OCR
Oxford Cambridge and RSA

Computing:
Application Development

Alternative Academic Qualification

Introduction

The AAQ in Computing course is an ideal way to continue developing your knowledge and skills after GCSE computer science or IT.

The next few slides provide an overview of the course. Read through them and then complete the Q&A section.

You then have a series of tasks to work through to prepare you for studying Computing in Year 12.

Grading

AAQ	A-Level Equivalent	UCAS Points
Distinction *	A*	56
Distinction	A	48
Merit	C	32
Pass	E	12

Course breakdown

F160 *Fundamentals of application development (exam)*

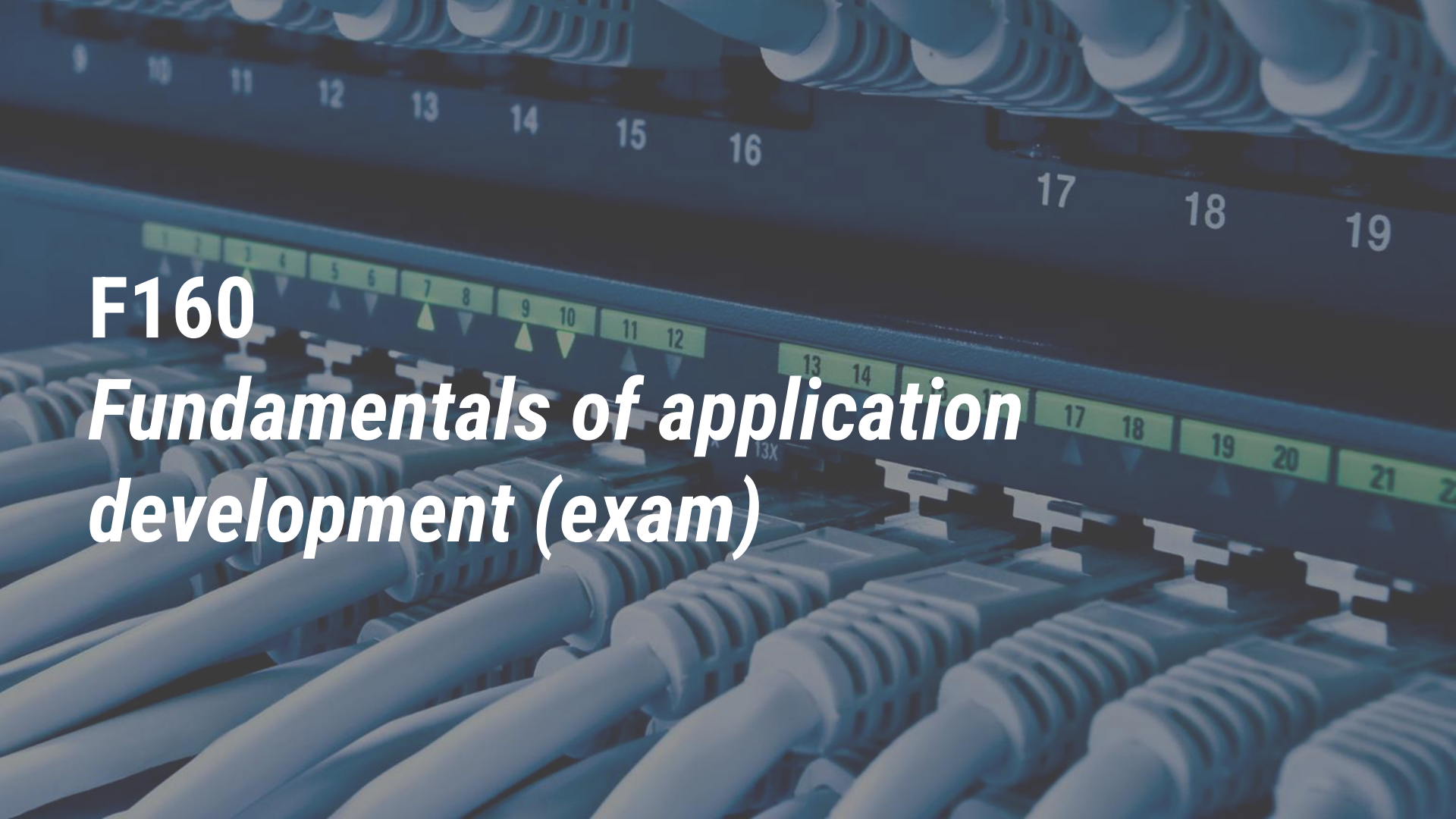
F161 *Developing Application software (exam)*

F162 *Designing and communicating UX / UI solutions (NEA)*

F163 *Game development (NEA)*

F164 *Website development (NEA)*

Click here for the specification



F160
Fundamentals of application development (exam)

F160 *Fundamentals of application development (exam)*

In this unit you will learn about the stages that developers go through to produce a working software application, how developers meet requirements, and the design features which make applications intuitive for users.

Topics include:

1. Types of software used in application design
2. Software development models
3. Planning application development projects
4. Application design scoping
5. Human computer interface and interaction
6. Job roles and skills


F161
Developing Application software (exam)

F161 *Developing Application software (exam)*

In this unit, you'll explore how applications are developed for different platforms, how data flows and is secured, and how apps are deployed, installed, and maintained.

Topics include:

1. Application software considerations
2. Data and flow in application software
3. API and protocols
4. Application software security
5. Operational considerations
6. Legal considerations

F162
Designing and communicating UX / UI solutions (NEA)

162 *Designing and communicating UX / UI solutions (NEA)*

In this unit you will learn the principles of UX/UI design and what makes an interface easy to use. You will learn tools and techniques to plan UX/UI solutions and how to design high-fidelity prototypes of UX/UI solutions. You will also learn how to communicate effectively with clients.

Topics include:

1. Principles of UX and UI design
2. Plan UX/UI solutions
3. Design UX/UI solutions
4. Communicate UX/UI solutions
5. Review and improve UX/UI solutions


F163
Game Development (NEA)

F163 *Game Development (NEA)*

In this unit you will learn how types and genres of digital games and their characteristics affect game design. You will then learn how to plan, design, create, and test game prototypes.

Topics include:

1. Game design
2. Plan and design high-fidelity game prototypes
3. Create high-fidelity game prototypes
4. Test high-fidelity game prototypes
5. Review and improve high-fidelity game prototypes

F164
Website Development (NEA)

F164 *Web Development*

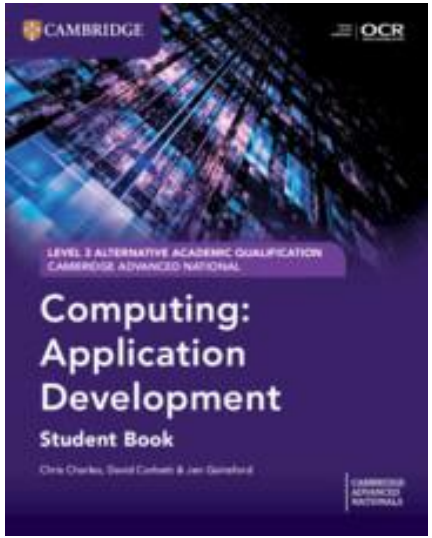
In this unit you will learn about website principles and the components of web pages. You will then learn how to plan, design, create, and test website prototypes that can be viewed on a range of devices.

Topics include:

1. Fundamentals of website development
2. Plan and design high-fidelity website prototypes
3. Create high-fidelity website prototypes
4. Test high-fidelity website prototypes
5. Review and improve the effectiveness of high-fidelity website prototypes

Resources

Textbook



Cambridge Advanced National (AAQ) in Computing: Application Development Student Book

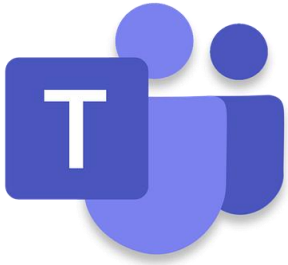
Chris Charles, David Corbett, Jen Gainsford

ISBN: 9781009817134

These are available in the classroom.

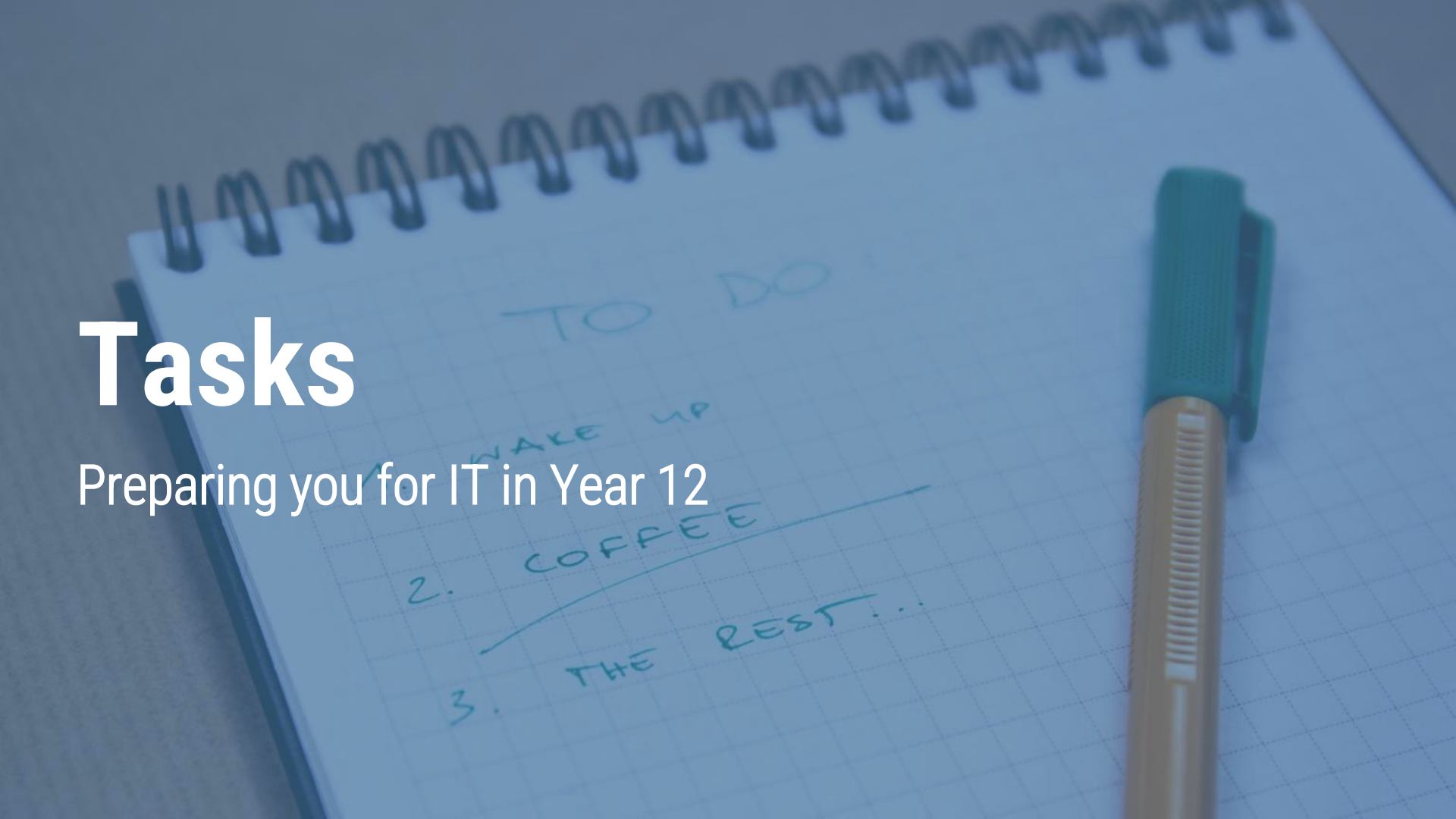
If you want your own copy you can purchase one here.

Resources



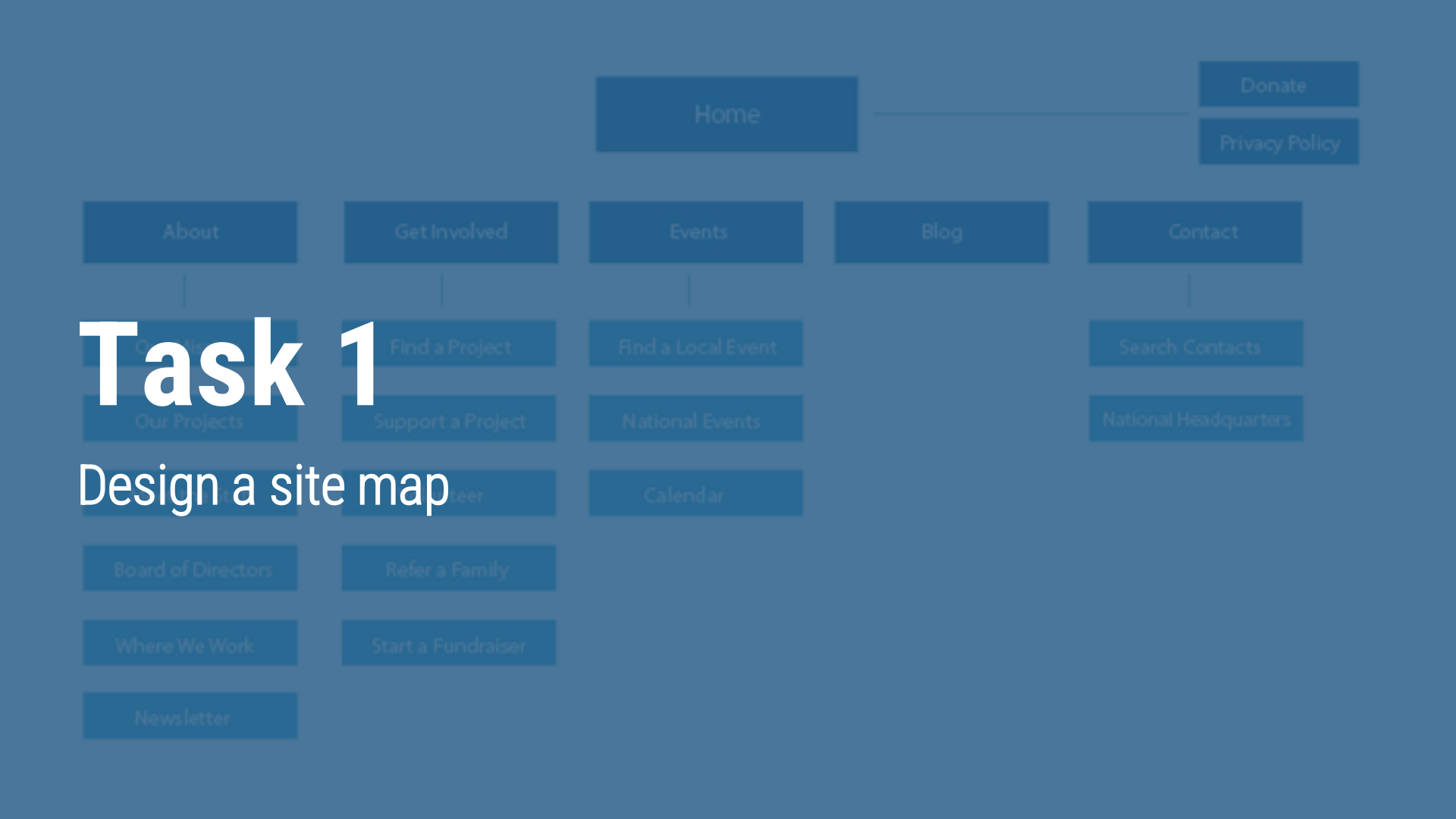
Teams

All digital resources for the course will be provided on Teams



Tasks

Preparing you for IT in Year 12



Task 1

Design a site map

Task 1

Sitemap

You're going to create a sitemap for bushfield.co.uk

You don't need to map the entire site, but you should aim to include at least 15 web pages.

Start by watching the video on the next slide to see how a real web designer uses sitemaps.

What is a site map?

Skip to 3:50 to see Charli create a sitemap to plan her website.

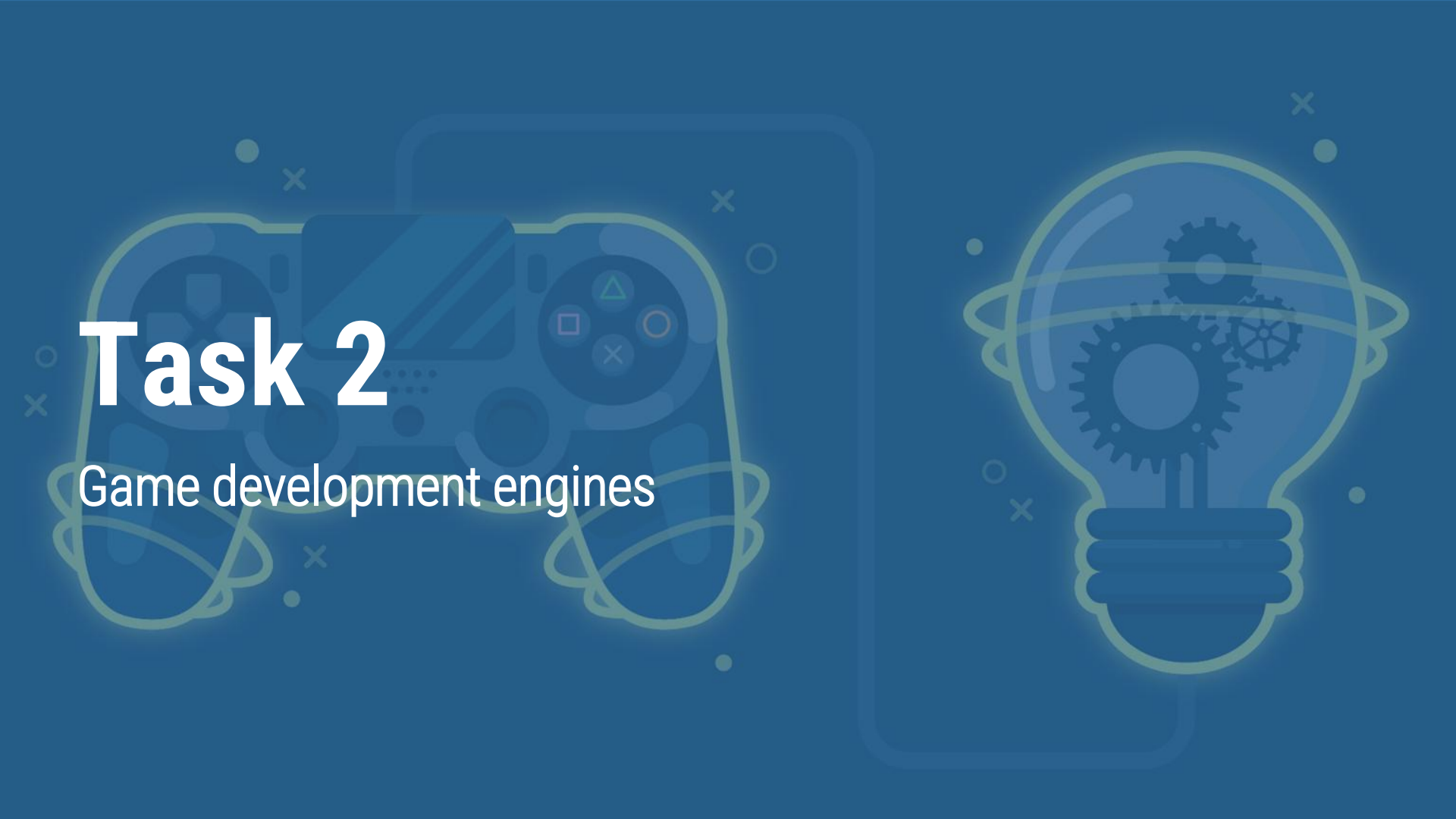
Task 1

Create a sitemap for bushfield.co.uk

Click the diagram to open the editor.

Continue adding bullet points to extend the sitemap.

You can delete this box.



Task 2

Game development engines

Task 2

In this task you are going to explore how modern games are created using game engines.

Watch the video on the next slide and create a mind map of their key features.

What is a game engine?

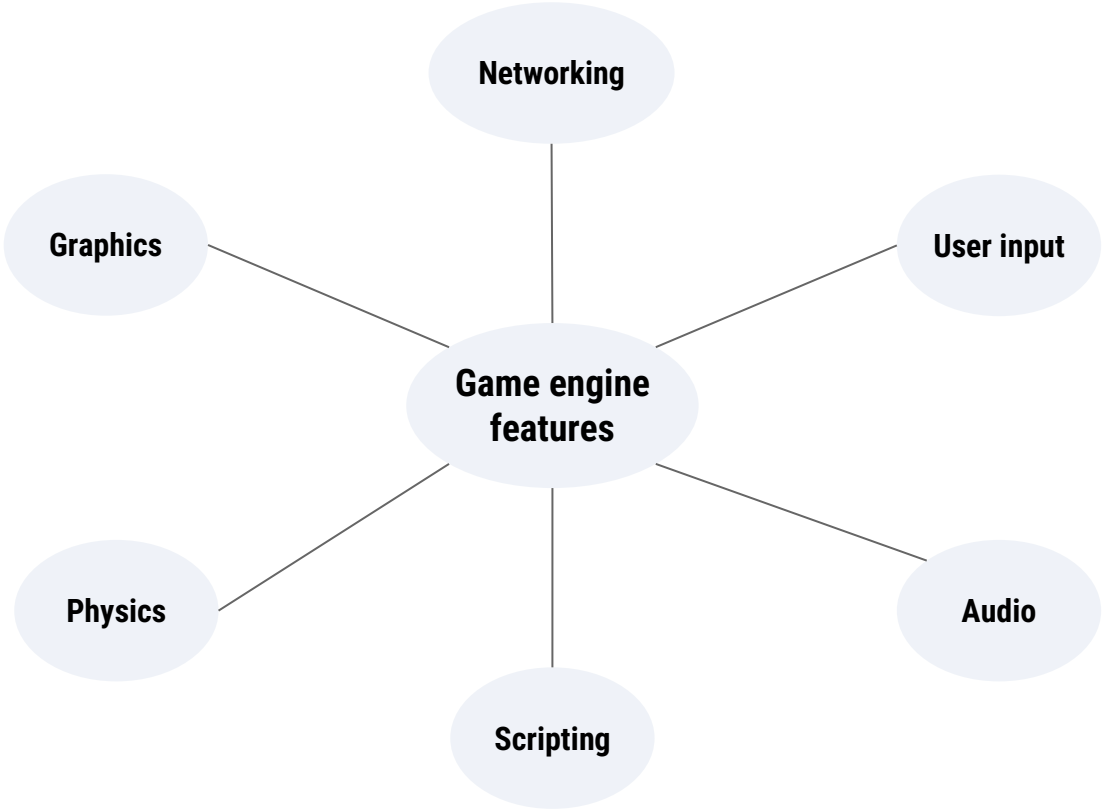
Watch the video and use the next slide to create a mind map of the key features

Task 2

Watch the video and makes notes around each of the bubbles.

Your font should be no larger than 10.

You can delete this box.



Task 3

Research

Effective research

Careful reading is the skill of closely reading a text to gain a deeper understanding. Without careful reading valuable information can easily be overlooked or misunderstood.

Depending on the text and the subject, careful reading allows you to find and learn keywords and terminology; understand concepts and ideas; appreciate opinions and perspectives and make judgements about reliability, authenticity and bias.

In computing the skill of careful reading is essential when carrying out research using technical articles.

Research checklist

Research will often look like this:

1. Read once to gain a general overview of the text
2. Re-read complex parts and look up unfamiliar words or terms
3. Highlight keywords and information (typically less than 10% of the text and not more than 20%)
4. Summarise the information in a condensed format such as a mind map or bulleted list

Highlighting web pages

The quickest way to highlight information from a website is to copy and paste the text it into Word or OneNote.

Alternatively, you could install a web highlighter browser extension on your home computer.

Task 3

One of the topics you will be studying for your F161 exam is cyber security.

Take a look at the last slide and you will see a range of different cyber attacks. Your final task is to summarise each of these using no more than 25 words. Carry out research using the website below.

https://phoenixnap.com/blog/cyber-security-attack-types

Task 3 -Research

Malware	
Ransomware	
Trojan horse	
SQL injection	

DDoS	
Password attack	
Brute force attack	
Insider threat	