

# BICT

(Business, IT and Computing Technology)

# Department Curriculum



## **BICT Department Statement of Intent**

**“Behold, they are one people, and they all have the same language. And this is what they began to do, and now nothing which they purpose to do will be impossible for them.” Genesis 11:6**



## **Aims of the BICT Department**

The department aims to ensure that students are taught and equipped with a range of skills and experiences which will ensure that they are ready for life beyond St Joseph's when the time comes for them to transition to their next adventure.

- The ultimate aim is that all students are able to use digital technology to support them in all areas of their lives, with confidence.
- Learners will have strong e-safety awareness and positive e-etiquette. They will be exposed to potential dangers and scenarios and be provided with a range of strategies and resources which they can use to support them, when necessary.
- In the modern world all individuals will require some degree of digital literacy within their everyday lives. The BICT department aims to ensure that all learners have exposure to a range of technology and experiences to allow them to grow in confidence and make use of their skills in an every changing environment.
- The skills used and developed should be transferrable so that it does not matter what system/app/software is being used, our young people are able to quickly and adeptly adapt.
- Learners have a balance of digital technology so that they have: knowledge of computer programming and have developed their computational thinking skills, questioning and understanding how systems work; understanding and experience of everyday software which is used extensively and generally in the worlds of further education and work; experience of more creative elements of the digital sector and the chance to develop and hone some of these skills.

## **BICT Department Overview of Intent**

### **Curriculum Intent – Year 7**

By the end of Year 7 our digital learners will...

#### **Subject Content**

- Have developed a good awareness and understanding of e-safety and be equipped with the necessary knowledge to keep themselves safe when online.
- Develop their digital literacy start working toward nationally recognised certification (iDEA awards: Bronze).
- Explore the office suite to support their ongoing development and knowledge which will be needed to enhance their learning journey throughout St Joseph’s and beyond.
- Develop computational thinking and problem solving, creating their own programs and debugging where appropriate.

### **Curriculum Intent – Year 8**

By the end of Year 8 our digital learners will...

#### **Subject Content**

- Build upon their qualifications by completing the Bronze iDEA award and working toward Silver certification.
- Explore different sides of IT including creative elements and airbrushing; consider why airbrushing is used in society and the morals/ethics surrounding this.
- Explore different career options for IT related fields and consider project management, creative and computer science related fields.
- Develop skills in CAD design and use software to design and develop their own ideas.
- Begin to use computational and abstract thinking to create their own programs with textual based programming languages.

### **Curriculum Intent – Year 9**

By the end of Year 9 or digital learners will...

#### **Subject Content**

<u>Creative iMedia</u>	<u>Business</u>	<u>Information Technologies</u>
<ul style="list-style-type: none"> <li>• learn about graphics and their properties – what makes them suitable for use in different situations.</li> <li>• Have developed their own skills in airbrushing and image manipulation.</li> <li>• analyse client briefs and be able to identify</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a basic understanding of business and implications and factors to consider for small businesses</li> <li>• Begin to develop an understanding of business finance and the calculations needed to be successful.</li> </ul>	<ul style="list-style-type: none"> <li>• develop an understanding and appreciation of what is project management and the requirements and expectations of each stage.</li> <li>• Have skills needed for database and spreadsheet creation/development.</li> </ul>

<p>requirements and target audiences.</p> <ul style="list-style-type: none"> <li>• Know about copyright legislation and other restrictions with online use.</li> <li>• Evaluate and criticise their own and others work – identifying potential further improvements.</li> </ul>	<ul style="list-style-type: none"> <li>• Start to practise extended answer techniques and answer questions in context of specific related scenario's</li> </ul>	<ul style="list-style-type: none"> <li>• Use various applications to develop business documents</li> </ul>
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**Year 10**

**Subject content...**

<ul style="list-style-type: none"> <li>• know about interactive, multimedia products – what are they, different types for different purposes etc.</li> <li>• the effect of technical aspects on interactive multimedia products i.e. bandwidth, latency, wired or wifi connections etc.</li> <li>• be able to design and implement their own interactive multimedia product incorporating a range of high level skills.</li> <li>• Understanding surrounding theory examination deepens and this is revisited often.</li> <li>• Sit the R081 exam.</li> </ul>	<ul style="list-style-type: none"> <li>• Use real world contexts and scenarios develop and deepen their understanding.</li> <li>• Study a range of business content including the economy and how to grow a business – factors which will affect this.</li> <li>• Be provided with opportunity to participate in an enterprise event which allows for the running of their own business.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop greater skills and knowledge of project management.</li> <li>• Put this knowledge in to practise by undertaking practice, guided assignments designed to prepare them for the controlled assessment.</li> <li>• Look at real world scenarios as to where IT can be used to help support and develop business systems.</li> <li>• Learn about and research malware, social engineering and hackers.</li> <li>• Interleave learning – revisit areas covered in Y9 to check for understanding and put in to practise.</li> </ul>
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**Year 11**

**Subject content...**

<ul style="list-style-type: none"> <li>• Consider the origins and history of comics</li> <li>• Research comics and characters including superheroes.</li> <li>• Interleave learning undertaken in the previous 2 years to complete the controlled assessment.</li> <li>• Design and develop their own multipage</li> </ul>	<ul style="list-style-type: none"> <li>• Use a range of real life scenarios and understanding to learn what is needed to develop the business.</li> <li>• Exam technique and use context within structured responses to fully prepare for the final exams.</li> <li>• Revisit areas of specification – including</li> </ul>	<ul style="list-style-type: none"> <li>• Use business documents skilfully to fully utilise the functionality and ensure a professional approach.</li> <li>• Undertake controlled assessment (20 hours).</li> <li>• Apply theory knowledge to controlled assessment</li> </ul>
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<p>comic strip, in line with the board set scenario and meeting the needs of the audience and client requirements.</p> <ul style="list-style-type: none"><li>• Revise and refresh exam content, practise exam technique to improve upon previous exam scores.</li></ul>	<p>calculations and formulas.</p> <ul style="list-style-type: none"><li>• Interleave learning – revisit areas covered in Y9 and Y10 to check for deep understanding.</li></ul>	<ul style="list-style-type: none"><li>• Interleave learning – revisit areas covered in Y9 and Y10 to check for understanding and put in to practise.</li></ul>
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## **SMSC in BICT**

### *Spiritual Development:*

The spiritual development of students within BICT is vital and ensures that they are able to develop and fully comprehend the importance of their part in a digital world. Students are encouraged to cover areas such as digital-interaction etiquette and how they can keep themselves and others safe, both physically and emotionally in today's world.

### *Moral Development:*

Within each area of the department students are expected to consider legislation such as copyright, discrimination law, computer misuse act and health and safety legislation. Students will be exposed to moral dilemmas and will need to explore the moral issues surrounding these laws and why there is need for such legislation within our society.

### *Social Development:*

Students are encouraged to consider their experience and effect on society through their use of digital technology. What impact can they have on the lives of others and how does their use of IT impact them. They will be required to think about the ever evolving world of technology and are exposed to different areas of IT related fields to ensure that they have as much exposure and insight as possible to the new careers and opportunities that are coming into existence.

### *Cultural Development:*

The digital divide has a huge effect on academic and socioeconomic development. Students are provided with opportunities

BICT contributes to our students' SMSC development through:

- ***E-safety and cyberbullying awareness***
- ***Airbrushing in our society – why?***
- ***CAD design (developments in rural areas – what are we losing?)***
- ***Legislation and why it is necessary***
- ***Appropriate digital communication with a range of audiences and within different contexts.***
- ***Cybersecurity and hacking – can it ever be ethical?***



As a Catholic school, Gospel Values are promoted alongside the Fundamental British Values.  
The Gospel Values are:

<b>Gospel Value</b>	<b>Location in Department Teaching</b>
Faithfulness and Integrity	E-safety principles
Dignity and Compassion	Cyberbullying awareness and airbrushing in our society
Humility and Gentleness	Cyberbullying awareness
Truth and Justice	Legislation and Laws
Forgiveness and Mercy	Legislation and Laws
Purity and Holiness	Airbrushing in our society
Tolerance and Peace	Digital communication with a range of audiences
Service and Sacrifice	Using ICT resources to support others



## **Literacy and BICT**

Literacy needs to be deliberately planned into a department's SOL in order to give it the time and priority it requires. Resources will need to be prepared in advance so that Literacy is an integral part of BICT teaching and learning in lessons and develops alongside knowledge, skills and understanding. These may include word banks, key vocabulary, books, magazines and leaflets, writing frames and worksheets and games.

Whenever it is appropriate literacy objectives should be built into the lesson along with subject specific objectives. Literacy can be developed in every lesson through activities such as emphasis on word work during questioning and mental start-up activities at the start of each lesson. Some topics will lend themselves more easily to literacy development than others. Such emphasis on the language of BICT will inevitably result in students being more able to articulate ideas in their own words.

Technical vocabulary is vitally important for the successful assessment of all BICT Key stage 4 pathways and students must be encouraged to use correct technical vocabulary at every occasion.

### *Key Areas of Literacy*

<p><b>Vocabulary</b></p> <p><b>Key issues</b>      Technical and specialist words                           Appropriate usage                           Correct spelling                           Understand meaning</p> <p><b>Common difficulties</b></p> <ul style="list-style-type: none"><li>❑ Time and lots repetition needed to ensure new words are internalised into working vocabulary and linked to appropriate concepts.</li><li>❑ Ordinary words with alternative meanings can be difficult as it causes cognitive conflict. There may be a precise scientific and an everyday meaning to the same word e.g. program,</li></ul> <p><b>Supporting strategies</b></p> <ul style="list-style-type: none"><li>❑ Introduce words using a multisensory approach e.g. orally, visually, kinaesthetically</li><li>❑ Use vocabulary frequently using open questions</li><li>❑ Use words in sentences to keep reflecting back</li><li>❑ Use models and picture to help visualise the word</li><li>❑ Use flash cards to test students understanding</li><li>❑ Ask students to explain using pictures to encourage language development</li><li>❑ Use visual clues e.g. hand signals</li></ul>	<p><b>Oracy</b></p> <p><b>Key issues</b>      Use language precisely                           Listen to others and respond by                           building on ideas and views</p> <p><b>Common difficulties</b></p> <ul style="list-style-type: none"><li>❑ Constant use and repetition are essential. Words which are not frequently used are easily forgotten</li><li>❑ Often little planned time in lessons to "talk"</li><li>❑ One word answers for fear of getting it wrong</li></ul> <p><b>Supporting Strategies</b></p> <ul style="list-style-type: none"><li>❑ Teacher model good use of technical vocabulary</li><li>❑ Use questions to review past knowledge and understanding, check understanding, encourage the learner to think and to practice the language</li><li>❑ Use a range of questioning strategies</li><li>❑ Allow students "thinking" time</li><li>❑ Use of Seneca learning to embed language and vocabulary</li><li>❑ Offer students challenge</li><li>❑ Use games to encourage meaningful peer group talk and embed new word and concepts</li><li>❑ Use small group discussion to develop student understanding through conversation in a less threatening atmosphere</li></ul>
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## Reading

**Key issues** Strategies to help reading for understanding  
Locating and using information  
Summarising  
Synthesise learning from

reading

### Common difficulties

- ❑ Children prefer to use interactive methods of discovering information e.g. Internet
- ❑ Limited range of text that can be offered to students
- ❑ Weak readers can lack the ability to scan and skim read
- ❑ Students prefer to copy chunks of text without checking their relevance
- ❑ Seating plan to seat weaker readers next to more able and encourage buddying.

### Supporting Strategies

- ❑ Encourage students to summarize lesson content in their own words – make notes

## Writing

**Key issues** Correct spelling and punctuation  
Follow grammatical conventions  
Organise work in a logical and coherent form

### Common difficulties

- ❑ Many students are reluctant writers
- ❑ Lack of understanding what they are being asked to write about
- ❑ Time pressure in lessons to get ideas or work down onto paper

### Supporting Strategies

- ❑ Use of technology to support s
- ❑ Use different types of text
- ❑ Get students to and spelling, grammar and look for key words and phrases
- ❑ Get students to criticise and improve on received text
- ❑ Encourage use of a variety of genre e.g. narrative, descriptive, persuasive, reports, imaginative when appropriate
- ❑ Use writing frames where appropriate, encouraging children to use it as a guide line and eventually manage without
- ❑ Encourage children to redraft work in lessons using teacher comments
- ❑ Develop skills in note taking by using short simple activities e.g. jot down key words, note observations on teachers demo
- ❑ Structure layouts for students where permitted and use practise materials beforehand to prepare students for assessments where scaffolding is not allowed.

## **ICT Department Structure**

The ICT department is made up

Mrs C Hazlehurst	Head of Department
Mr F Patel	Specialist teacher (RQT)
Mr D Slater	Specialist Teacher
Mr J Butler	Network manager
Mr R Blake	Technician

### *Curriculum Structure*

Students in Year 7 and Year 8 are follow a programme of study which aligns to the National Curriculum for Computer Science as well as developing essential digital literacy skills, needed in the modern wider world.

Each unit of work is.....

Year 7:

- E-Safety
- PC Basics
- Spreadsheets
- Databases
- HTML websites
- Scratch project

Year 8:

- E-Safety
- Small Basic Programming
- Python Programming
- Business skills
- CAD Design
- Artificial Intelligence

In Year 9 to 11 students can choose to study either Creative iMedia or Business in further detail.

An overview of the topics in the courses is shown below:

OCR Cambridge Nationals Level1/2 Creative iMedia

R081 – theory unit of work based around pre-production documents and the understanding of how and why these are used. Scenario driven study with questions designed around these. Assessment: Written paper 1 hour 15 minutes (assessment opportunity Jan/June annually – 1 resit allowed).

R082 – Creating computer graphics – study of computer graphics, uses and purpose, understanding of file types and resolution as well as practical skills in designing, creating and evaluating a solution for a theoretical client. Assessment: NEA under controlled conditions

R084 – Storytelling using comic strips – study of comic strips including the history and origins for Japanese, European and American comics. Focus on different genres and panel placements as well as comic content and character study etc. NEA is a project to create a solution for a theoretical client. Assessment: NEA under controlled conditions.

R087 – Interactive multimedia products – study of multimedia and elements which affect this i.e. bandwidth, cabled/wifi connections as well as design principles etc. NEA project is based upon theoretical client and a solution created for them, designed, created and evaluated by the candidate. Assessment: NEA under controlled conditions.

### **Pearson Edexcel GCSE Business**

This is a theoretical study of Business and it is divided in to two themes. The assessments can only be sat in one examination series and must be completed during the same academic year.

Theme 1 Investigating small business

- Topic 1.1 Enterprise and entrepreneurship
- Topic 1.2 Spotting a business opportunity
- Topic 1.3 Putting ideas into practice
- Topic 1.4 Making the business effective
- Topic 1.5 Understanding external influences on business

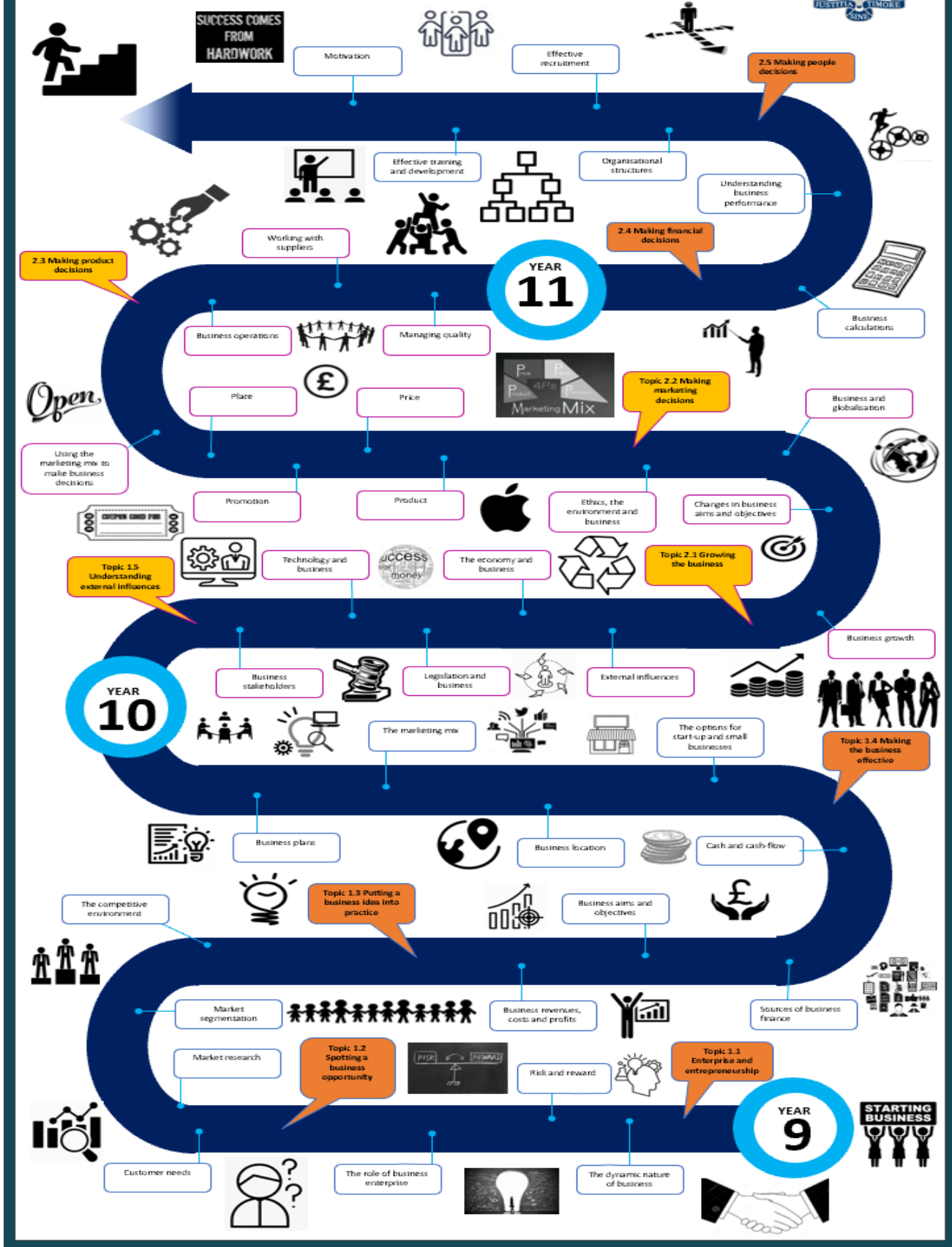
Assessment: Written exam paper 1 hour 30 minutes – June Year 11

Theme 2 Building a business

- Topic 2.1 Growing the business
- Topic 2.2 Making marketing decisions
- Topic 2.3 Making operational decisions
- Topic 2.4 Making financial decisions
- Topic 2.5 Making human resource decisions

Assessment: Written exam paper 1 hour 30 minutes – June Year 11

# Business GCSE Learning Journey



## **Assessment Principles**

The department aims to include both formative and summative assessment opportunities for students.

In Years 7 and Years 8 all students will receive immediate feedback on completion of iDEA badges. Each half term they will study a topic within BICT which is designed to enrich their experience and understanding within these areas. They will be assessed on these areas against an assessment rubric which will be available to them at the start of the topic.

Throughout Y9 students are provided with audio feedback on the work that they have undertaken. They are starting to use extended answer technique and the feedback will focus on this skill set. The aim is to broaden their knowledge and understanding of their chosen pathway.

In Years 10 and 11 students will be assessed against the relevant mark scheme of the course which they are studying. Assessments will be both formative and summative and controlled assessments will take place for Information Technologies and Creative iMedia throughout the duration of the courses. Controlled Assessments are carried out in designated classrooms and the work must not be removed from the school system either via email/digital upload or download to removable device. Students will not receive feedback on any part of controlled assessment work.

## **Enrichment and Extra-Curricular**

The BICT department offers weekly enrichment during P6 and also other activities and trips/visits as they arise from external providers.

BICT offer

- Computing Club
- Enterprise Club

Extra-curricular visit include

- External speakers

## **SEND Students and Curriculum Planning**

The Equality Act 2010 and Special Educational Needs and Disability (SEND) Regulations 2014 place certain duties on schools to ensure that students with SEND are able to take advantage of the same opportunities that other students have. To help students with special educational needs and disabilities (SEND) reach their full potential, they first must have equal access to the curriculum.

Students have access to a range of resources which have been designed to support their needs. Firstly, the department encourages the use of various software and tools and techniques which can be utilised to support SEND students, for example colour veil can be used in place of overlays, immersive reader is used to help those with language and reading needs, as well as spelling and grammar checks. We have speech to text recognition software which can be used for students, if necessary.

The assessment rubrics within the department have been designed to be fully inclusive and cover the range of abilities of all students, ensuring that everyone can see that they have achieved and made progress. Students are supported by teachers and teaching assistants (where appropriate) to achieve well and software such as AbTutor allows real time monitoring of students whilst they work, this allows immediate and timely feedback and correcting of misconceptions as they arise.

The assessment rubrics and SOL are scaffolded so that all children are taught knowledge and skills in a step-by-step structured format with many opportunities to revisit/recap and embed learning.

Various methods of formative assessment are used within the classroom including no hands up checking for understanding with targeted questioning designed to increase confidence/enhance and develop understanding. We regularly use online assessment tools such as Kahoot quizzes, these allow assessment in a fun and none-threatening environment.

Seating plans are designed strategically with children with SEND seated as priority. Specific needs i.e. visual/hearing impaired children will be seated toward the front of the classroom. Seating positions will be chosen to ensure that they are accessible for teaching assistants and teacher support when necessary. The students selected to sit either side of the SEND student are typically chosen as a learning buddy (HA to support) or as a safety friend to ensure that they feel safe in the environment and help to increase their confidence.

A wide range of resources are used to support SEND students within the department, these range from laminated and/or enlarged resources to allows easy demonstration, WAGOLL resources, digital literacy awards (different levels), scaffolded activities, text based helpsheets, video help resources.

Students in Years 9-11 are given the GCSE/Cambridge National mark schemes before commencement of assessments and these are discussed in detail so that all students know what is expected to achieve each of the levels. Students are supported to achieve their potential.



## **Consolidation Curriculum**

BICT has been impacted greatly by the COVID-19 pandemic. Students have had widely differing experiences based upon their level of access to technology/skills to access technology.

The department have worked to ensure that all students at St Joseph's have levels of digital literacy which mean that they are able to access learning and the whole school curriculum as fully as possible. Throughout remote learning episodes students were provided with live lessons and the planned curriculum was reviewed with SOL brought forward or delayed to best support learning at the time. Video instructions and support were recorded so that students could recap and revisit learning at later times if necessary and presentations were recorded to allow for this also. The class notebook facility within Microsoft Teams has been fully utilised for all students to allow for seamless transition from classroom to remote learning. Feedback was recorded directly on to the class notebook pages.

Consolidation was a main objective of curriculum planning upon returning to classroom based teaching and promoting positivity and re-establishing learning routines. The main focus in Years 7 and 8 has been practical hands-on elements with students undertaking programming SOL and seeing how algorithms are used to change programs in reality and experimenting with these.

IDEA awards are being used as homework tasks for Years 7 and 8 to ensure a broader level of digital literacy is developed, this will support students with learning across the whole school curriculum, as well as develop their digital resilience.

Students are encouraged to revisit materials which are stored online, within the class Teams. Resources such as Seneca learning are used with Years 9-11 to ensure revision and recap can take place.

Year 11 have scheduled intervention sessions with all students invited to attend, with some compulsory attendance for students requiring the additional support.