

CLASS PROJECT: A SHORT HISTORY OF A MEDICAL DEVICE

Step 1: Plan

THE PROJECT

In groups, you are going to research and write a short history about a device related to health and the medical world. You will include key information about the device, such as who invented it, when it began, and why it was needed, etc. You will then present your short history to your classmates and decide together which device has had the most interesting history.

1 Read the project description and answer these questions with a partner.

- 1 What topic is the project about?
- 2 What will you produce in this project?
- 3 What kind of information will you need to research?
- 4 What decision will you make at the end?

2 Discuss these questions about the topic with your classmates.

- 1 What medical device is in the photo?
- 2 Have you ever used this device? For what reason?
- 3 What other medical devices do you sometimes need to use?
- 4 What other medical devices do some people need to use and for what reason?



PREPARATION

3 Match the words (1–8) in the glossary to their correct definitions (a–h).

Glossary

- 1 height (n)
- 2 injury (n)
- 3 to patent (v)
- 4 patient (n)
- 5 permanent (adj)
- 6 support (n)
- 7 temporary (adj)
- 8 weight (n)

- a a person getting medical help from a doctor
- b to have the right to make or sell an invention
- c how heavy someone or something is
- d describes something that doesn't last very long
- e how tall someone or something is
- f describes something that lasts a long time or for always
- g practical help
- h something that hurts because of an accident

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"Hi! I'm Adam. I (a) _____ (break) my leg. I was playing American football. I was in a lot of pain when it first happened, but my leg is getting better now. I (b) _____ just _____ (be) back to the hospital, and the doctor says he can remove my cast next week and I'll be able to walk without crutches again."

A short history of crutches

When someone breaks or badly hurts their leg, knee, foot or ankle, they need help to walk again. The doctor will usually put a cast on the (1) *support / injury* and the patient has to use crutches for a while.

People (c) _____ (use) crutches since the time of the ancient Egyptians. Nearly 3,000 years ago, they created the first crutch using a piece of wood.

Crutches (d) _____ (be) popular for a long time, both with people who had (2) *permanent / height* problems with walking and those who needed temporary help walking after an accident. In fact, the basic design of the crutch (e) _____ (not change) much over the years – a wooden stick with an underarm (3) *injury / support* to hold the patient's weight.

Then, in 1917 A Frenchman called Emile Schlick was the first person to (4) *patient / patent* the crutch. He wanted to produce more crutches for soldiers injured in the First World War. Later, an American called Lofstrand developed a more modern crutch with the option to change the (5) *weight / height* for taller or shorter people.



In the 1950s, the American Thomas Fetterman invented a new design called the 'forearm' crutch, which has a circular part that goes around the forearm for support instead of under the arm.

Nowadays, underarm and forearm crutches are both popular, but they are usually made of plastic and metal instead of wood. And more than 100 million crutches are produced in the world every year!

5 Read through the text again and complete a-e with the correct present perfect form of the verbs in brackets.

6 Discuss with a partner. Have you ever used crutches? When? For what kind of injury?

CLASS PROJECT: A SHORT HISTORY OF A MEDICAL DEVICE

Step 2: Develop

1 In groups, decide which medical device you would like to write a short history of. Here are some suggestions, but you can also choose your own.

- hearing aid
- wheelchair
- teeth brace
- syringe
- thermometer
- stretcher

2 Try to find out the answers to these questions about the device you chose in Exercise 1. Use the *Online Research* to help you.

- 1 What do you already know about this device?
- 2 What other useful information would you like to find out?
- 3 How are you going to do the research for your device?
- 4 How can you be sure the facts are correct?
- 5 How can you be sure the facts are up to date?

Online Research: Different search techniques



In earlier projects, we looked at how to search for the right information online. Let's review some of these key tips:

- Use a well-known search engine like *Google*
- Look at official information sites like *Wikipedia*
- Choose websites that specialise in your topic
- Use key words to help you find the information you need
- Make sure the information is up to date
- Remember to check the facts on at least three different websites

3 You are going to do the research for your short history. Use the *Useful Language* to ask for and give opinions about the facts that you would like to include for your chosen device.

Useful Language: Asking for and giving opinions



- What do you think about (including) ...?
- Please tell me your opinion on ...
- Do you agree that we should (include) ...?
- I really think that ...
- I strongly believe that ...
- My opinion is that ...
- I agree with the opinion of ...

4 Write your short history using the information you have collected. Don't forget to:

- decide on the best way to present the information in your short history
- use the model short histories on crutches and glasses (page 67 of the Student's Book) as examples
- use vocabulary and grammar from Unit 11 of the Student's Book
- use photos to make your short history more attractive

CLASS PROJECT: A SHORT HISTORY OF A MEDICAL DEVICE

Step 3: Produce

PRESENTATION

- 1 When your short history is ready, present it to the class. Display it on the wall or on the digital whiteboard and tell the other groups what you learned about the device you researched.
- 2 Listen to the other groups present their short histories. Then answer these questions with the members of your own group:
 - 1 Did anybody write about the same device as you? Did they present the information in the same way or differently?
 - 2 What interesting information did you learn from this project? Did anything surprise you?
 - 3 Which device has had the most interesting history? Why?
 - 4 In your opinion, which device is the most important to our everyday life? Why?

SELF-EVALUATION

- 1 With the members of your group, answer these questions together. 1 = not very well, 6= very well

COLLABORATION

- 1 How well did we work together?

1 2 3 4 5 6

COMMUNICATION

- 2 How well did we talk about the planning and preparation of our short history?

1 2 3 4 5 6

DIGITAL LITERACY & CRITICAL THINKING

- 3 How well did we compare points from different online sources?

1 2 3 4 5 6

EMOTIONAL DEVELOPMENT

- 4 How well did we understand each other's points of view in choosing our device?

1 2 3 4 5 6

- 2 Answer these questions about yourself. 1 = not very much, 6= a lot

- 1 How well did I contribute to the project?

1 2 3 4 5 6

- 2 How much English did I use to plan and research the project?

1 2 3 4 5 6

- 3 Thinking about your answers above, how could you improve the next time you do a project?

TEACHER'S NOTES



PROJECT OVERVIEW

In this project, students work in groups to research and write a short history about a device related to health or the medical world. They will include key information about the device, such as who invented it, when it began, and why it was needed, etc. They will then present their short history to their classmates and decide together which device has had the most interesting history.

The project helps students to develop the following life competencies, which form part of the **Cambridge Framework for Life Competencies**:

COLLABORATION

Listening respectfully and responding constructively to others' contributions

COMMUNICATION

Using appropriate language for context

DIGITAL LITERACY & CRITICAL THINKING

Understanding and analysing links between ideas

EMOTIONAL DEVELOPMENT

Empathy and relationship skills

HEALTHY BODY, HEALTHY MIND

Compact A2 Key for Schools Unit 11

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CLASS PROJECT: A SHORT HISTORY OF A MEDICAL DEVICE Step 1: Plan

Estimated time: 45 minutes

- 1** Ask the students to turn to page 67 of their Student's Books. Draw their attention to the Exam Task *A short history of glasses* and ask them to read it through again. Then ask some questions on the text with their books closed, e.g. *What did Seneca use for glasses? When did the Chinese first use sunglasses? What did people in Canada put on their eyes before glasses were invented?* Explain that in this project students will prepare their own short history on a device related to health and the medical world. Have students read the project description and then answer the questions in pairs.
[AK: 1 health and the medical world; 2 a short history about a device related to health and the medical world; 3 who invented the device, when it began, why it was needed, etc; 4 which device has had the most interesting history]
- 2** Discuss the questions about the topic as a class to find out what students know about common medical devices that people use regularly, and which medical devices they might need sometimes need to use and for what reasons. The photo shows a thermometer – a medical device to check people's temperature. Other common medical devices can include glasses, hearing aids, teeth braces, stethoscopes, wheelchairs, etc.
[AK: Students' answers]
- 3** Explain to students that the words they are presented with in this exercise will probably be new to them, but they are important to know in order to help them understand the project text that they will read in the next exercise. Ask students if they know what a glossary is. Explain that it is a list of words and their meanings, a sort of smaller version of a dictionary, that sometimes accompanies a text to explain any above-level words. Students read the definitions and match the correct words to them. It doesn't matter if students only make a guess. You can correct any mistakes when you go through the answers together.
[AK: 1 e; 2 h; b; 4 a; 5 f; 6 g; 7 d; 8 c]
- 4** Draw students' attention to the text on page 2. Ask them to read Adam's speech bubble quickly and ask *What's the matter with Adam? (He's broken his leg.)* Point to the photos of Adam and ask *What has Adam got to help him walk?* Elicit *a crutch/crutches* from the students. Ask *What is Adam wearing on his leg?* Elicit *a cast* from the

students. Tell students they are going to learn more about the history of crutches in the text that follows, and tell them they are going to prepare a similar text on the history on a medical device of their choice later in the project. Then ask them to read the text *A Short History of Crutches* and circle the correct words for 1–5 taken from the Glossary in Exercise 3.

[AK: 1 injury; 2 permanent; 3 support; 4 patent; 5 height]

- 5 Ask students to read through all of the text again, completing the sentences with the correct present perfect form of the verbs in brackets.

[AK: a have broken; b have been; c have used; d have been; e hasn't changed]

- 6 Students discuss a time when they might have needed to use crutches and for what kind of injury.

[AK: Students' answers]

Note: This is the end of Stage 1 of the project: Plan. You can continue now or in a future lesson. If you decide to continue in a future lesson, you could ask the students to prepare for the next stage by thinking about which medical device they would like to write a short history of.

HEALTHY BODY, HEALTHY MIND

Compact A2 Key for Schools Unit 11



CLASS PROJECT: A SHORT HISTORY OF A MEDICAL DEVICE Step 2: Develop

Estimated time: 90 minutes (this can be split into two sections, between Exercises 3 and 4)

Exercises 1–3: 45 minutes

Exercise 4: 45 minutes

- 1 In groups, students choose a medical device that they would like to write their short history on. They can choose from the suggestions given or think of their own. Encourage each group to choose a different device so that there is an interesting mix. This will allow for more discussion in the final stage of the project when students discuss how successful each device has been over time.
- 2 Students should use these questions as guidelines to help them find the information they need when researching their device. Focus their attention on the *Online Research* box. Explain that when they are looking for information online, it is important to use official websites and to check at least three different website sources so that they can be sure that the facts they want to use are accurate and up to date.
- 3 Students start doing the research for their short history and ask and give each other their opinions on the facts that they would like to include for their chosen device. Encourage students to use the language in the *Useful Language* box to help them with this planning and research stage.

Note: If you wish to stop here and continue in a future lesson, this stage of the project can be split at this point.

- 4 Students write their short history in their groups. They should decide on the best way to present the information. This can be done digitally if preferred or it can be handwritten. They prepare the text and include photos to illustrate their short history. When it is ready, students should have some time to practise presenting it. They should decide in their groups who will present the information. Ideally, all the group members should take a turn in presenting different sections of information.

Note: This is the end of Stage 2 of the project: Develop. You can continue now or in a future lesson.

CLASS PROJECT: A SHORT HISTORY OF A MEDICAL DEVICE**Step 3: Presentation and Evaluation****Estimated time: 30 minutes****PRESENTATION**

- 1** Have each group present their short history to the other students in the class. If the groups have prepared digital texts, link them to a digital whiteboard or similar if your classroom has access to one of these.
- 2** Allow students enough time to listen to the different short histories and look at them. Then ask students to work in their original groups to answer the questions. Take feedback on Questions 3 and 4 from the class, and discuss together the interesting histories of some of the devices and which ones students think are the most important to our everyday life.

SELF-EVALUATION

- 1** Explain that students are going to think about how well they did the project as a group, as this will help them to understand their strengths and their areas for improvement in future projects. Students discuss the questions together and give their group a score from 1–6 for each question. Ask for some examples as feedback for the entire class.
- 2** Explain that students are going to reflect on their own personal contribution, as this will help them to understand their strengths and their areas for improvement in future projects. Students consider the questions individually and give themselves a score from 1–6 for each question. Ensure that students understand that this is self-reflection and is not in any way a formal mark.
- 3** Students reflect on their answers in Exercises 1 and 2 and discuss as a group how they feel they could improve for the next project.