# YEAR 7 COMPUTING

**Units taught:**

| Autumn Term | Spring Term | Summer Term |
|---|---|---|
| Understanding Computers | Networks | Programming Constructs |
| Computational Thinking 1 | eSafety | Computational Thinking 2 |

**Main skills developed:**

- An understanding of key parts of a computer system.
- How to be a safe and responsible digital citizen.
- An understanding of computational thinking.
- How the internet works.
- How to solve problems using programming?

**How parents can help to support their child's learning:**

Encourage practicing the skills they learn at school with particular attention to learning to program in different languages by downloading and installing the relevant software which is freely available at no charge. Students will be given the links to the sites where they can find the software for free.

Students will be set homework activities for longer projects which require work to be produced and used in the following lessons.

**The following websites can help your child's learning:**

https://www.bbc.co.uk/bitesize/subjects/zvc9q6f

https://scratch.mit.edu/

https://senecalearning.com/en-GB/

**Extra-Curricular opportunities:**

Within Y7 Computing we provide homework drop in sessions at break and lunchtime.

**SMSC & British Values:**

Within the Year 7 curriculum we cover the British Value 'Rule of Law' when teaching internet safety. Think links to the 'Social' and 'Moral' strands of SMSC, students are taught how to protect themselves and others when communicating online learning how to report concerns and how to be a responsible digital citizen.

**Career Opportunities:**

- Software Engineer
- Computer Games Developer
- Cyber Crime Officer

# YEAR 8 COMPUTING

**Units taught:**

| Autumn Term | Spring Term | Summer Term |
|---|---|---|
| Data Representation | Issues and Impacts | Computational Thinking |
| Understanding Computers | The Internet | Understanding Computers |
| | Programming | |

**Main skills developed:**

- An understanding of how a computer uses binary.
- How and why key programming concepts are used.
- How to program in a high level programming language.
- An understanding of computational thinking.
- An understanding of key parts of a computer system.

**How parents can help to support their child's learning:**

Encourage practicing the skills they learn at school with particular attention to learning to program in different languages by downloading and installing the relevant software which is freely available at no charge.  Students will be given the links to the sites where they can find the software for free.

Students will be set homework activities for longer projects which require work to be produced and used in the following lessons.

**The following websites can help your child's learning:**

https://www.bbc.co.uk/bitesize/subjects/zvc9q6f

https://www.python.org/

https://www.codecademy.com/

**Extra-Curricular opportunities:**

Within Y8 Computing we provide homework drop in sessions at break and lunchtime.

**SMSC & British Values:**

Within the Year 8 curriculum we cover the British Value 'Rule of Law' when teaching the internet with direct reference to legislation used when addressing the misuse of computers. This links to the 'Social' and 'Moral' strands of SMSC, students are taught how to use software to prevent unauthorised access to computer systems. It also addresses the 'Cultural' issues associated with the increased use of technology and impacts of cybercrime.

**Career Opportunities:**

- Software Developer
- Specialist Investigator (Dark Web)
- Ethical Hacker

# YEAR 9 COMPUTING

**Units taught:**

| Autumn Term | Spring Term | Summer Term |
|---|---|---|
| The Bigger Picture<br>Computational Thinking<br>Programming Constructs | Networks and Communication<br>Boolean Logic<br>Modelling and Simulation | Issues and Impacts<br>Computer Hardware<br>Data Representation |

**Main skills developed:**

Computer Science students at Bridlington School develop knowledge and understanding of how technology can be used to help proactively with current issues that impact on modern society, preparing them for their next steps in today's global world. Students will develop transferable skills for progression to higher education. We teach the 'underpinning' concepts, which are useful in many subjects, for example mathematics, science, and engineering. The rigorous approach to the subject will facilitate a smooth transition to the next level of study.

**How parents can help to support their child's learning:**

Encourage practicing the skills they learn at school with particular attention to learning to program in different languages by downloading and installing the relevant software which is freely available at no charge. Students will be given the links to the sites where they can find the software for free.

Students will be set homework activities for longer projects which require work to be produced and used in the following lessons.

**The following websites can help your child's learning:**

https://www.bbc.co.uk/bitesize/subjects/zvc9q6f

https://www.python.org/

https://www.codecademy.com/

**Extra-Curricular opportunities:**

Within Y8 Computing we provide homework drop in sessions at break and lunchtime.

**SMSC & British Values:**

When studying issues and impacts students look at wider societal issues such as the digital divide and the effects of technology on the environment.

**Career Opportunities:**

- Web Developer
- Software Engineer
- IT Technician
- IT Customer Support Technician
- Service Desk Analyst

# Year 10 Computing

**Units taught:**

| Autumn Term | Spring Term | Summer Term |
|---|---|---|
| Programming Constructs 1 | Programming Constructs 2 | Programming Constructs 3 |
| Data Representation | Computer Systems | Threats to Systems |
| | Software | Networking |

**Main skills developed:**

Computer Science students at Bridlington School develop knowledge and understanding of how technology can be used to help proactively with current issues that impact on modern

society, preparing them for their next steps in today's global world. Students will develop transferable skills for progression to higher education. We teach the 'underpinning' concepts, which are useful in many subjects, for example mathematics, science, and engineering. The rigorous approach to the subject will facilitate a smooth transition to the next level of study.

**How parents can help to support their child's learning:**

Encourage practicing the skills they learn at school with particular attention to learning to program in different languages by downloading and installing the relevant software which is freely available at no charge.  Students will be given the links to the sites where they can find the software for free.

Students will be set homework activities for longer projects which require work to be produced and used in the following lessons.

**The following websites can help your child's learning:**

https://www.bbc.co.uk/bitesize/examspecs/zdqy7nb

https://qualifications.pearson.com/en/qualifications/edexcel-gcses/computer-science-2020.html

https://senecalearning.com/en-GB/

https://www.youtube.com/channel/UC0HzEBLlJxlrwBAHJ5S9JQg

**Extra-Curricular opportunities:**

After school revision sessions on a Friday 2.30-3.30pm

**SMSC & British Values:**

When studying threats to systems students consider the 'Rule of Law' as well as 'Social' and 'Moral' issued linked to threats associated with using computer systems.

**Career Opportunities:**

- Network Engineer
- Fabricator
- Software Engineer

# YEAR 11 COMPUTING

**Units taught:**

| Autumn Term | Spring Term | Summer Term |
|---|---|---|
| Programming Constructs 4 | Programming Constructs 5 | Examination |
| The Internet | Images | |
| Binary | AI | |
| The Environment | Privacy | |

**Main skills developed:**

Computer Science students at Bridlington School develop knowledge and understanding of how technology can be used to help proactively with current issues that impact on modern
society, preparing them for their next steps in today's global world. Students will develop transferable skills for progression to higher education. We teach the 'underpinning' concepts, which are useful in many subjects, for example mathematics, science, and engineering. The rigorous approach to the subject will facilitate a smooth transition to the next level of study.

**How parents can help to support their child's learning:**

Encourage practicing the skills they learn at school with particular attention to learning to program in different languages by downloading and installing the relevant software which is freely available at no charge. Students will be given the links to the sites where they can find the software for free.

Students will be set homework activities for longer projects which require work to be produced and used in the following lessons.

**The following websites can help your child's learning:**

https://www.bbc.co.uk/bitesize/examspecs/zdqy7nb

https://qualifications.pearson.com/en/qualifications/edexcel-gcses/computer-science-2020.html

https://senecalearning.com/en-GB/

https://www.youtube.com/channel/UC0HzEBLlJxlrwBAHJ5S9JQg

**Extra-Curricular opportunities:**

After school revision sessions on a Friday 2.30-3.30pm

**SMSC & British Values:**

When studying the environment students consider the impacts of the digital divide on society as well as the moral impact of the manufacturing and recycling process associated with technology. When studying Artificial Intelligence students look at the way the world is changing and what the effects AI is having.

**Career Opportunities:**

- Robotics Engineer
- Research Associate in AI
- Software Manager