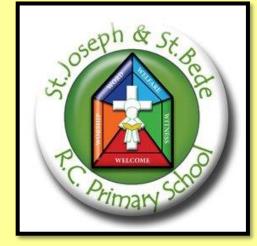
With Christ at the centre, our Dream is for greatness in our learning, to Believe in our unique talents, to be Guardians of life & creation and to Achieve a better world, by living life to the full.

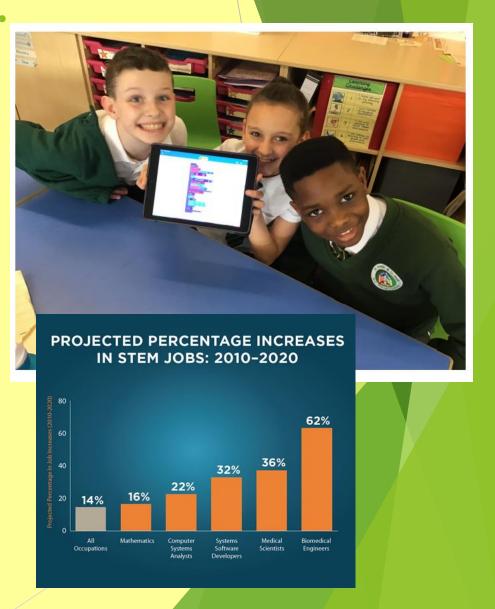


Computing

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



The St Joseph and St Bede Learning Journey J. 1 Ø () Continue your lifelong love of learning and Refine and perfect 1 чеа **7** Continue to make a positive contribution to British and Global Society Attend Crucial Crew Atten d the Robin the Sea sid Year 6 Produ Complet B ough High Revise for my e as YEA 6 Leðvers Avlands Evéning Gro Digital Literacy Special Project Women in Computi ng. Web Design and Research Research Research Students create a single page website that documen nts the history and Have a Learn Lessons from Auschwi tz with poetry Support the school's Open Day Make the pilgrimage with Jesus during Holy Week Robin Wood Meetings Support Become a HOUSE CAPTAIN careers and Aspirati on Day Christmas Computer Science Go, Robot! Physical Go, Robott Physical System Game Development L2 Students use the fully textual programming language introduced in the previous module to program a physical robot to play classic games such as Door curren Computer Science Go, Robot! Robot Arcade Students are introduced the concept of using code to control physical systems, they take on a weekly challenge that require them to code solutions that will help a robot Digital Literacy Creative Computing L2 and Safe Surfin' L2 Social Medla Posts. Students re-examine how to use the internet safely and respectfully; they create visual social posts and other print designs to promote what they have learnt around school. UK S2 Computer Science Hello, World, Video Game Development navigate various Computer Science Helio, World Mini App Build Challenge Students code miniature apps within an app: initiality, students are guided through the process, before being given more creative autonomy to develop n algorithm that incorprates multiple sensors. Digital Literacy Creative Computing L1 Movie Trailer Students capture video content to produce their own movie trailers. There trailers use robots as main characters, soldifying students' knowledge of the advanced hybrid graphical-textual programming Comput Science Hello, World Code Challen ges L3 Student s progress onto a hybrid graphica LK nultiple sensors. S2 textual program ming anguag e, they complet evisual challeng es that's develop and test their **CAT PSGEGRIS TSGEGRIS** their **CAT CAT CATCAT CAT CAT** Computer Science Hello, World Code Computer Science Helio, World Code Challenges L2 Students progress onto using graphical programming language in which the code is displayed separately from the route of the animated character, vusuitization and anticij Computer Science Sphero Junior L1 Students will take their first steps into the world actively controlling and programming robots. This module uses ripbots that the pupils will use to sole a variety of fun Animation Students use code to create animations. A multi-scene routine is produced. lization and anticip skills are develo Digital Literacy and ICT Digital Literacy and ICT Everyday Computing L2 and Safe Surfin' L2 Students to continue exploring everyday uses for computers, with a special focus on the internet and how to use it safety. Everyday Computing L1 Students explore everyday uses of computers, from taking photographs to typing lists, and everything in mans tel EYG 17 - Being Imaginative Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. KS Children select and use technology for particular purpose 1 ΕY FS Digital Literacy There's An App For That L1 Students begin by exploring the question, "What can computers do?" A new app is introduced each week that helps students learn how to interact with technology EYG 15 - Technology EYG 17 - Being Imaginative Children represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role-play and stories. Children recognise that a range of technology is used in places such as homes

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	Computer Science	E-Safety	
ne	Year 2	'Computing Unplugged'	'Algorithm of Awesome'		
	KS2	Computer Science	Robotics (Computer Science)	E-Safety	
		'Hello World'	'Go Robot!'		
	Year 3	Interactive Cards	Communications	'My Life Online	
	Year 4	Cake Factory	Robot Factory	(MYLO)'	
	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...

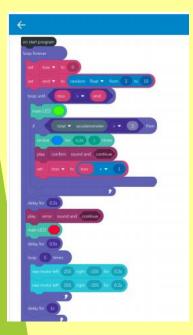
- Check in
- Sticky knowledge (key words)
- Introduce core skill and what type of computers it might be used in (eg. Loops in road crossings)
- Children are taught the skill
- Apply the skill to a larger challenge
- Check out to assess progress

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 ability
- 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

<u>EBI</u>

- 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?

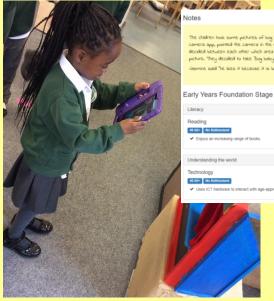
- We use Bee Bots, I pads, listening centre, whiteboards
- ► How we assess Observations through tapestry, teacher assessment

Notes

Early Years Foundation Stage

✓ Uses ICT hardware to interact with age-appropriate computer software.

Understanding the world Technology 40-60+ No Refinement



the children took some pictures of bog baby on the iPad, they selected the amera app, pointed the camera in the right direction and took the photo. They decided between each other which area they wanted to put Bog baby in to take a picture. They decided to take Bog baby into the dress up area to take photos. asmine said the likes it because it is blue like water.

Uses ICT hardware to interact with ane-appropriate computer software





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

In response to: ICT



Practical coding

- 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

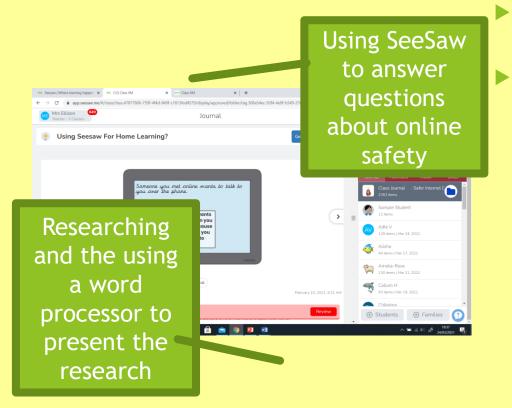


Coding

through

scratch

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

NEWS

FAKE

Creating an online safety poster

Fake news is a pie

How to spot FAKE news Today we found out how to spot fake news and scam types from fake links and opinions.

PIC.COLLAGE



Where are we? Online Safety

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



Rest Carlos Carl



0





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

仚

Mrs Ellison @sisbMrsEllison · 9 Feb

help keep children safe online 🕮 🙌!

#SaferInternetDay: hubs.ly/H0Ghpdg0

1] 1

online, #SaferInternetDay

0

An excellent way to keep up to date with how to keep your children safe

our FREE #OnlineSafety course for parents & carers empowers you to

FREE Online Safety Course for Parents & Carers

presented by Myleene Klass
Ages 7-11
Ages 11-14
Ages 14-18

0 5

1

Understand the risks that children may face at different ages the

National Online Safety @natonlinesafety · 9 Feb Developed by experts and delivered by the amazing @KlassMyleene.

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.

Level: 3.2

Mrs Ellison @sjsbMrsEllison 20 Jan Anothe fantastic guide from @natoniinesafety Remote Education 10 Top Tips for Children Definitely working a read in these current times. @stJosephStBede #sjsbesafety #onlinesafetysawy nationalonihesety.com/guides/10-top-.



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%



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.



Staff Development

8 responses

How confident do you feel in teaching Computing

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



Understanding the world

Technology

40-60+ No Refinement

Completes a simple program on a computer.



Seen by: Natalie Greenhalgh

Miss Keiley, Miss Bibby
 Miss Keiley Well done Daisy!
 Miss Bibby Well done! ⁽²⁾

🗘 Like 🗘 Comment 🎓

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."

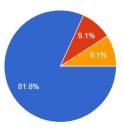
Layla "Go forwards just 1 then turn then forwards one."

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

Do you enjoy your lessons and usually feel you wish to learn more? 22 responses



A large proportion (91%) of children enjoy their lessons

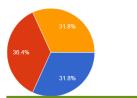
and want to learn more.

🔵 Yes, v	very often	
🕒 Usual	ly	
😑 Not v	ery often	
	At the end of the new?	e lesson or a unit do you know that you have made progress and learnt somethin
	22 responses	
	Yes	
	Yes	
	Yes.	
	No	
	Yes all the time	
	Sometimes	

Yes definitely No

ves sometimes

Do you get chance to talk about your own work with teachers and other pupils? 22 responses





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

22 responses That we have fun teacher and they make us do fun activetys What do you enjoy most about Computing? when you get to play the game That it is very fu Coding to make a robot move Playing game Don't like them Playing the games. We learn new things especially that are fur Different and fur It all It's fun

What do you enjoy most about Computing?

Learning new skills

Coding

I like the Harry Potter Wands and Crossy Road

Emilia is not a fan and gets easily distracted

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

Being on gadgets Learning new things Doing the words

Children enjoy the lessons and often describe them as 'fun'.

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 - 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.

NEXT STEPS - 2021-2022 -

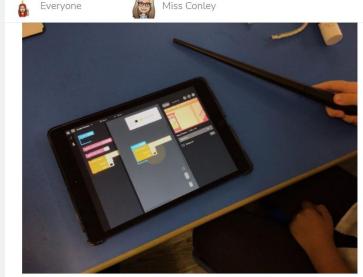
These next steps have already been started but are not yet embedded in practise

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.



Seen by: Damian Lloyd, Destiny Dominic, Jeanette Hearne, Juliette Coucill, L...June 23, 2021, 2:48 |

Computing

🖤 Miss McCaffer, Mrs Pearson

Miss Conley In our computing session today we have been learning how to cope with Harry Potter wands. Students get to explore Hogwarts and the surrounding areas, casting magical spells they have coded themselves! Lots of fun!

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.