

Unit 1.2: We are TV chefs



Filming the steps of a recipe

Software: Camera and iMovie apps on the iPad (alternatives: video editing software such as WeVideo or Microsoft Photos)

Hardware: iPads, ideally with tripods and clamps (alternatives: desktop/laptop computers and cameras with movie mode, or Android tablets)

Overview

In this unit, pupils produce short videos of themselves making a healthy meal or snack in the style of a TV chef. In:

- **Session 1** pupils work out the steps for making a jam sandwich
- **Session 2** pupils watch you making a healthy snack and record the steps; they then work out and record the steps of another recipe
- **Session 3** pupils learn how to record video
- **Session 4** pupils film one another making the snack
- **Session 5** pupils add a commentary to their video
- **Session 6** pupils review each other's recordings and provide feedback.

Alternatives

Sessions 3–5 give step-by-step guidance using the iPad camera app and iMovie. However, this unit could also be carried out using other video cameras and video editing software (see *Software* above).

Knowledge, skills and concepts

In this unit, pupils will learn to:

- break down a process into simple, clear steps (an **algorithm**)
- use different features of a **video camera**
- use a video camera to capture moving images
- record a video using ground rules for filming
- **edit** a video to include an **audio** commentary
- develop collaboration skills
- discuss their work and think about how it could be improved.

Progression

In Key Stage 1:

- Pupils learned about algorithms in **Unit 1.1: We are treasure hunters.**
- Pupils will build on their knowledge of planning videos and using **storyboards** in **Unit 2.5: We are animators.**

In Key Stage 2:

- Pupils will further develop filming and editing techniques in **Unit 3.3: We are presenters.**

Assessment – by the end of the unit:

All pupils can:

- identify the steps in the teacher's recipe
- create a recipe with correctly ordered steps
- film a video
- record a commentary.

Most pupils can:

- create a recipe with clear steps
- change the steps in their recipe to improve it
- film a video, keeping the camera still and steady
- record and **edit** a commentary.

Some pupils can:

- create a recipe with precise and unambiguous steps
- correct their algorithms
- film a variety of shots.

Background information

This unit draws together ideas from computer science: about **algorithms** as sequences of instructions; and information technology: about creating, **editing** and reviewing digital media.

- Creating even a simple snack involves breaking a big task down into smaller parts; in computing, this is called **decomposition**. It is a key element of computational thinking, the approach taken when solving problems using computers.
- The method in a recipe is a sequence of instructions – an algorithm in computer science.
- Recipes often include instructions, which themselves could be broken down into smaller steps – e.g. ‘spread jam on bread’ comprises many smaller movements of the knife and hand. Working at just the right level of detail is called **abstraction** in computer science.
- Many recipes are quite similar to one another, e.g. the recipe for a peanut butter sandwich and a jam sandwich; in computer science, these **patterns** are recognised and used.
- Creating a good video involves both:
 - technical skills: in **framing** shots, ensuring the camera is steady, that scenes are well lit and that **audio** is recorded at a reasonable quality
 - creativity: telling an interesting story and ensuring that actors, props, scenery and **narration** are all combining effectively.

Key vocabulary

Abstraction: computational thinking approach to managing complexity by simplifying things through identifying what is important, and what detail can be hidden or ignored

Algorithm: a sequence precise instructions or steps (sometimes a set of rules) to achieve an objective

Audio: sound, such as spoken narration

Decomposition: breaking a problem down into smaller parts

Edit: change or correct a piece of work after the first go

Frame: a single static image from a video

Narration: a commentary, description or explanation of what happens in a video

Pattern: a predictable sequence generated by one or more rules

Storyboard: a visual representation of the key scenes or frames in a video; one way of recording an algorithm visually

Video camera: a device that can record film

Differentiation

See each session (pages 23–28) for ways to increase support and add challenge to this unit.

Cross-curricular opportunities

Art and design: Pupils illustrate the steps in their recipe on a simple **storyboard**.

Design and technology: Pupils create, follow and record recipes, which can help them to develop a love of cooking. Encourage pupils to consider principles of healthy eating when planning their recipes.

English: Pupils develop their spoken language skills by speaking audibly and fluently and by participating in presentations. Some pupils might use instructional language to write their recipes.

Maths: Pupils develop vocabulary for measures, e.g. weights and volumes. They could create a maths video in which they explain the steps needed to solve a problem.

PE: Pupils could create a video explaining the rules of a game or sport.

PSHE: Pupils are encouraged to make simple choices that improve their health and well-being. They could create an instructional video on an aspect of safety or school policy.

Science: Pupils have the opportunity to describe the physical properties of everyday materials and consider nutrition.

Preparation for teaching the unit



Things to do

- Check you have access to enough iPads with iMovie (or alternative recording devices).
- Read pages 20–21 to get an overview of the unit.
- Read the steps in the unit sessions (pages 23–28) and look at the associated online resources, printing out the worksheets as required.
- Watch the CPD video: Introducing algorithms, which explains how a sequence of instructions in a recipe is an **algorithm**.
- Work through the unit yourself so you know what is expected of the pupils.
- Decide how the school will provide ingredients for Session 4 (making the snack) and if you need to ask parents/carers to contribute. Consider if there are any particular cultural or health restrictions.
- If your school has limited cooking facilities, restrict pupils to simple recipes that could be carried out in the classroom.



Resources needed

- **Software:** Camera and iMovie apps on the iPad
- **Hardware:** iPads, ideally with some way to keep these steady, such as tripods and clamps
- See *Alternatives* on page 20
- Paper to record pupils' recipe steps
- Ingredients and cookery equipment for making a jam sandwich (Session 1), a healthy snack (Session 2) and pupils' snacks (Session 4)



Online resources provided

Session resources

- Worksheet 1.2a: Jam sandwich vocabulary cards
- Worksheet 1.2b: Jam sandwich recipe
- Worksheet 1.2c: Planning sheet for filming
- Worksheet 1.2d: Recipe script template
- Worksheet 1.2e: End-of-unit quiz
- Worksheet 1.2f: Pupil self-assessment
- Teaching slides 1.2a–1.2f
- Walkthrough videos 1.2a–1.2b
- Interactive end-of-unit quiz 1.2

Additional resources

- CPD video: Introducing algorithms



Online safety

- Even if video footage is used only within school, you may still need to seek consent from pupils and their parents or carers. This consent is required if uploading video project outcomes to the Internet. If permission has not been given, ensure that those pupils do not appear in the background of videos.
- Talk to pupils about how the videos are going to be used and explain that they do not have to appear on screen if they do not want to. Talk about responsibilities of filming others with permission and to show them in a positive way.
- Remove any information in the videos that might identify pupils. Should school crests or logos be seen in the videos?
- This unit would be a good opportunity to introduce pupils to the concept of copyright because they are creating original work.



Collaboration

Filming video is a collaborative process and this unit is best tackled with pupils working in small teams of three or four. It is important that all pupils contribute fairly to the films so they all learn about the algorithmic reasoning involved and the technical and creative filming skills.



Useful links

Software and tools

- iMovie app: www.apple.com/uk/imovie
- Apple clips: www.apple.com/uk/clips
- WeVideo: www.wevideo.com
- Microsoft Photos: www.microsoft.com/en-gb/p/microsoft-photos/9wzdncrfjhb4?activetab=pivot:overviewtab

Online tutorials

- Instructions on how to use the iPad camera for filming: www.support.apple.com/en-gb/guide/ipad/ipad527d65e6/ios
- iMovie tutorials: www.support.apple.com/en-gb/imovie

Information and ideas

- Philip Bagge sandwich bot video: www.youtube.com/watch?v=leBEFaVHIIIE
- TV cookery programmes: www.bbc.co.uk/food/programmes
- Healthy recipe ideas: www.bbcgoodfood.com/recipes/collection/snacks-kids

Unit outcomes

Below are some examples of the outcomes you could expect from this unit.

Jam Sandwich Recipe

1. First, pick up the bread.
2. Next, pick up the knife.
3. Then, spread the butter across the bread.
4. Next, spread the jam over the butter.
5. Put the second piece of bread on top.
6. Place the sandwich on a plate.
7. Cut the sandwich in half with the knife.
8. Serve the sandwich.

Session 1: Creating a jam sandwich recipe



Session 2: Observing and learning how to make a simple snack



Session 3: Learning how to use video mode on the iPad Camera app

What ingredients and utensils do you need?

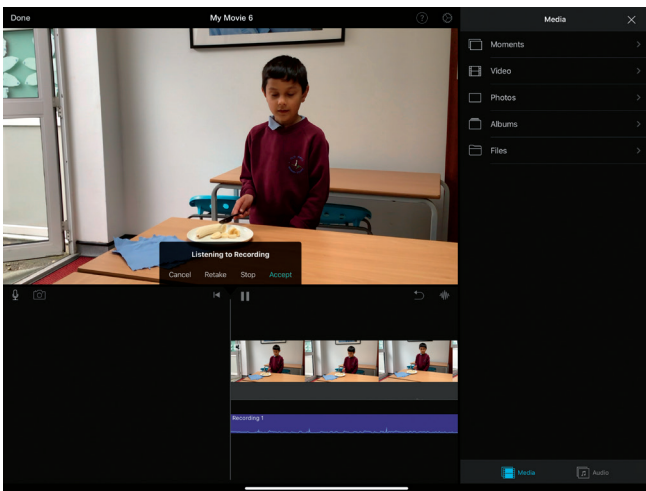
Where are you going to film it?

Who will take on each role?

Role	Description	Name
Director	in charge of telling the chef on screen the steps they must follow	
TV chef	main presenter making the snack	
Chef's assistant	presenter who passes equipment to the chef	
Camera operator	films the video	
Prompt	reminds the presenters of the steps	

What instructions are you going to give?

Session 4: Completing planning sheets



Sessions 5 and 6: Importing a video into iMovie, recording a commentary and reviewing