**Computing fundamentals**

**Lesson 6: Computer systems 2**

**Introduction**

In this lesson students showcase their understanding of micro:bit by creating a short explainer video. They also revise and show their understanding of computer systems, algorithms and programming and computational thinking developed over the course of this unit.

**You will need**

Lesson plan, lesson guide, explainer video planning sheet for pairs or small teams, video recording equipment and/or screen recording software, headphones and microphones.

**Learning objectives**

* To plan and create a short explainer video about micro:bit
* To follow criteria and use criteria to evaluate
* To review and evaluate learning

**Lesson summary**

1. What have you learnt? (5 minutes)
2. Explainer video planning (10 minutes)
3. Explainer video creation (30 minutes)
4. Explainer video showcase (10 minutes)
5. Wrap up (5 minutes)

**1. Introduction: 30 second challenge (5 minutes)**

* Split students into pairs give them 30 seconds each to discuss each topic on **slide 2** before discussing briefly as a class.
* Share the learning objectives on **slide 3** if you wish.

**2. Explainer video planning (10 minutes)**

* Invite students to share what they know about explainer videos (**slide 4**).
* Show the example if you wish, making sure students understand this is a BBC production, and they will be creating something much more simple.
* Introduce their task and the criteria for their video, highlighting this will be used to evaluate the videos at the end (**slide 5**). Ensure students grasp that they have only have 30 minutes, so will need to work very efficiently and keep it simple, focusing on one aspect or a simple overview.
* Give out copies of the **explainer video planning sheet** to pairs or small teams and give them 5 minutes to sketch out a quick plan of their explainer video (highlighting they are decomposing the task and this is their algorithm).

**3. Explainer video creation (30 minutes)**

* Give students 30 minutes to complete their explainer video, ensuring they have access to suitable recording equipment and software as needed.
* Give regular time reminders to ensure they stay on task and work efficiently. You could allow more time if you wish, however it is also a good skill for students to learn how to create something ‘good enough’, that meets the criteria given within the timeframe allowed.

**4. Showcase (10 minutes)**

* Depending on space and your preference, either invite students to show their videos to the class, have a round robin showcase where teams move around the classroom or ask them to swap with another team to watch each their videos and offer feedback.

**5. Wrap up (5 minutes)**

* Remind students of the criteria on **slide 5** and give out the **video evaluation sheets** to complete (can be completed for homework if you wish).
* Use **slide 6** to recap the learning objectives if you wish.

**Extension ideas:**

* Students could complete an extended explainer video if you wish/have more time.
* You could ask students to complete a more formal assessment of their learning in this unit.

**Differentiation**

**Support:**

* Ensure pairings/groupings are supportive and students are able to be fully involved in the planning and recording of the video.
* Encourage students to focus on creating a simple video that fits with their areas of confidence (e.g. a video of them explaining in an entertaining way how one aspect of micro:bit works, or a screen recording with voice over of how to use button A as an input).

**Stretch & challenge:**

* Challenge students to create a clear video that is highly suitable for the audience and explains aspects of micro:bit in detail, using appropriate language to showcase their understanding.

**Opportunities for assessment:**

* Informal observation and assessment of students’ work during lesson.
* Formal assessment of planning, videos and evaluation sheets.