**Assessment Outline**

Materials

* PowerPoint Presentation
* Teacher Feedback Form

Procession of Ideas

* We made a PowerPoint to support the lesson we had planned for a classroom. We wanted the lesson to be structured enough that students had a set of instructions they could follow, but still have enough freedom that they could explore and play around with the Microbit.
* We decided to make the presentation visually active and aesthetic so the students would be engaged with it. But also, to keep text to a minimum where we were talking to not distract from what we were saying.
* We provided learning outcomes and structure so that students have a clear view of the structure of the class, and they knew what to expect and what we wanted them to get out of it.
* We started with a simple task (drawing a smiley face) that did not have any big concepts behind it, this was to introduce the students to the Microbits interfaces and how to upload code onto their Microbits. For fast learners we let them do a bit of personalisation and draw their own original face or artwork.
* We made a big slide and moment in presentation to help students through the process of connecting the Microbit. We expected a lot of trouble and resistance around this as it is a complicated process, but once you understood and worked through it with them it was relatively easy for them to download the information.
* When it came to follow up activities for the students, we opted to have activities taken from the make code Microbit website. this was because we anticipated the students would work at a range of paces, therefore, if we did it step by step with them, some students would struggle to complete the instructions and others would finish them quickly. Therefore, by allowing students to work at their own pace and with us providing support where it was needed the lesson flowed more smoothly. We had to pay special attention to students who worked through the activity slower and have extension activities for the ones who finished it quickly.
* We had a teach-back session in between the transition from one activity to the order, this was to help students learn the concepts and assimilate them as they would need to really know them in order to work with them. The first lesson they were a bit distracted with the Microbits to fully do this aspect of the lesson plan, but for the next lessons we walked around and asked them to give us examples and definitions, making them interact more with the content and with each other.
* It is not clear in the slides, but we used semantic waves to explain variables and conditions before teach-back. The exact analogies used were crossing the road for conditions and labelled boxes for variables, which we then expanded on during our presentation.
* For the first two lessons, we had a set time of 1 ½ hours for the class, which worked perfectly as some students managed to just complete the activities within that time period whilst others finished quicker and took the opportunity to explore and play around with the Microbit, we gave them some loose direction, but let them explore the other Microbit activities for themselves, like they would if they were to buy a Microbit for their own personal use.
* For the third and fourth class, we had to adapt the materials, as we were given a 2-hour class rather than a 1 ½ hour class. To do this, we added an extra activity at the end of the previous one. This one touched on radio messages, which was a fun expansion as it got the students to interact with each other whilst still learning. Students generally enjoyed getting to communicate with their friends across the room, but this task was less enjoyable for students with a more dominant partner in their pair, as they seemed even less involved than in the previous activities.
* Students were split into pairs as there were not that many computers, but also working in pairs ensured that they were communicating their actions and checking in with their partner, therefore this meant that they had to have their ideas clearly set or at least it had to make sense in their heads. Some of the students did not collaborate well with their partners though.
* During the lessons we delayed handing out the Microbits, so we had student’s attentions while introducing the class and the learning objectives. We also had a dedicated tidying up slot, and after this we asked some questions based on the learning objectives, so we had student’s attentions.

Trouble Shooting

* On the third session the images in the slide deck did not load. This meant we spent more time to make sure our verbal explanations were comprehensive, while remaining clear to the students. This seemed to work well as the students seemed to understand these parts of the lesson as well as the other sessions we ran.
* Some students finished tasks much earlier than others, we had foreseen this so had advanced task prepared, although as they completed even these we had to come up with extra features or challenges to occupy them before we moved onto the next section of the lesson.
* In the first lesson it was difficult to speak over and get the attention of students while they had the Microbits in their hands, we had also anticipated this, but after the first section further encouraged students to unplug their Microbits while we were addressing the whole classroom.

Main Feedback

* Teachers and students liked the slides, especially the arrows pointing out key bits.
* Teachers appreciated that tidying up was an allocated time slot in our lesson, and we didn’t just drop a chaotic classroom on them to get control of and tidy up.
* Working in pairs worked well in terms of classroom management.
* Learning objectives and lesson overview was helpful and appreciated, as students knew the flow of the lesson, and the points that we wanted them to take from it.

Extra Comments

* After every session, a couple of students wanted to know if they could get their hands on their own Microbit, which was encouraging as this shows that we had successfully gotten some children passionate enough to want to learn more outside of their normal classroom.