frames ● I can review a sequence of frames to check my work ● I can evaluate the quality of my animation

5 Evaluate and make it great!	Last lesson, learners created their own stop-frame animations. This lesson, they will evaluate their animations and try to improve them by creating a brand-new animation based on their feedback.	<p>To review and improve an animation</p> <ul style="list-style-type: none"> ● I can explain ways to make my animation better ● I can evaluate another learner’s animation ● I can improve my animation based on feedback
6 Lights, camera, action!	Last lesson, learners perfected their stop-frame animations. This lesson, they will add other media and effects into their animations, such as music and text.	<p>To evaluate the impact of adding other media to an animation</p> <ul style="list-style-type: none"> ● I can add other media to my animation ● I can explain why I added other media to my animation ● I can evaluate my final film

- I can add other media to my animation
- I can explain why I added other media to my animation

Progression

This unit progresses students' knowledge and understanding of using digital devices to create media, exploring how they can create stop-frame animations. Following this unit, learners will further develop their video editing skills in Year 5.

Please see the learning graph for this unit for more information about progression.

Curriculum links

National curriculum computing links

Computing

- 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.

Further national curriculum links

Literacy links

- Pupils should be taught to: draft and write by: in narratives, creating settings, characters and plot
- Pupils should be taught to: proof-read for spelling and punctuation errors

History

- The Roman Empire and its impact on Britain

Education for a Connected World links

Managing online information

- I can use key phrases in search engines.
- I can use search technologies effectively.

Copyright and ownership

- I can explain why copying someone else's work from the internet without permission can cause problems.
- I can give examples of what those problems might be.
- 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.
- I can give examples of content that is permitted to be reused.
- I can demonstrate the use of search tools to find and access online content which can be reused by others.

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 lessons 3 to 6.

Subject knowledge

Teachers will need to understand that animations are a series of still images stitched together to create a motion video. Animations can be created using on-screen or off-screen (flipbooks) images. Teachers need to understand how to create a simple flipbook (see lesson 1 for support) and how to use software to create an on-screen animation (support is provided in the lessons).

Teachers will need to have an understanding of using their chosen software. Within the software, teachers will need to be aware of how to take images, ‘onion skinning’ (showing a part transparent photo to demonstrate the previous frame to make small movements more consistent), deleting frames and saving.

Enhance your subject knowledge to teach this unit through the following training opportunities:

Online training courses

- [Raspberry Pi Foundation online training courses](#)

Face-to-face courses

- [National Centre for Computing Education face-to-face training courses](#)

Resources are updated regularly — the latest version is available at: nccce.io/tcc.

This resource is licensed under the Open Government Licence, version 3. For more information on this licence, see nccce.io/ogl.