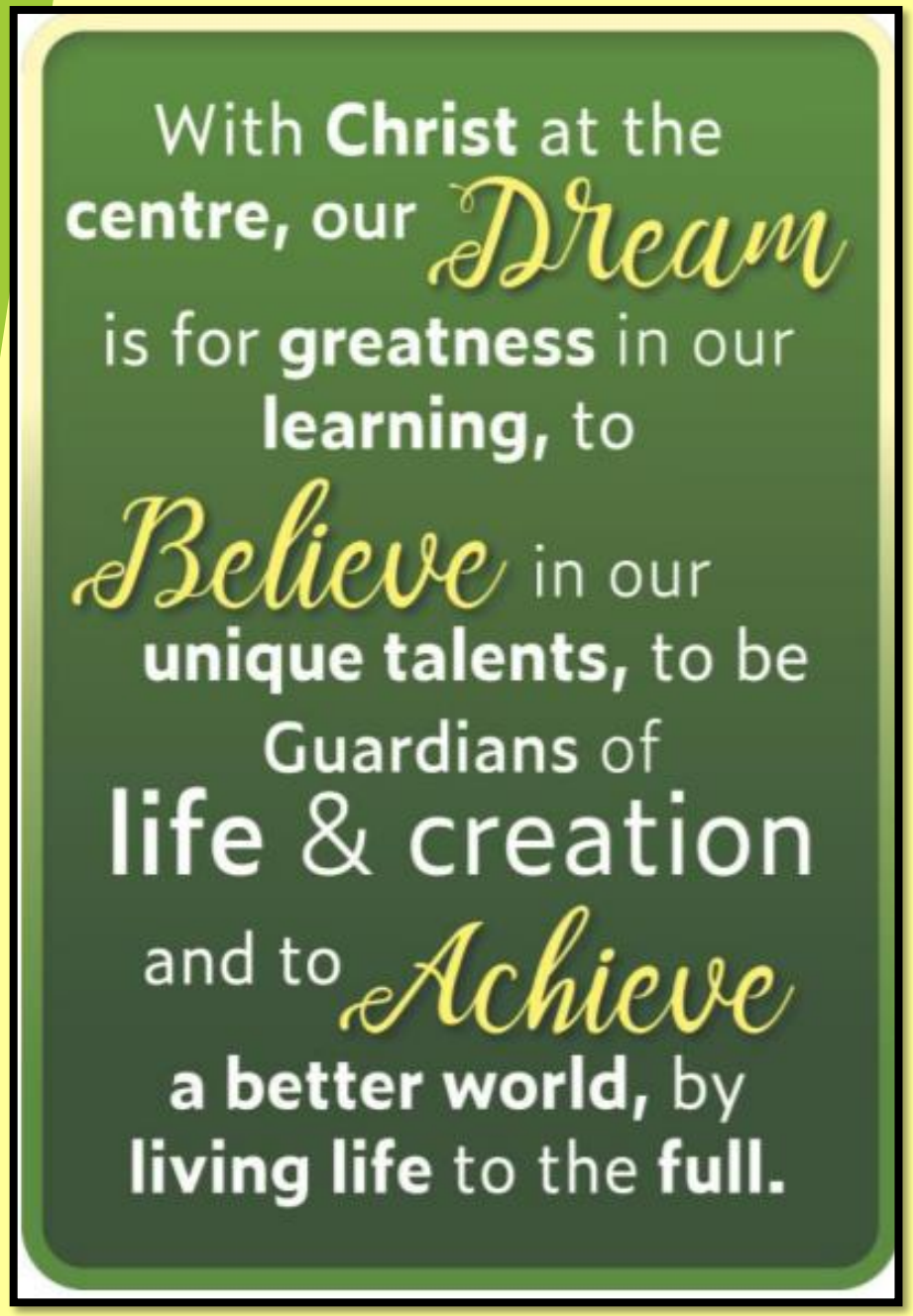
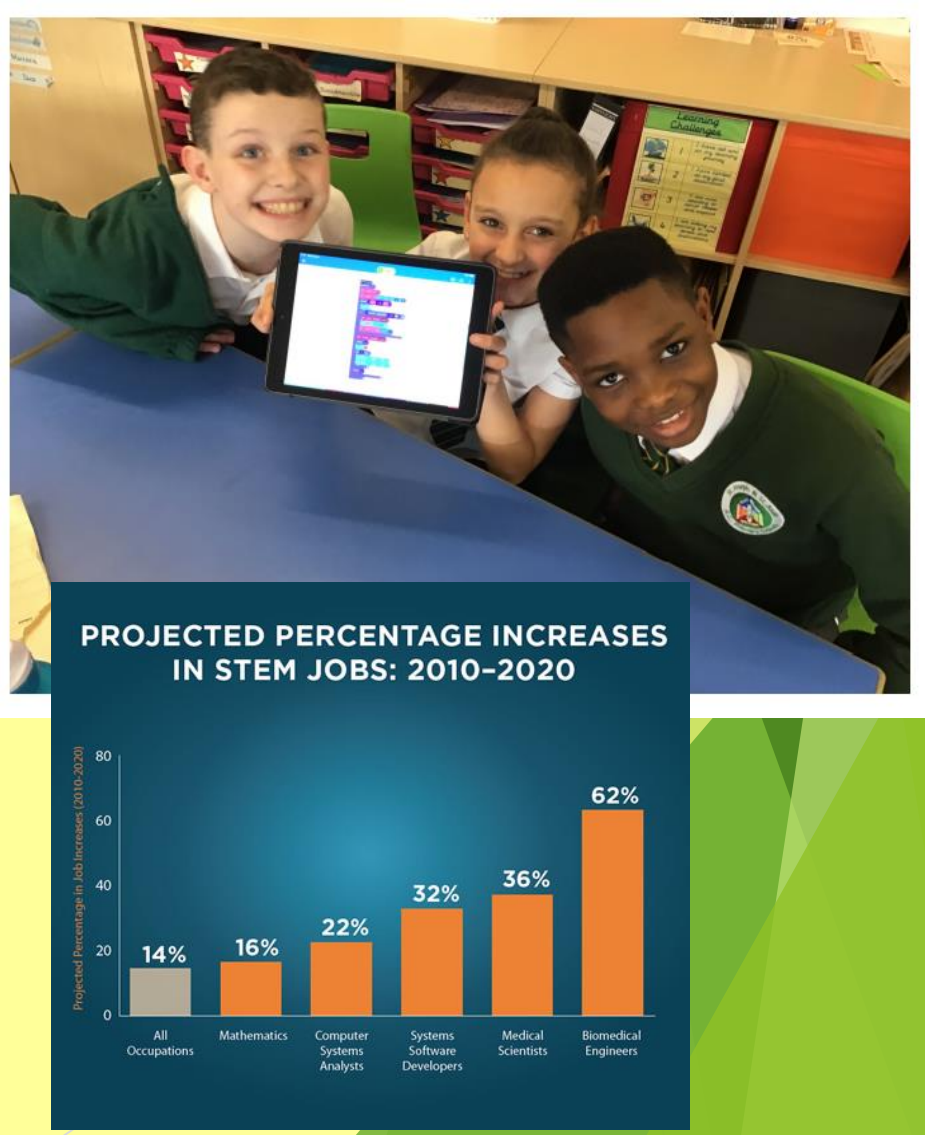


Computing

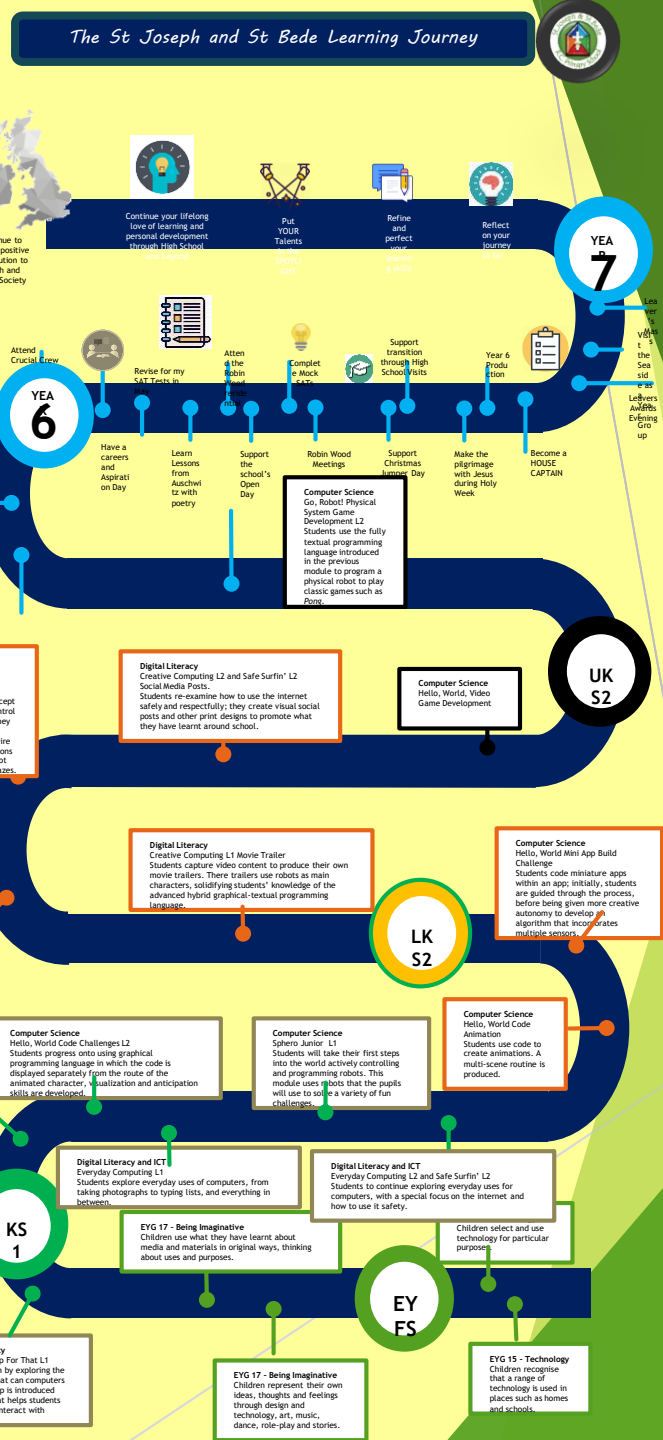
Subject Leadership Report

INTENT
What we aim to do in Computing…

- At St Joseph and St Bede we are aware of the crucial role computing plays in modern day life. A large majority of jobs require workers to be competent in a ranging of computing skills, from programming to computer science and information technology. We aim for all children to receive a broad and balanced set of computing skills that equip them to excel in the job market of the current world. We endeavor to ensure that our children develop a positive and enthusiastic attitude towards mathematics that will stay with them. It will be taught in accordance with the National Curriculum while taking account of the specific needs and learning styles of the children in our school.



IMPLEMENTATION



How is computing organised across the school?

Each term, the same curriculum area is taught, developing skills from the previous year of the same term.

Computer science and e-safety are covered by Technola, IT & Research and Digital Literacy are covered by the class teacher throughout other subjects.

The children are assessed at the start of each unit to identify their starting point. The units are open ended are so children can start at their level and there will always be room for development and progress.

	Autumn	Spring	Summer
Year 1	Computer Science *'Computing Unplugged'*	Computer Science 'Algorithm of Awesome'	E-Safety
Year 2			
KS2	**Computer Science** **'Hello World'**	**Robotics (Computer Science)** ***'Go Robot!'***	**E-Safety**
Year 3	Interactive Cards	Communications	'My Life Online (MYLO)'
Year 4	Cake Factory	Robot Factory	
Year 5	Maze Makers	Autonomous Vehicles	
Year 6	Game Studio	Physical System Game Development	

The units cover a broad and balanced application of technology in a range of real life situations. There are a wide range of computing skills addressed and developed and these are taught using a variety of hardware and programmes (such as robotics, scratch, iPads etc)

Each year group has a set of key words, they learn what they mean and how to apply them. Each year, previous key words are recapped as sticky knowledge before moving onto learning the next ones.

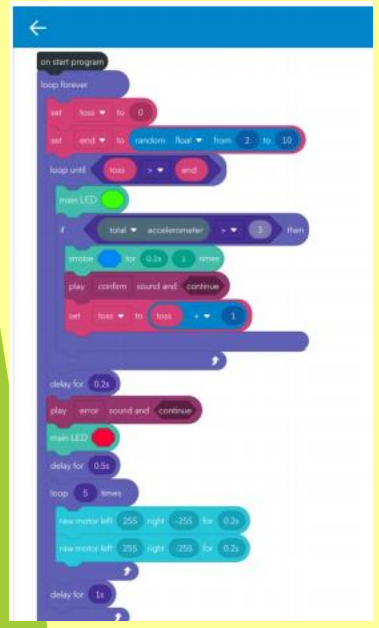
Technola – What a unit looks like…

- Check in
- Sticky knowledge (key words)
- Introduce core skill and what type of computers it might be used in (eg. Loops in road crossings)
- Children are taught the skill
- Apply the skill to a larger challenge
- Check out to assess progress

The societal impact is considered throughout. Regularly reminding the children of how their learning can be applied in a real life context. As well as any societal issues that arise such as a low proportion of women, compared to men, with high paid computing jobs

Technola – Assessment and Progress

- Assessment at the start of a topic and then at the end (check in, check out)
- The teaching is then adapted to suit all children's needs
- Units are designed with very little use of 'puzzle' programmes. Children are starting on a blank slate therefore some children reach the end of the initial challenge within a week or so and other children at the end of the half term.



- Projects are quite open ended enabling a range of abilities to be met with the same project.
  - Children who meet the basic challenge early are then encouraged to develop their project further, adding in extra elements and complications to ensure they continue progressing in this area.

How does it fit in with the wider curriculum?

- Many of the skills learnt can be used to support learning in other subjects.
- Children currently use Seesaw for developing typing skills, creating videos and apps such as pic collage to provide alternative methods of recording. Laptops are used to teach the children word processing skills and how to create presentations using PowerPoint
- Due to a lack of communication teachers are unaware of exactly what skills children are learning with Technola and therefore find it difficult to incorporate more complex skills across the curriculum.

NEXT STEPS - Technola are going to use SeeSaw, Twitter and Teams to communicate better with teaching staff so they know what is being taught and how to use it in lessons.

Time tabling

- Each class receives one lesson a week PPA cover from Technola. This is for half a term, each term.
- EYFS and Class 3 do not use Technola to teach computing.
- Technola cover Computer Science, E-safety and Robotics.
- The rest of the computing curriculum is taught in a cross curricular way, through other subjects.
- This provides enough time to cover all areas of the computing curriculum in depth.

NEXT STEPS 2021-2022 – Technola will be teaching classes 4-11 for lesson every term. They will provide a shorter lesson for class 3. They will therefore be able to teach all elements of the currciculum so any computing taught through other subjects will be surplus to requirements.

Technola - WWW EBI

WWW

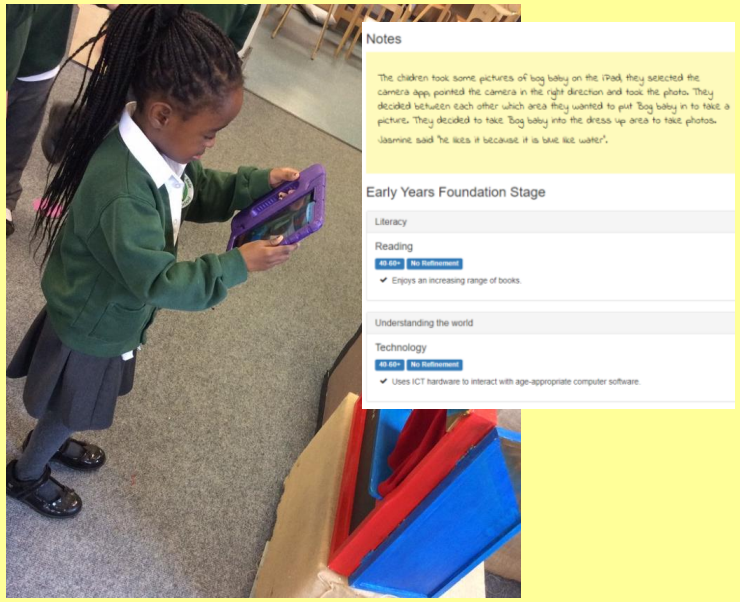
- use of robotics to promote enthusiasm, the children enjoy their lessons and can tell others what they have been learning.
- Open ended modules to address varying levels of abilty
- Specialised teachers have the skills and computing understanding to teach the children to a high level
- Resources enable the children to learn using up to date technology

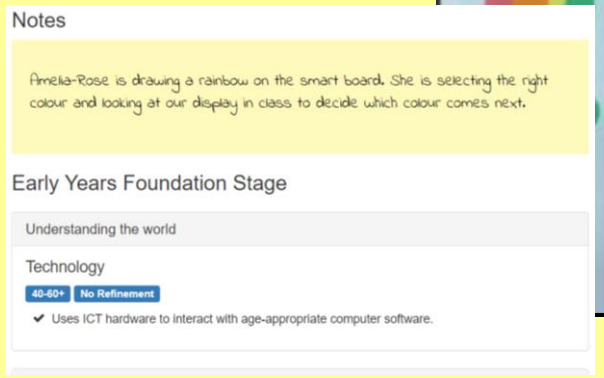
EBI

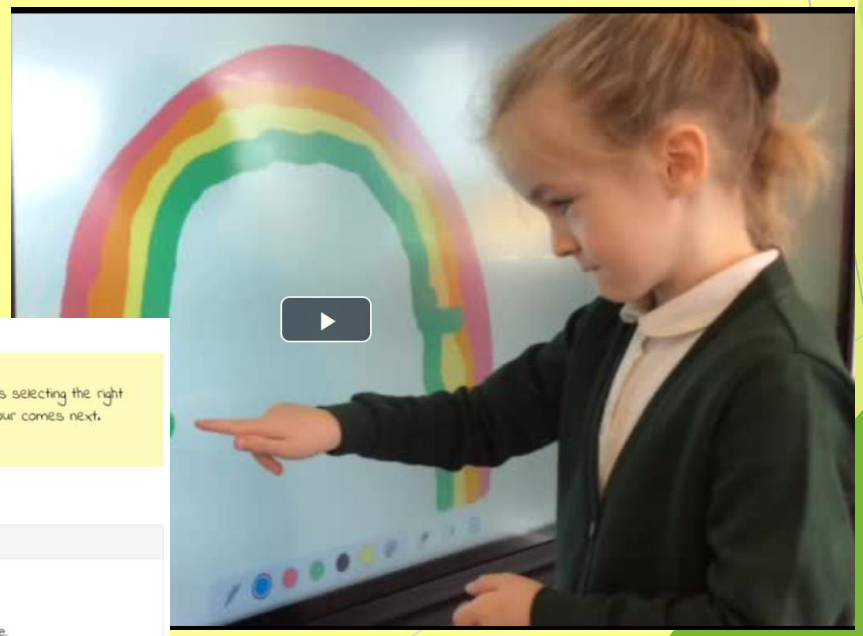
- Feedback to Teachers – Teachers feel they do not know enough of what is being taught on a day to day and termly basis. They want more information on assessment throughout the year rather than at the end of the year.
  - We are working with Technola to develop a system where teachers are informed of what has been taught. This may be giving Technola accesss to SeeSaw, asking Technola to tweet and tagging the teacher.
  - Technola have also suggested a Teams meeting with all the staff to explain what is taught in the long term.
  - Assessment data is going to be shared throughout the year.

What Computing looks like in Early Years?

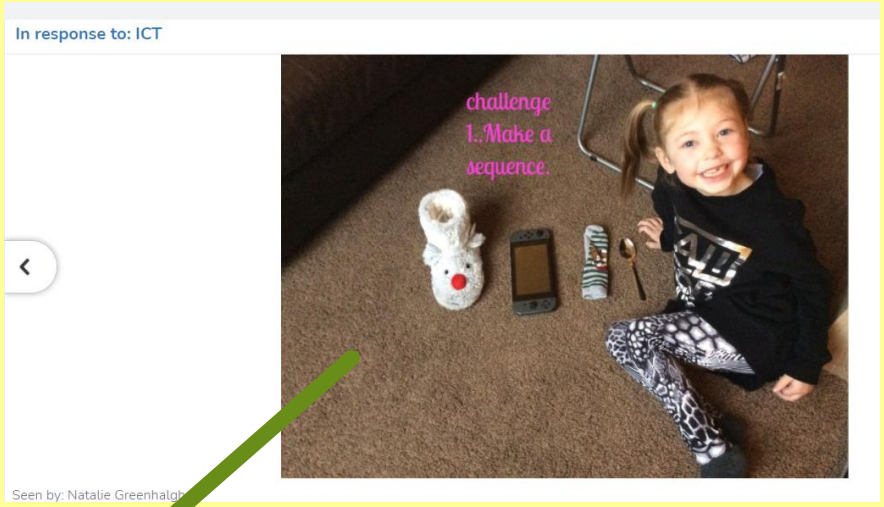
- We use Bee Bots, I pads, listening centre, whiteboards
- How we assess – Observations through tapestry, teacher assessment







What Computing looks like in other areas of the curriculum (KS1)



Practical coding

Coding through scratch

- SeeSaw is used to answer questions using voice notes to overcome writing barriers. Videos are created on SeeSaw as a way of overcoming barriers to writing
- Research using iPads, using apps the read aloud the content, creating pic collages to showcase work or annotate images, Using Chatterpix as an alternative method of recording.
- Home work is set through SeeSaw and completed on the following apps: Teach your Monster to Read, Spelling Shed, TT Rockstar
- Class 3 use teacher assessment to enter onto integris

What Computing looks like in other areas of the curriculum (KS2)

- Seesaw for creating videos
- Pic Collage to provide alternative methods of recording.
- laptops to teach the children word processing skills and how to create presentations using PowerPoint

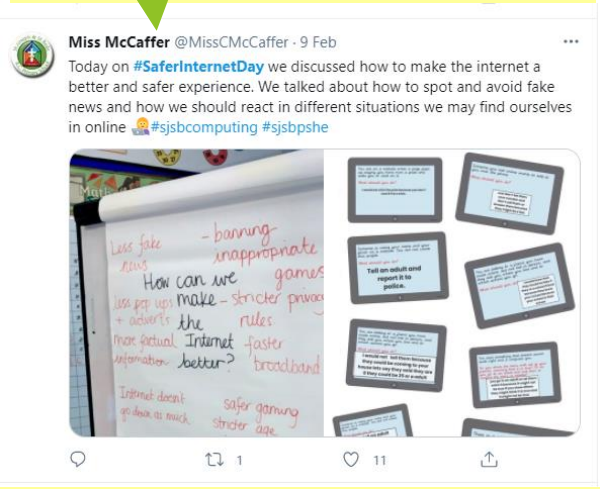
Using SeeSaw to answer questions about online safety

Researching and the using a word processor to present the research

Creating an online safety poster

Where are we? Online Safety

Safer Internet Day 2021 – Taught across the school and at home due to lockdown



Informing the Wider Community – When issues arise in school or in the wider public, Information is sent out to the wider community through twitter. This supports their understanding of online safety. On occasion specific information has been given directly to parents.

360 Safe – An initial assessment of where we began at the start of the year has been completed, areas for development highlighted and progress has been made to some of the sections, such as Online Safety Policy.
Jan 2021 we have achieved 42%

Online Safety Policy – This has been updated to reflect the change in the times with regards to home learning and devices at home.

Staff Training and Development

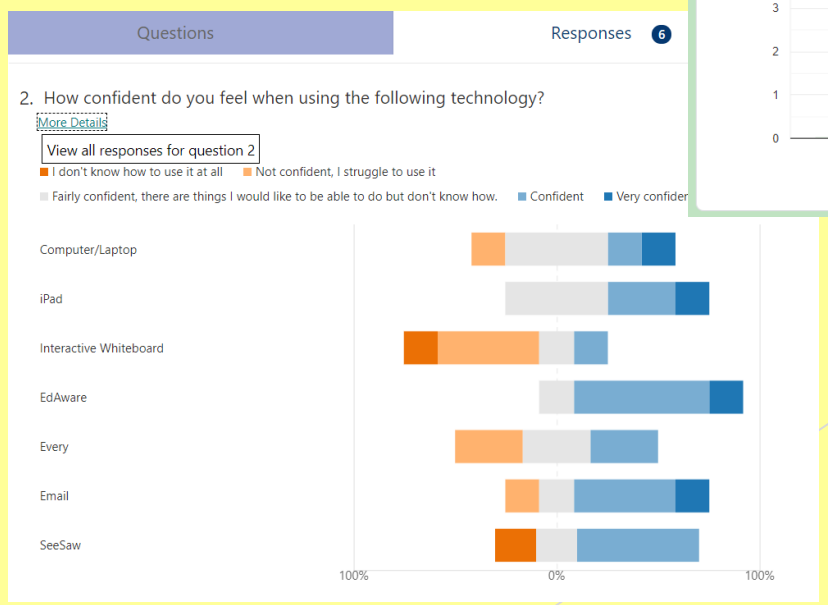
Replies from staff surveys have found:

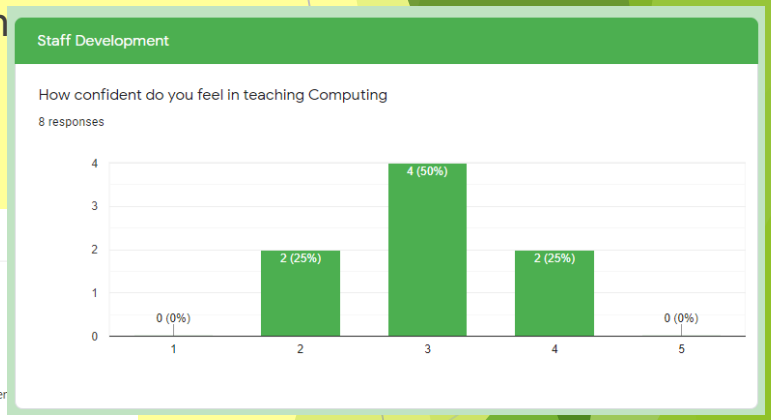
- Teachers would like more training on how to link computing through the curriculum.
  - Technola have agreed to a Teams session to help teachers understand what they are teaching across the year, how this can be supported and what gaps teachers need to address.
- TA's have received Teams training to prepare for home learning.
- TA's would like more training on how to navigate through a whiteboard and what to wh
  things 'go wrong' on their laptop.
  - When COVID restrictions ease, this training will be delivered by Rachel Ellison.

3. If there is something listed above that you aren't confident in, what specifically do you find difficult? Or What would you like to learn to do that you aren't sure how to do at the moment?

4 Responses

ID ↑	Name	Responses
1	[redacted]	Using the whiteboard. Writing on the board or onto of PowerPoint etc..
2		Never been shown how to work interactive board. Now I have been shown Seesaw I am uploading no problem. I can log on computer and lap top but unsure where items are stored regarding school. Really appreciate you doing this training for us x
3		n/a
4		I have never used Seesaw, but need to learn and I rarely use the whiteboards so struggle to remember. I have not used the whiteboards in the past 12 months.





IMPACT -Assessment

Technola – provide a learning journey each half term to show what the children have learnt and the vocabulary they now understand. An end of year score is provided to teachers for reporting to parents.

Week Six

This week, students finished the remaining levels in Tynker Junior. Using all of their coding knowledge they were able to solve each puzzle.

Students have worked extremely hard this week, reciting key words and their explanation each lesson. Their vocabulary includes command, algorithm, bug, loop, event, and code!

KS1 – Assignments are commented on, on SeeSaw, by teachers and then teacher assessed

Seen by: Natalie Greenhalgh

Computing Home Learning

Miss Keiley, Miss Bibby

Miss Keiley Well done Daisy!

Miss Bibby Well done!

Like Comment

Understanding the world

Technology

40-60+ No Refinement

✔ Completes a simple program on a computer.

EYFS – Teachers assess children during an activity or in the moment play and record this on Tapestry.

After reading 'What the Ladybird Heard' we mad our own maps of the farm. We made sure we included all the important places mentioned in the book. We cut up pictures in the shapes of the animals to make our pictures look like they do in the book.

We directed the bee to around our map to see if we could get it to follow the instructions from the book.

We read the direction page of the book together and step by step we directed the bee-bot to the right place. We used the words forward, backwards, left and right and used our knowledge to program the bee-bot correctly.
We needed to predict the correct number of steps it would take to reach each part and gave suggestions if we thought differently. The group worked brilliantly as a team.

William "It didn't go forwards. This is actually quite hard. Press forwards first this time. It actually did it that time."

Ocean "Turn this way so it can go around the pond. Press forward now, I think three will get it past the pond. Three was enough, it got to me."

Alexa "Straight backwards. I think 3 times."
William "That will be back where we started."
Alexa "Go backwards two." It goes off the page. "I didn't press clear."

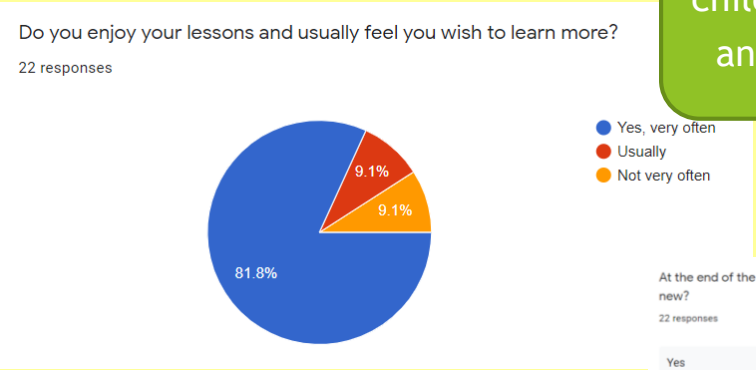
Layla "Go forwards just 1 then turn then forwards one."

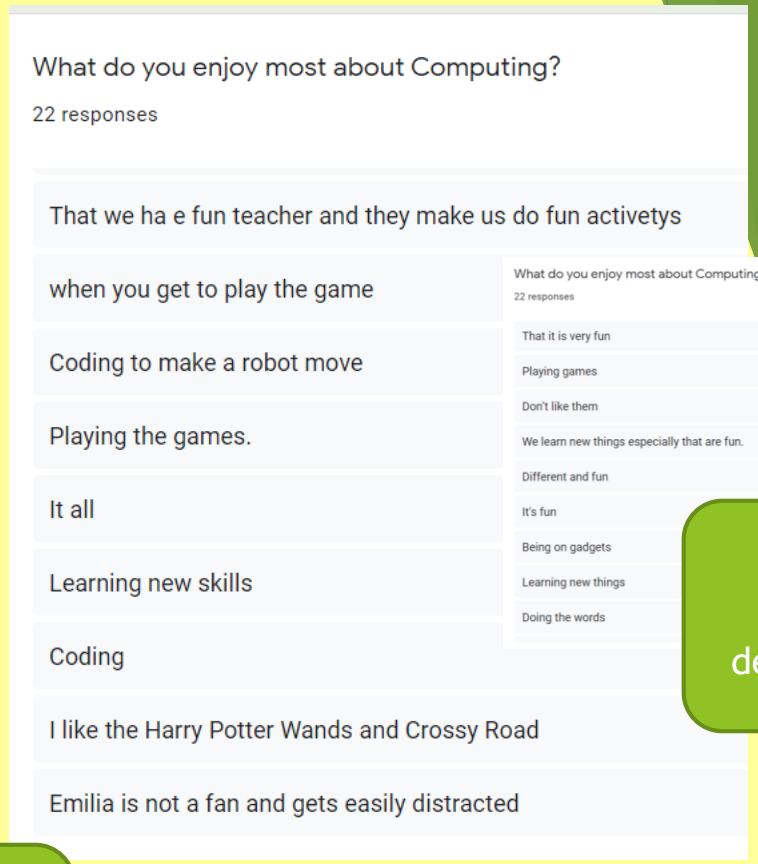
Jacob "Left past the sheep is just this arrow. I think 4 will get it there."

William "Five was too far with when we did it with everyone."

IMPACT – Pupil Voice

A large proportion (91%) of children enjoy their lessons and want to learn more.

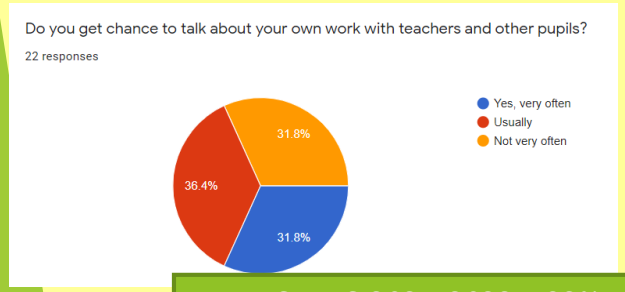




Children enjoy the lessons and often describe them as ‘fun’.

82% of children know they have made progress and learnt something new.

Their suggestions for improvement are positive such as: more lessons, more one to one learning, more tasks.



NEXT STEPS 2021-2022 – 32% of children do not feel they have time to talk about their learning with others. When COVID restrictions ease, lessons observations will provide chance to see where opportunities for this could be.

The suggestions of ‘more creative’ and ‘make games’ will be addressed when children do the cross curricular units that are now included in the two year overview.

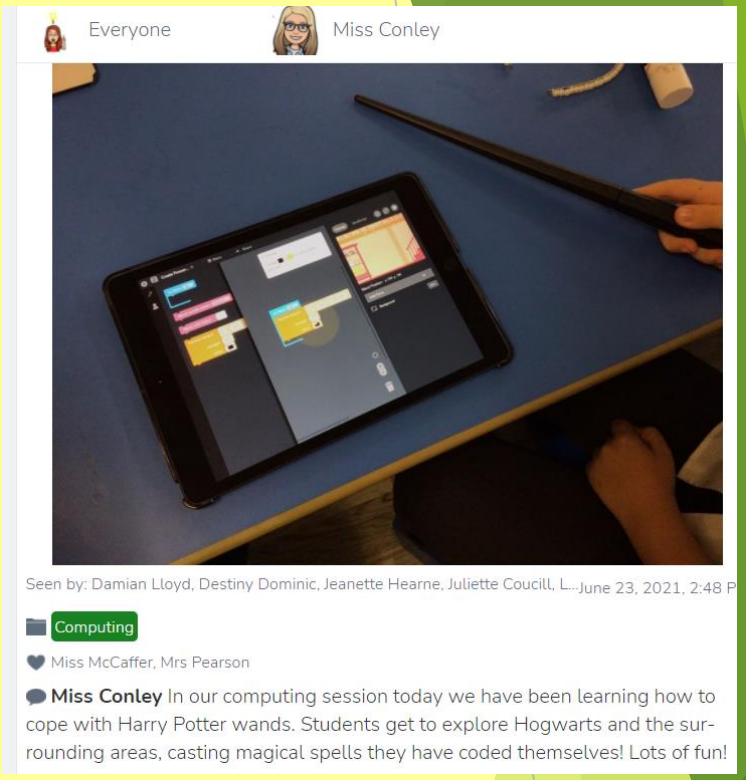
NEXT STEPS - 2021-2022 -

These next steps have already been started but are not yet embedded in practise

Assessment

Technola staff will upload to SeeSaw an overview of what they have done each lesson along with the learning challenge for that lesson. They will link this to the assessments, showing how each child has done. They will also complete a whole class feedback form for each lesson and upload this onto SeeSaw.

This will give all staff a lot clearer picture of what is being taught and how well children are doing in the subject.



Technola to teach classes 3-11 every week, every term.

This will enable all coverage of the curriculum to be provided by Technola

Technola to provide two after school clubs each week.

This will raise the profile of the subject across the school and school community.

Technola to provide training to staff during staff meetings.

This will up skill staff to feel more confident to use the computing skills the children have in other subjects.

NEXT STEPS

Create Online Safety Group

This will support the completion of the 360 Safe accreditation.

Whiteboard training for Support Staff

Once restrictions are eased and we can work together more closely, this training will help Support Staff get the most from their whiteboard and be more confident when using them during lessons.

STEM Day

A STEM day will be held next year in line with the National STEM Day. This will be whole school event to raise the profile of the subject and ignite enthusiasm and excitement about STEM.

Technola to provide more detailed medium term planning.

This will help all teachers to have a better understanding of what is being taught and when.