Biddulph High School Curriculum Intent

To deliver a broad and enriching curriculum through engaging and challenging lessons that provide a wide range of opportunities for all students to achieve their potential.

Students will all be prepared to take their next steps in a diverse and ever changing future ready to make a positive contribution to society.

Through a broad programme of extracurricular activities students will have the opportunities to showcase their talents and experience new challenges.

We value individuals and all that they can offer as well as supporting each other with kindness and empathy.

Curriculum Intent for Computing

"Those who can imagine anything, can create the impossible." Alan Turing

Our aim in the Computing department is centred around equipping students for their future, regardless of the individual pathway they may decide to choose, ensuring that students are prepared for the challenge of a rapidly developing and changing technological world. We will equip learners with the key technical skills to support their learning across the curricula, for future studies and ultimately for their chosen career pathway. We believe in delivering a mixture of both ICT and Computer Science in our curriculum to develop core employability skills, such as problem solving and critical thinking. We also develop "Internet Citizens" who understand the importance of being responsible in the digital world. Our curriculum is mapped from KS3 to KS5 ensuring that students have the opportunity to grow both their knowledge and technical skills. We will provide a variety of extra curricula activities including entering national competitions, providing opportunities for students to acquire further technical qualifications and conferences/ visits to inspire students to follow a future in technology.

All teachers will follow the schemes of work provided by the department. This will ensure that all students receive the same high-quality provision. All units of work will provide a clear outline of the knowledge and skills required and assessments will ensure that this knowledge has been retained and that skills can be evidenced.

Teachers will ensure that gaps are closed through regular monitoring within the classroom. DINT activities will allow for interleaving and recap of previous learning. Misconceptions will be identified through effective questioning and the regular inspection of student work.

Computing

Computing Long Term Overview						
Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
9						
BTEC Tech Award Level 1/2 in Digital IT						
10	Introduction and key skills for User Interface Design	Complete Pearson Set Assessment for Component 1	Introductions and key skills for collecting, presenting and interpreting data	Complete Pearson Set Assessment for Component 2	Component 3 Learning Aim A	Component 3 Learning Aim A
11	Component 3 Learning Aim B	Component 3 Learning Aim C	Component 3 Learning Aim D	Skills to prepare for work		

Computing

Computing: BTEC Digital IT Medium Term Overview

Year 10	*Autumn Term 1*	Unit Title: Introduction and key skills for User Interface Design	No of Lessons: 15
Overview		**Learners will develop their understanding of what makes an effective user interface and how to effectively manage a project. They will use this understanding to plan, design and create a user interface.**	
Assessment		Students will be assessed on the 4 main documents that will be required for the Pearson Set Assessment Task. These scores will be marked as per the marking grids. An assessment grade can be awarded based on the grade boundaries from the last series.	

Essential Knowledge (what must students know):	Essential Skills (what must students be able to demonstrate):	Lessons:
- Understand interface design for individuals and organisations - To identify and explain design principles - To identify and explain how to meet accessibility needs - Be able to review a user interface **Terminology:** User Interface, GUI Audience Needs: Accessibility; visual, hearing, speech, motor, cognitive, Skill level, Demographics Design Principles; colours, font, language, amount of information, layout, user perception, retaining attention, intuitive design. Planning Tools; task lists, storyboards, Gantt charts, constraints, milestones, tasks, subtasks, dependencies	**Students will be able to:** - Be able to use project planning techniques (e.g. Gantt Chart) - To plan and design detailed storyboards - To develop a user interface meeting user requirements and using design principles	1. Course introduction and research task on Ski Arena interfaces 2. Accessibility Needs of Users 3. Input/output and introduction to scenario 4. Project Proposal introduction 5. Project Proposal completion 6. Timescale introduction 7. Timescale completion 8. Storyboard vs Prototype 9. Storyboard – design principles 10. PowerPoint Skills introduction 11. PowerPoint creation 12. PowerPoint creation 13. Introduction to reviewing interfaces 14. Review of interface 15. Review of interface
Careers Links: Students will look at roles such as designers and learn project planning tools that would support future jobs in Computing.	**Enrichment:** NA	

Computing: BTEC Digital IT Medium Term Overview

Year 10	*Autumn Term 2*	Unit Title: Component 1 Pearson Set Assessment	No of Lessons: 14
Overview		This unit is completing the Pearson Set Assessment.	
Assessment		Students will be assessed using the marking grid and mark sheets for this Component. These scores will be entered and sample uploaded before Christmas in the January 2024 moderation window.	

Essential Knowledge (what must students know):	Essential Skills (what must students be able to demonstrate):	Lessons:
- Understand interface design for individuals and organisations - To identify and explain design principles - To identify and explain how to meet accessibility needs - Be able to review a user interface **Terminology:** User Interface, GUI Audience Needs: Accessibility; visual, hearing, speech, motor, cognitive, Skill level, Demographics Design Principles; colours, font, language, amount of information, layout, user perception, retaining attention, intuitive design. Planning Tools; task lists, storyboards, Gantt charts, constraints, milestones, tasks, subtasks, dependencies	**Students will be able to:** - Be able to use project planning techniques (e.g. Gantt Chart) - To plan and design detailed storyboards - To develop a user interface meeting user requirements and using design principles	1. Introduction to PSA Scenario 2. Completing Task 1A 3. Completing Task 1A 4. Completing Task 1B 5. Completing Task 1B 6. Completing Task 2 7. Completing Task 2 8. Completing Task 2 9. Completing Task 3 10. Completing Task 3 11. Completing Task 3 12. Completing Task 3 13. Completing Task 4 14. Completing Task 4
Careers Links: Students will look at roles such as designers and learn project planning tools that would support future jobs in Computing.	**Enrichment:** NA	

Computing

Computing: BTEC Digital IT Medium Term Overview

Year 10	Spring Term 1	Unit Title: Introduction and key skills for Collecting, Presenting and Interpreting Data	No of Lessons: 15
Overview		Learners will develop the characteristics of data and information and how they help organisations in decision making. They will use data manipulation methods to create dashboard to present and draw conclusions from information.	
Assessment		Students will be assessed on the 5 main documents that will be required for the Pearson Set Assessment Task. These scores will be marked as per the marking grids. An assessment grade can be awarded based on the grade boundaries from the last series.	

Essential Knowledge (what must students know):	Essential Skills (what must students be able to demonstrate):	Lessons:
- Understand how data is collected and used by organisations and its impact on individuals - Be able to draw conclusions and review data presentation methods. **Terminology:** Primary Data, Secondary data, Data Collection Features: size of sample, who, where, when, methods used Quality of information factors: source, accuracy, age, completeness, amount of detail, format, volume Threats: invasion of privacy, fraud, vulnerable groups, inaccurate data Formulae, Functions Findings: trends, patterns, possible errors Presentation Methods: misinterpretation, biased data, inaccurate conclusions	**Students will be able to:** - Be able to use relevant formulae and functions - Be able to create graphs and charts - Be able to create a dashboard using data manipulation tools	1. Introduction to component 2 / data collection methods 2. Theory lesson on features of data collection 3. Theory lesson on Quality of data 4. Theory lesson on threats to data/ privacy 5. PSA Task 1 6. PSA Task 1 **Key Spreadsheet Skills for PSA** *Subject to change once PSA released 7. Sweetshop Task 8. Scooter Task Using Booksales PSA to guide lessons May 2022 9. Importing data &Formatting & conditional Formatting 10. Vlookup 11. Sum/ Sumif/ average/ averageif 12. Count/countif / percentages 13. Data validation 14. PSA Task 2 formatting 15. PSA Task 2 formatting / formulas
Careers Links: Link to jobs that use spreadsheets	**Enrichment:** NA	

Computing: BTEC Digital IT Medium Term Overview

Year 10	*Spring Term 2*	Unit Title: Component 2 Pearson Set Assessment	No of Lessons: 14
Overview		This unit is completing the Pearson Set Assessment.	
Assessment		Students will be assessed using the marking grid and mark sheets for this Component. These scores will be entered and sample uploaded before May in the Summer 2025 moderation window.	

Essential Knowledge (what must students know):	Essential Skills (what must students be able to demonstrate):	Lessons:
- Understand how data is collected and used by organisations and its impact on individuals - Be able to draw conclusions and review data presentation methods. **Terminology:** Primary Data, Secondary data, Data Collection Features: size of sample, who, where, when, methods used Quality of information factors: source, accuracy, age, completeness, amount of detail, format, volume Threats: invasion of privacy, fraud, vulnerable groups, inaccurate data Formulae, Functions Findings: trends, patterns, possible errors Presentation Methods: misinterpretation, biased data, inaccurate conclusions	**Students will be able to:** - Be able to use relevant formulae and functions - Be able to create graphs and charts - Be able to create a dashboard using data manipulation tools	1. Complete Task 2A 2. Complete Task 2A 3. Theory on graphs/ charts/ annotations 4. Theory on pivot charts/ pivot tables 5. BookSales Dashboard create 6. Completing Task 2B 7. Completing Task 2B 8. Theory on errors/ patterns/trends 9. Completing Task 3A 10. Completing Task 3A 11. Theory on presentation methods and impact 12. Completing Task 3B 13. Completing Task 3B 14. Catch up! (NOTE: This goes up to 22nd April – week to collect sample. Upload due by 1st May 2024)
Careers Links: Students will look at roles such as designers and learn project planning tools that would support future jobs in Computing.	**Enrichment:** NA	

Computing: BTEC Digital IT Medium Term Overview

Year 10	*Summer Term*	Unit Title: Component 3	No of Lessons: 25
Overview	Learners will explore how organisations use digital systems and the wider implications associated with their use.		
Assessment	Do It Now Task – mini tests. End of topic assessment.		

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Essential Knowledge (what must students know):
- Explain the impact of modern technologies
- Explain threats to data
- Explain prevention and management of threats to data
- Explain cyber security policies

Terminology:
Communication: Ad hoc, open wifi, personal hotspot
Cloud storage
Cloud Computing
Modern Teams
External Threats to data
Internal Threats to data
Impacts of security breaches
Management of threats to data

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Essential Skills (what must students be able to demonstrate):
Students will be able to:
- How a network is set up
- Explain answers in a scenario
- Analyse benefits and drawbacks
- Reach conclusions

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1. Why systems are attacked
2. Externals threats
3. Internal threats
4. User access restrictions
5. Firewalls
6. Device hardening / encryption
7. Improving system weaknesses
8. Security Policies
9. Passwords
10. Policies
11. Actions to take after attack

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Careers Links:
Students will look at roles such as designers and learn project planning tools that would support future jobs in Computing.

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Enrichment:
NA

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Computing: BTEC Digital IT Medium Term Overview

Year 11	*Autumn Term 1*	Unit Title: Component 3	No of Lessons: 25
Overview	Learners will explore how organisations use digital systems and the wider implications associated with their use.		
Assessment	Do It Now Task – mini tests. End of topic assessment.		

Essential Knowledge (what must students know):	**Essential Skills (what must students be able to demonstrate):**	
- Explain Communication technologies - Explain the features of cloud computing and cloud storage - Explain how technologies are used to manage teams - Explain how to technology is used in order to communicate with stakeholders effectively - Understand the positives and negatives that technology has on stakeholders and the community **Terminology:** Communication: Ad hoc, open wifi, personal hotspot Cloud storage Cloud Computing Remote working Collaborative technology	**Students will be able to:** - Explain answers in a scenario - Analyse benefits and drawbacks - Reach conclusions	1. Communication technologies 2. Cloud storage 3. Cloud Computing 4. Using cloud and traditional systems together 5. Choosing cloud technologies 6. Maintenance and performance set up 7. Collaborative technologies 8. Managing teams 9. Communication with stakeholders 10. Accessibility and inclusivity 11. Impact of technology on organisations 12. How technology impacts the way organisations operate 13. Impact of technology on individuals 14. Mock paper for LAA/LAB
Careers Links: Students will look at roles such as designers and learn project planning tools that would support future jobs in Computing.	**Enrichment:** NA	

Year 11	*Autumn Term 2*	Unit Title: Component 3	No of Lessons: 25
Overview	Learners will explore how organisations use digital systems and the wider implications associated with their use.		
Assessment	Do It Now Task – mini tests. End of topic assessment.		

Essential Knowledge (what must students know):	**Essential Skills (what must students be able to demonstrate):**	1. Sharing data
• Understand the wider implications of digital systems and their use. • Understand how legislation covering data protection, computer crimes and intellectual property has an impact on the way that organisations and individuals use digital systems and data. • Understand the procedures that organisations must follow in order to conform to legal requirements and professional guidelines. **Terminology:** Neutrality Legislation AUP Data Interllectual property	**Students will be able to:** • How to apply laws • Explain answers in a scenario • Analyse benefits and drawbacks • Reach conclusions	2. The impact of technology on the environment 3. Equal access to information and services 4. Legal requirements and professional services 5. Net neutrality 6. Acceptable use policies 7. Data protection principles 8. Data and the use of the internet 9. Intellectual property 10. The criminal use of computer systems
Careers Links: Students will look at roles such as cyber crime professionals and lawyers.	**Enrichment:** NA	

Year 11	*Spring Term 1*	Unit Title: Component 3	No of Lessons: 25
Overview		Learners will explore how organisations use digital systems and the wider implications associated with their use.	
Assessment		Do It Now Task – mini tests. End of topic assessment.	

Essential Knowledge (what must students know): • Learners should be able to interpret and use standard conventions to combine diagrammatical and written information to express an understanding of concepts. **Terminology:** Flow charts Input Output Table	Essential Skills (what must students be able to demonstrate): **Students will be able to:** • How a network is set up • Explain answers in a scenario • Analyse benefits and drawbacks • Reach conclusions	1. Information and data flow diagrams 2. Flow charts 3. System diagrams 4. Tables and written information 5. Review of Learning Aim A 6. Review of Learning Aim B 7. Review of Learning Aim C 8. External Examination.
Careers Links: Students will look at roles such as designers and learn project planning tools that would support future jobs in Computing.	**Enrichment:** NA	

Year 11	*Spring Term 2*	Unit Title: Skills for work	No of Lessons: 25
Overview		**Learners will begin to look at the documents and skills required when beginning to work.**	
Assessment		Creation of documents for application process and mock interview.	

Essential Knowledge (what must students know): • Learners should be able to create effective documents for the recruitment process and gain an understanding into what may be required of them when they apply for a job. **Terminology:** CV Covering Letter Soft Skills	Essential Skills (what must students be able to demonstrate): **Students will be able to:** • Understand the recruitment process • Create their CV • Write an effective covering letter • Know where to find job vacancies	1. What is included in a CV and why are they used 2. Creating a CV 3. Different methods of applying for a job 4. Creating a covering letter 5. Completing an application form 6. How businesses advertise vacancies 7. Skills required in the workplace 8. Searching for a job

Interview Job Centre Assessment Centre		9. Different types of interview questions 10. Top tips for interviews 11. Mock Interview 12. Skills Audit
Careers Links: Links to recruitment and how to prepare for interviews and selection processes	**Enrichment:** NA	