Reading in Computing

What does it mean to be a proficient reader in Computing at Broughton High School?

BROUGHTON
HIGH SCHOOL
Achieving Together

DISTINCTIVE FEATURES

Computing is packed with **complex ideas**, and **technical vocabulary**, which need to be learned and understood, in order to communicate effectively and ask relevant questions.

Analytical thinking requires students to think critically about the information they read, identify key points, and evaluate the logic and evidence to support explanations. Knowledge gained from reading can be used to **solve technical problems**, use **algorithms** or engage in **programming** tasks.

Reading code is a key feature in Computer Science. Like human languages, code has precise **syntax requirements**, and some words have specific purposes in the code. Syntax and logic errors need to be identified by carefully reading through lines of code.

In code, words are often Americanised (such as ‘color’), which requires **contextual understanding** and explanation.

Students are introduced to **research techniques**, such as finding reliable sources, navigating websites, and using precise search terms to learn more about topics.

DEMANDS AND STRATEGIES

- **Skimming & Scanning**: Students skim through texts to get a sense of the content and scan for the information they need. This skill is valuable when searching for key words or specific details in coding instructions, technical documentation or websites.
- **Active Reading**: Students actively engage with the text while reading. They can highlight or underline important information, or write notes in the margins. This helps with comprehension and retention.
- **Chunking**: Complex texts are broken into smaller, manageable chunks. Students read a section, pausing to reflect, and summarise the main ideas before moving on. This helps with understanding complex programming concepts or algorithms
- **Vocabulary Building**: Students create a list of key terms and their definitions. Students refer to the list while reading technical texts to enhance understanding
- **Contextualising**: Students connect reading material to real-world examples or their experiences. This can make abstract concepts relatable and easier to understand.
- **Problem-Solving Reading**: Students approach reading as a problem-solving activity. For example, when facing a programming challenge or coding error, they read relevant documentation or forums to find solutions. This cultivates critical thinking and resourcefulness.
- **Visualisation**: Students visualise concepts, algorithms, or data structures as they read. Drawing diagrams, flowcharts, or mind maps can help them grasp abstract ideas and reinforce their understanding.
- **Collaboration**: Pair or group discussions, and paired programming encourages students to share interpretations, ask questions, and help each other. This fosters a supportive learning environment and exposes students to different perspectives.
- **Reflective Reading**: Students reflect on what they've read after completing a section or an article. They can summarise the main points, ask questions, or identify areas that need further clarification. This helps consolidate learning and identify areas for improvement.

TEXTS

- Websites
- Textbooks
- Code and algorithms
- Articles
- Forums
- News
- Computing books
- Instructions
- Worksheets
- Flow chart diagrams
- Graphs and charts
- Diagrams

DISCIPLINARY LITERACY

CULTURAL CAPITAL

Students are exposed to diverse perspectives, technological advancements, and historical context, enabling them to develop a broader understanding of the field and its impact on society.

By reading about the contributions of different cultures, the evolution of computing technologies, and the ethical considerations surrounding them, students acquire a deeper appreciation for the multifaceted nature of computer science and its intersection with cultural, social, and ethical issues.

INFERRING

VISUALISING

SUMMARISING

PREDICTING

DETERMINING IMPORTANCE

QUESTIONING

MAKING CONNECTIONS

SYNTHESISING

SKIMMING

SCANNING

CLOSE READING

TEACHER READS ALOUD

STUDENTS READ ALOUD

INDEPENDENT READING