APPLE LEARNING INSTITUTE

St Joseph's Catholic & Anglican High School
Presented by
Christopher Wilkinson
Victoria Jobson
Tom Trueman

ST JOSEPH'S CATHOLIC & ANGLICAN HIGH SCHOOL

St Joseph's Catholic and Anglican High School is a secondary school in Wrexham, Wales. The school is currently the only shared church school in Wales. The two Bishops of the Catholic Dioceses of Wrexham and the Anglican Church in Wales Diocese of St. Asaph have a shared responsibility for the school. We currently have on roll 751 pupils and 80 members of staff.
24% of the school population are from WIMD postcodes.
33% of the school have English as an additional language.
12.6% of the school have some form of ALN/SEN.

DIGITAL ACTION PLAN - FOCUS AREAS

- Up-skill staff to become Apple Teachers.

- Upgrading the infrastructure to allow more devices to connect, with greater stability and resilience.

- To promote coding for girls, making links with maths and ICT. Using Apple Swift Playground, pupils will complete the coding course, make video journal using iMovie.

INTENDED OUTCOMES

- To encourage more girls to consider careers in STEM.
- To use Apple Swift Playgrounds to replicate real world scenarios.
- To use a variety of different Apple applications to plan, carry out the task and record final result.
- To allow greater collaboration between departments and in particular the Maths and ICT departments.
- Improved network coverage throughout the school.
- All staff to achieve Apple Teacher status in the next academic year.

STATEMENT OF LEARNING

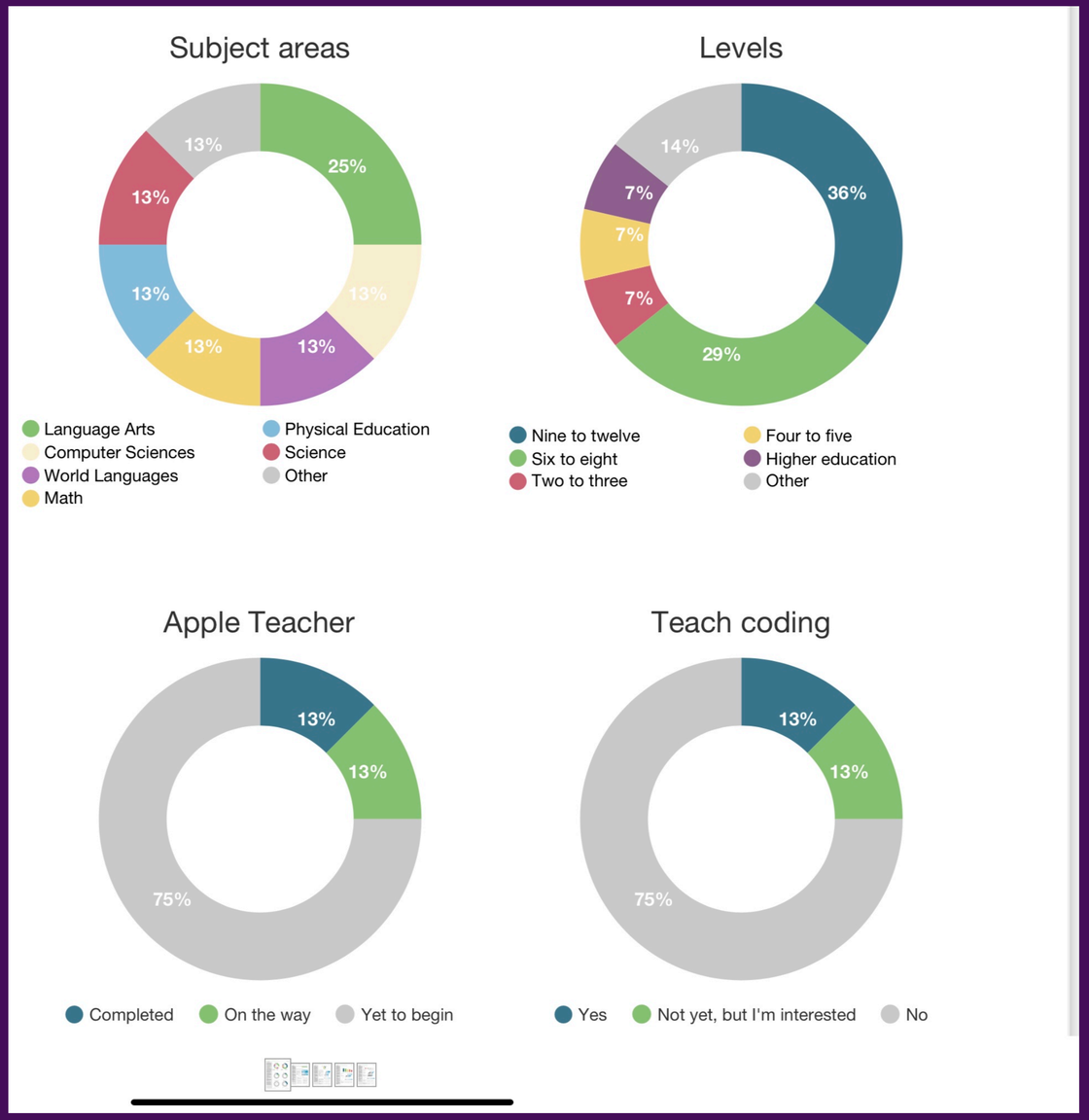
Create curious thinkers, and develop creative learners, through engaging experiences.

Empower pupils to take ownership of their learning and be collaborators within the classroom, and to be resilient in an environment where they are able to fail.

DAP – PHASE ONE OVERVIEW

- Staff to complete Apple learning survey.
- Identify 8 female pupils who are MAT in Maths and IT and set up 3 sessions on learning to code.
- BBC MICRO BITS - Use Python coding through Apple Swift Playgrounds and BBC Micro Bit app to make animations and display messages.
- LEGO - use the Lego Education Spike app to understand how motors and sensors can be coded, using blocks, with Lego.
- SPHERO - use the Sphero Edu app and Apple Swift Playgrounds to control Sphero Bolt and RVR, using Javascript code.

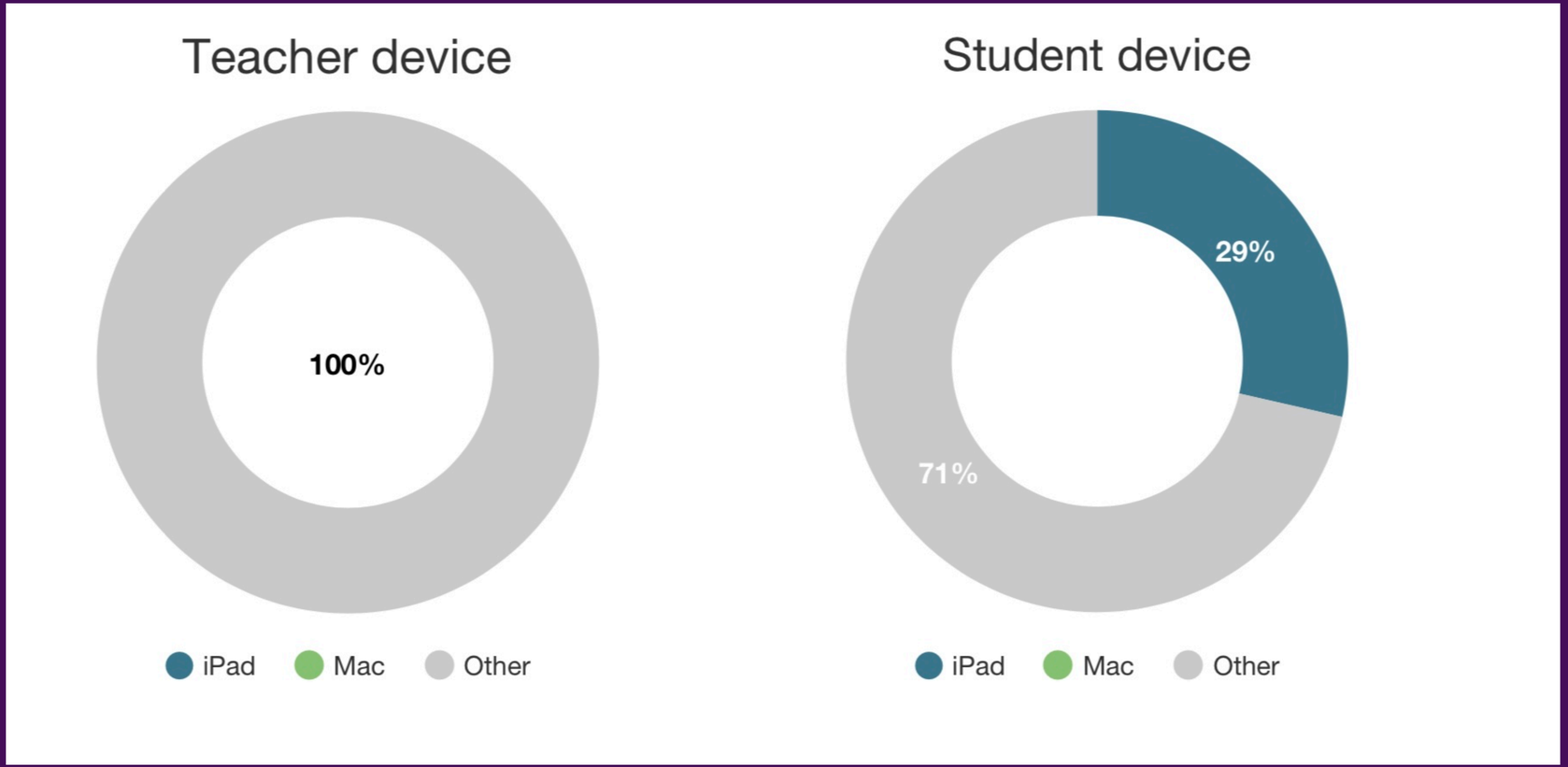
DAP – PHASE ONE EVALUATION – APPLE LEARNING SURVEY RESULTS



- The Apple Learning Survey was sent to all staff and the results showed the following:
- 8 Responses
- 6 Subject Areas
- 3 Apple Teachers
- 13% interested in learning how to teach coding.

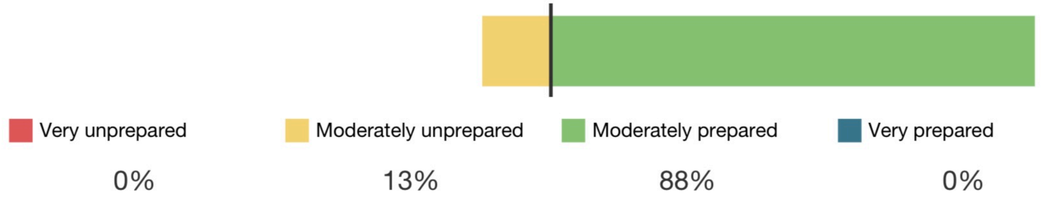
APPLE LEARNING SURVEY

- Windows based devices primarily used for teaching.
- 29% say they use iPads with pupils.

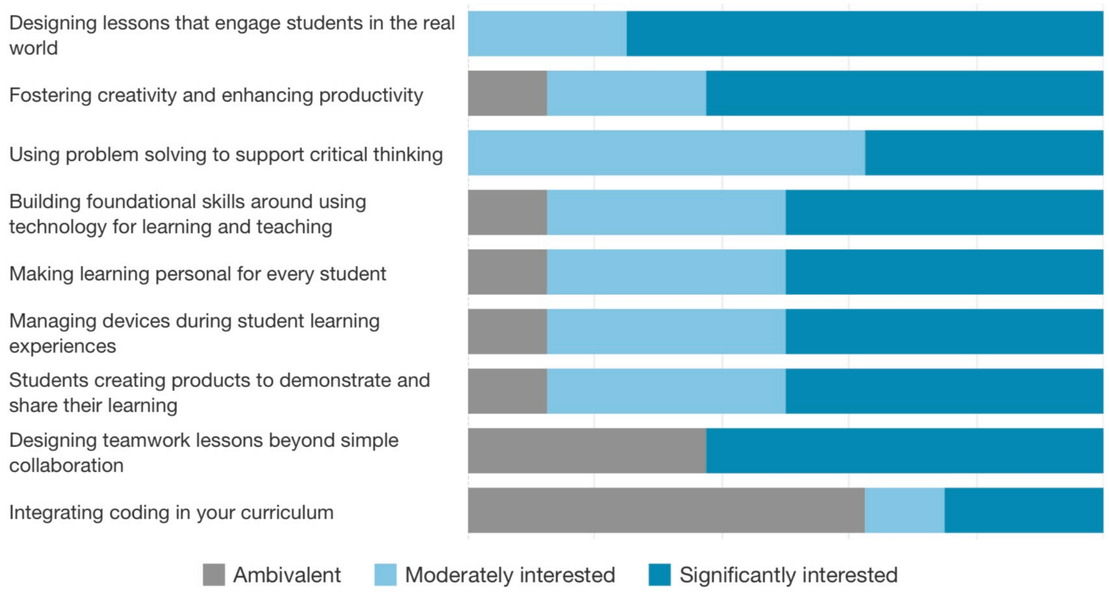


APPLE LEARNING SURVEY

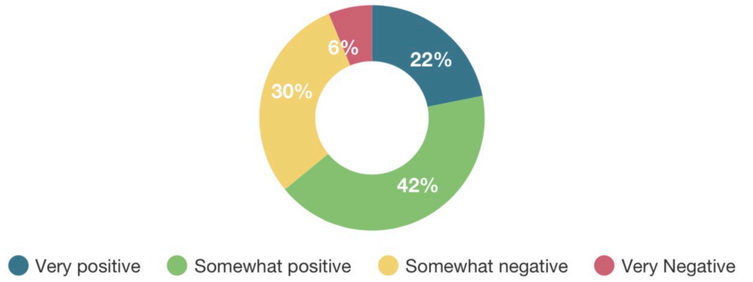
Teachers' sense of preparedness for teaching with technology



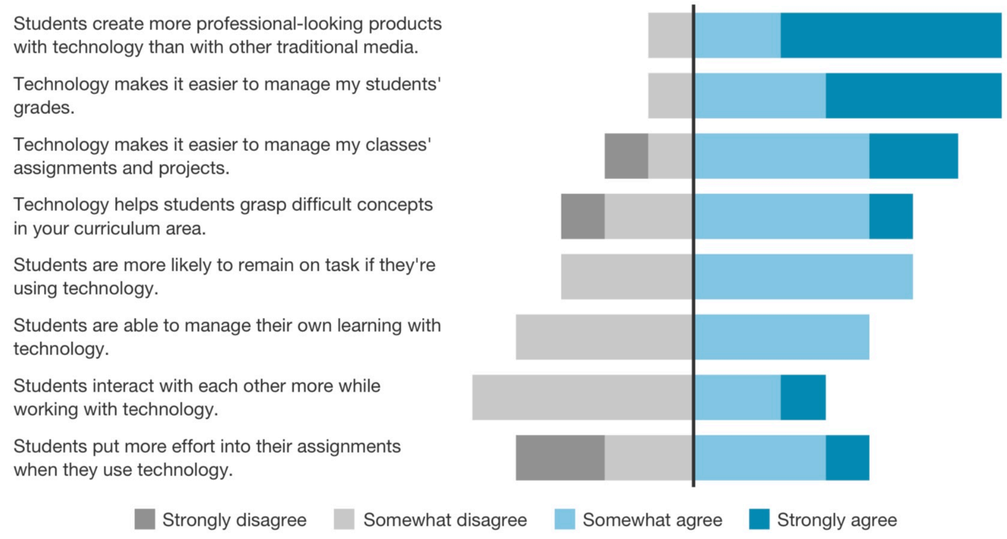
Professional learning goals with technology

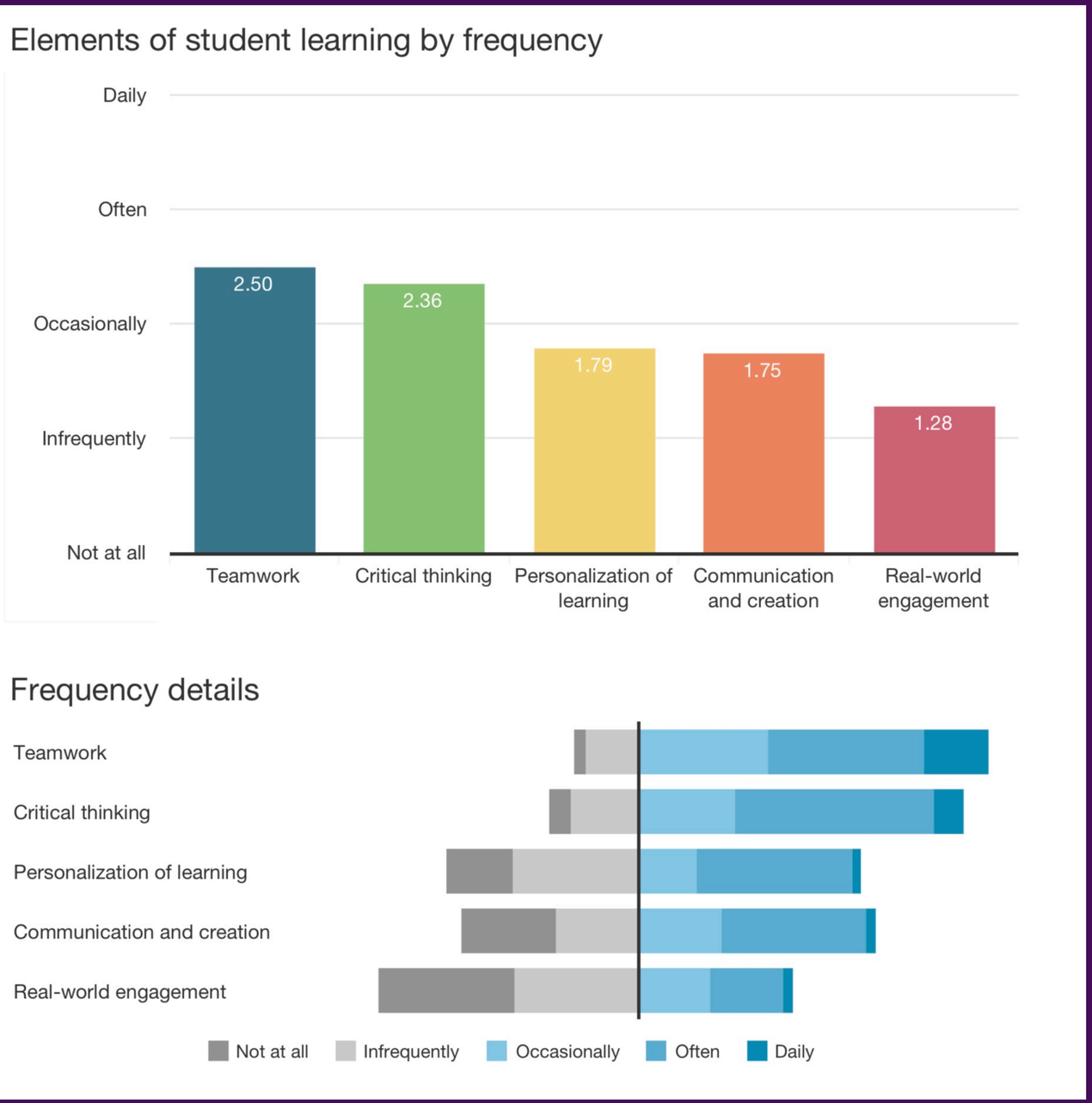


Teacher perception of technology



Teacher perception details





APPLE LEARNING SURVEY

- Teamwork and critical thinking are the two key elements highlighted by staff from their experiences within the classroom.
- Personalisation of learning and communication and creation are then seen most frequently in the classroom and they do compliment each other, as how can the learning be personalised without communication with the learners to create tailored resources.
- Real world engagement was seen less frequently and is an area we hope to improve by incorporating more practical examples into the classroom including the recent coding activities using Sphero's and Lego, which we will mention later within this presentation.

DAP – PHASE ONE EVALUATION

- Identify 8 female pupils who are MAT in Maths and IT and set up 3 sessions of coding.

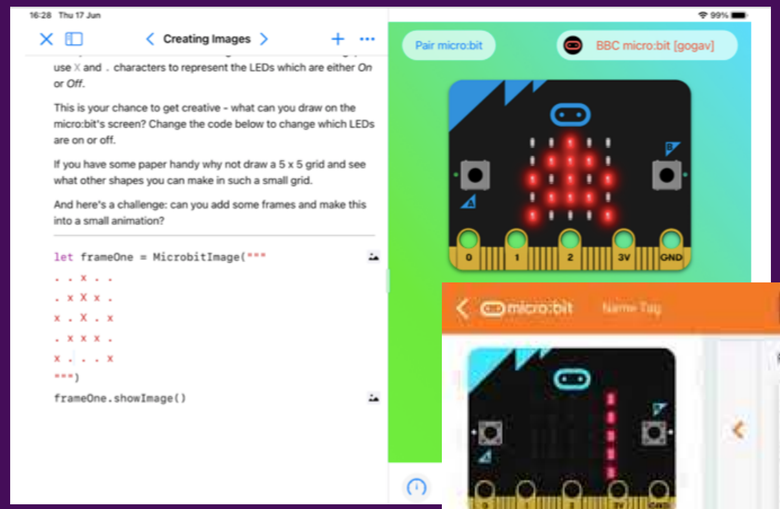
Pupils were identified and agreed to take part.

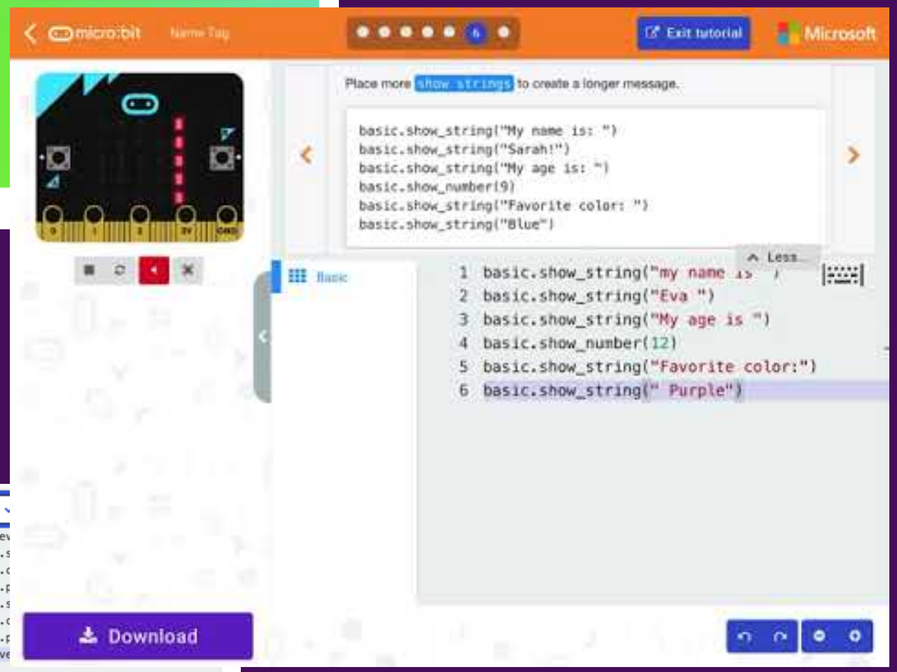
They were issued with their own iPad with Apple Swift Playground installed.

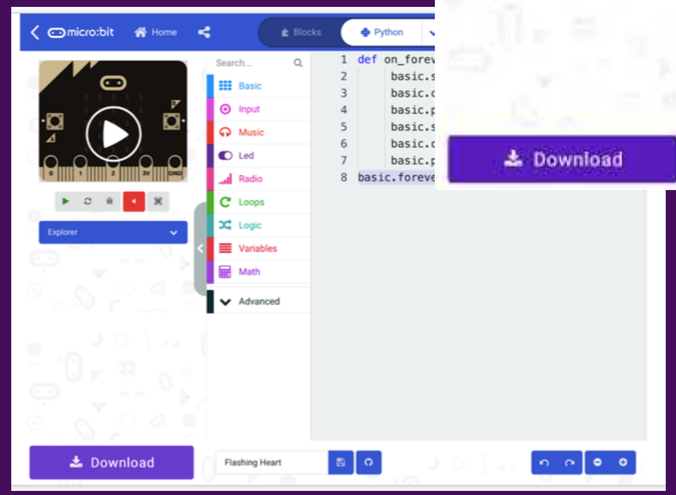
Their first task was to complete the ‘Learning to Code 1’ on Apple Swift Playgrounds.

DAP – PHASE ONE EVALUATION

- Session 1 BBC MICRO BITS
- Use Python coding through Apple Swift Playgrounds and BBC Micro Bit apps to make animations and display messages

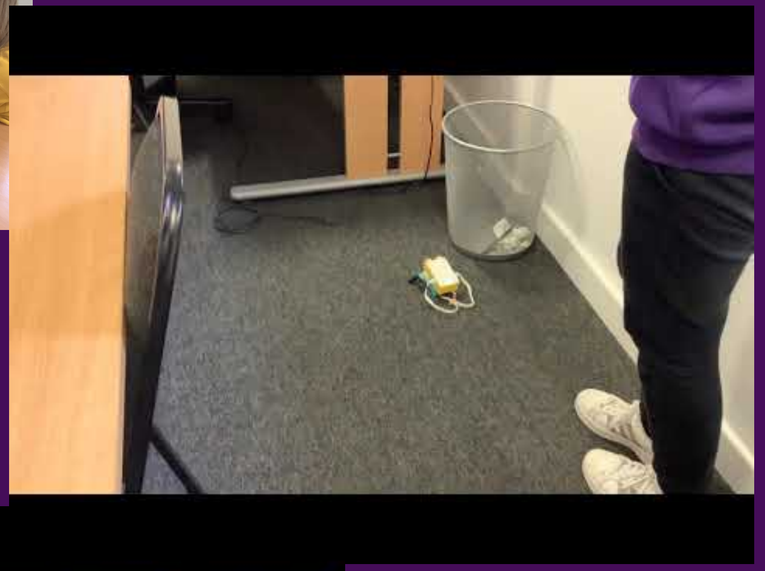


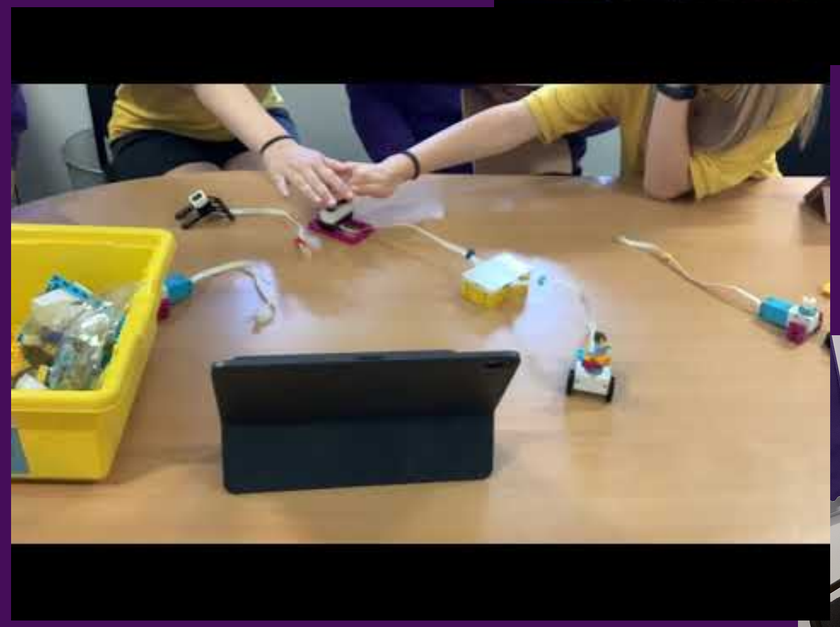




Pupils were asked to work through Introduction to BBC Micro Bit on Apple Swift Playgrounds. Firstly, to connect the BBC Micro Bit to their iPad, then to edit a code to display an image and text. They successfully made the images and text. They then went onto BBC Micro Bit app and coded a flashing heart animation.

For homework they were asked to create their own animation.





DAP – PHASE ONE EVALUATION

- Session 2 LEGO
- use the Lego Education Spike app to understand how motors and sensors can be coded, using blocks, with Lego

Pupils split into 2 groups. One group on Lego activities, the other on using Micro bits to play rock, paper, scissors.

Very successful session, pupils enjoying understanding how the sensors worked on the Lego and changed some variables to get the code to react to different colours.

Rock, paper, scissors was also successful and pupils added in sounds and different images in the code.

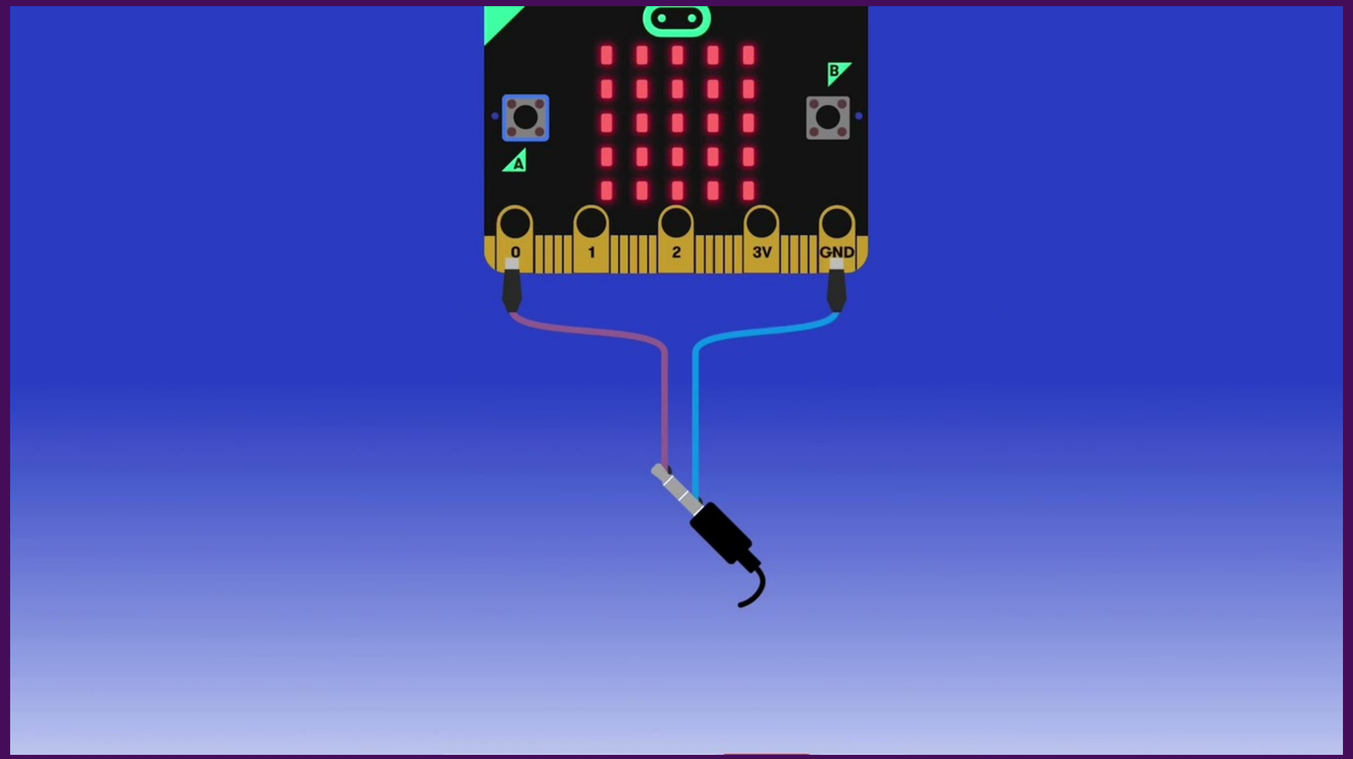
DAP – PHASE ONE EVALUATION

- Session 3 SPHERO BOLT and RVR
- use the Sphero Edu app and Apple Swift Playgrounds to control Sphero Bolt and RVR, using Javascript code

This session required the pupils to understand how to change the variables in a code to control the distance and speed the Sphero travelled. They used Sphero Edu app and played a game of curling. They successfully changed the variables within the code and reading the graphs to decide how long to shake the Sphero for, to set a distance.

During this session we also had a successful relay race which used the Sphero to find the average speed of each runner and the total time taken.

DAP – PHASE ONE EVALUATION



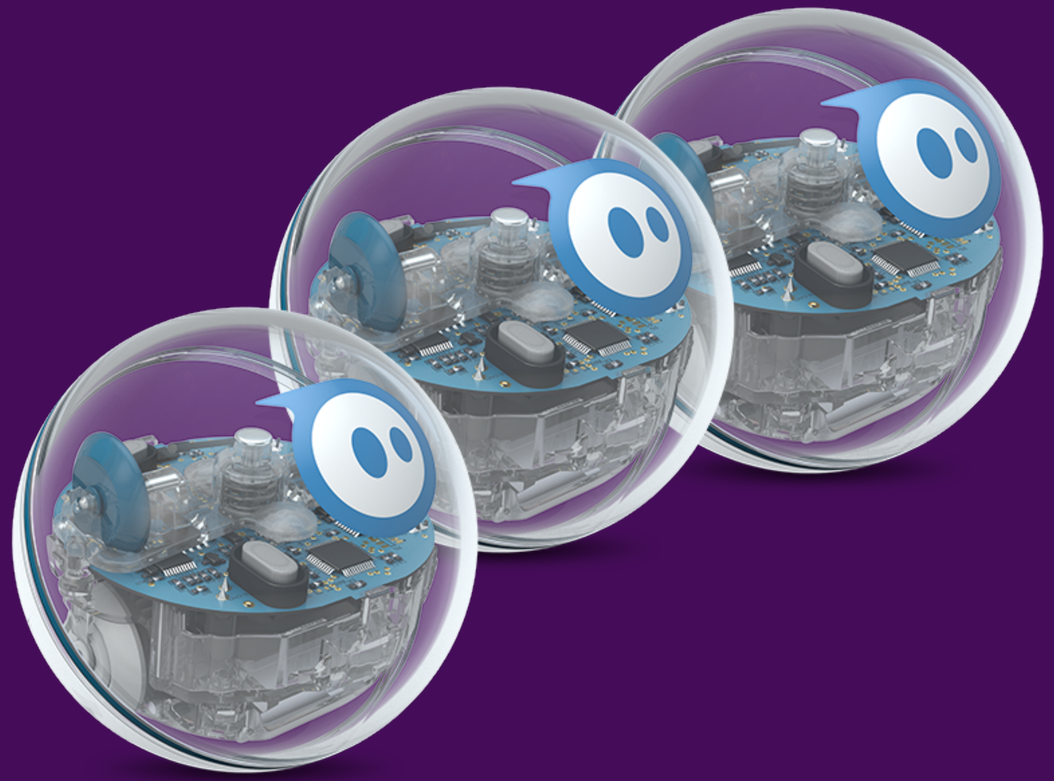
Lastly they were able to experiment and programme the RVR to drive. Using the built in colour sensor to make it change direction.

The final session for the ‘Coding Club’ will be a presentation from each pupil reflecting on the 3 sessions, using iMovie or Keynote. A survey will also be completed by the pupils to gain feedback, see how much they have enjoyed the sessions and what they have learnt.

DAP – PHASE TWO OVERVIEW MEDIUM TERM

- Invest in two new class sets of iPads for the RE and Maths/ICT department – 60 devices in total.
- Train at least one member of staff from each department, so they can achieve Apple Teacher status.
- Ensure that the screen sharing capabilities of our Promethean interactive boards are fully utilised.
- Arrange a special ICT/MATHS coding day incorporating the skills learnt during coding club. The 8 MAT learners who took part in the coding club will also be Digital Ambassadors on the day.

Apple Teacher



DAP – PHASE THREE OVERVIEW LONG TERM

- Liaise with local authority to improve the schools WiFi and access to Apple apps.
- All remaining teachers to become Apple Teachers.
- Invest in a class set of Sphero's and incorporate the coding club activities into the ICT and Maths Curriculum at KS3.

PERSONAL ALI FEEDBACK

The ALI has allowed us to have the time to plan the coding project

Discover new ways to use Apple apps in teaching Maths, eg using apple maps for measuring bearings

Identified weakness in staff using Apple applications in the classroom, even though 80% said they were prepared for teaching with technology

Opportunities for girls have been popular and well received

Identified problems with network

New ways to introduce coding in the classroom using devices to show how coding can be used in real life scenarios