Lesson aim

- In this lesson, students focus on how and why digital videos are compressed.

Lead-in

Ask students to name all the digital devices they own and how often they use them. Write the devices on the board and ask students what they use them for most.

Suggested answers

Devices: mobile phone, laptop, tablet, camera

Uses: texting, taking photos/videos, homework, internet searches, updating/checking social media pages

1 Draw students' attention to the photos and elicit what they can see in each one.

Answers

Different digital devices and teenagers making videos.

2 Ask students how often they make or watch videos. Ask students to work in pairs and tell their partner how they think videos are stored then transferred to our screens. Tell students not to worry if they don't know as they will find out more in the text.

Before reading the text, write the words from the *Vocabulary focus* box on the board and ask students to find them in the text. Highlight the fact that they may know some of them already, but that they have a slightly different meaning in this context (e.g. *post*, *frame*, *raw*, *stream*). Pre-teach some of the more complex words if necessary.

3 Tell students that there are also some new technical words in the text. Explain that these words would be new for most native English speakers too! Go through the list and tell the class that their meanings are explained within the text. Ask them to read the text and write the correct word next to each definition.

Answers

1 binary data **2** algorithm **3** compression **4** lossy **5** lossless **6** codec

4 Ask students to read the text again and circle the correct answers.

Answers

1 a **2** b **3** a **4** c **5** a

5 Divide the class into pairs. To clarify the complex process of video compression, ask them to make short, numbered notes of each stage of the journey. They could even draw a flow diagram to represent this. Encourage them to use the new vocabulary before asking one or two students to describe the journey to the rest of the class. Alternatively, you could write the flow diagram on the board with the help of the students. In pairs, students discuss question 2. Ask for feedback.

DID YOU KNOW?

- Direct students' attention to the *Did you know?* box. Read how CNN were the first news organisation to take advantage of improvements in computer programming to bring us live streams of news, 24 hours a day.

PROJECT

6 Tell students they can use their mobile phones/tablets to make a short explanatory video about one aspect of video compression. Divide the class into pairs and ask them to choose one of the listed ideas. Try to ensure that each topic is covered by at least one pair. Ask them to research and then prepare a short script for their film. They should include visual aids where possible, such as diagrams, flow charts or demonstrations. Explain that the aim is to produce a short, clear explanation of their chosen process.

7 Allow class time for research, writing and rehearsal of the video, as well as making and uploading it when completed.

8 Students show their video to the class or another pair, before uploading it to the school website for reference.