05 The Internet and Its Uses

SrWL Learning · Complete Classroom Teaching Version · 2026–2028 target

Web technologies and online safety

55 editable slides / Explanation · Visual · Practice · Teacher Check

By the end of this chapter

- Internet and World Wide Web.
- DNS, URLs and web pages.
- Digital currency and security.
- Cyber threats and protection.

Learning goals are organised into bite-sized lessons.

Our learning route

10 mini-lessons · each includes one guided check

01 Internet and World Wide Web: A

02 Internet and World Wide Web: B

03 URLs, DNS and web access: A

04 URLs, DNS and web access: B

05 How a web page loads: A

06 How a web page loads: B

07 Cookies and digital footprints: A

08 Cookies and digital footprints: B

09 Threats and protection: A

10 Threats and protection: B

01 Internet and World Wide Web · Foundations

One clear idea to explain before moving to practice

The Internet is a global network infrastructure.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

Internet and World Wide Web — key points

- The Internet is a global network infrastructure.
- The WWW is a collection of linked resources accessed via the Internet.

Worked context: The Internet and WWW are not the same thing.

Internet and World Wide Web — connect the ideas

Follow the concept from left to right

01

The Internet is a global network infrastructure.

→

02

The WWW is a collection of linked resources accessed via the Internet.

Apply the principles to this example: The Internet and WWW are not the same thing.

Try it · Internet and World Wide Web

Think (30 s) · Pair discussion (1 min) · Share

Explain the meaning of this idea and give a relevant example:

The WWW is a collection of linked resources accessed via the Internet.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · Internet and World Wide Web

Model response · Correct misconceptions

The WWW is a collection of linked resources accessed via the Internet.

EXAM TIP / EXTENSION

Use this worked context to add detail: The Internet and WWW are not the same thing.

02 Internet and World Wide Web · Applications

One clear idea to explain before moving to practice

A web browser requests and displays web content.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

Internet and World Wide Web — key points

- A web browser requests and displays web content.
- A web server stores or supplies resources.

Worked context: The Internet and WWW are not the same thing.

Internet and World Wide Web — connect the ideas

Follow the concept from left to right

01

A web browser requests and displays web content.

→

02

A web server stores or supplies resources.

Apply the principles to this example: The Internet and WWW are not the same thing.

Try it · Internet and World Wide Web

Think (30 s) · Pair discussion (1 min) · Share

Describe when this principle applies:

A web server stores or supplies resources.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · Internet and World Wide Web

Model response · Correct misconceptions

A web server stores or supplies resources.

EXAM TIP / EXTENSION

Use this worked context to add detail: The Internet and WWW are not the same thing.

03 URLs, DNS and web access · Foundations

One clear idea to explain before moving to practice

A URL identifies the location of a web resource.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

URLs, DNS and web access — key points

- A URL identifies the location of a web resource.
- DNS maps domain names to IP addresses.

Worked context: https://example.org/page includes protocol, domain and path.

URLs, DNS and web access — connect the ideas

Follow the concept from left to right

01

A URL identifies the location of a web resource.

→

02

DNS maps domain names to IP addresses.

Apply the principles to this example: https://example.org/page includes protocol, domain and path.

Try it · URLs, DNS and web access

Think (30 s) · Pair discussion (1 min) · Share

Identify the key technical terms and describe their roles:
DNS maps domain names to IP addresses.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · URLs, DNS and web access

Model response · Correct misconceptions

DNS maps domain names to IP addresses.

EXAM TIP / EXTENSION

Use this worked context to add detail: https://example.org/page includes protocol, domain and path.

04 URLs, DNS and web access · Applications

One clear idea to explain before moving to practice

HTTP/HTTPS support web communication.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

URLs, DNS and web access — key points

- HTTP/HTTPS support web communication.
- The browser renders received HTML and other content.

Worked context: https://example.org/page includes protocol, domain and path.

URLs, DNS and web access — connect the ideas

Follow the concept from left to right

01

HTTP/HTTPS support web communication.

→

02

The browser renders received HTML and other content.

Apply the principles to this example: https://example.org/page includes protocol, domain and path.

Try it · URLs, DNS and web access

Think (30 s) · Pair discussion (1 min) · Share

Compare this concept with a related alternative:
The browser renders received HTML and other content.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · URLs, DNS and web access

Model response · Correct misconceptions

The browser renders received HTML and other content.

EXAM TIP / EXTENSION

Use this worked context to add detail: https://example.org/page includes protocol, domain and path.

05 How a web page loads · Foundations

One clear idea to explain before moving to practice

A user enters a URL into a browser.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

How a web page loads — key points

- A user enters a URL into a browser.
- DNS resolves the domain name.

Worked context: HTTPS uses encryption to protect communication.

How a web page loads — connect the ideas

Follow the concept from left to right

01

A user enters a URL into a browser.

→

02

DNS resolves the domain name.

Apply the principles to this example: HTTPS uses encryption to protect communication.

Try it · How a web page loads

Think (30 s) · Pair discussion (1 min) · Share

Apply this idea to a new computer science scenario:
DNS resolves the domain name.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · How a web page loads

Model response · Correct misconceptions

DNS resolves the domain name.

EXAM TIP / EXTENSION

Use this worked context to add detail: HTTPS uses encryption to protect communication.

06 How a web page loads · Applications

One clear idea to explain before moving to practice

The browser requests a resource from the web server.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

How a web page loads — key points

- The browser requests a resource from the web server.
- The server responds; the browser displays the page.

Worked context: HTTPS uses encryption to protect communication.

How a web page loads — connect the ideas

Follow the concept from left to right

01

The browser requests a resource from the web server.

→

02

The server responds; the browser displays the page.

Apply the principles to this example: HTTPS uses encryption to protect communication.

Try it · How a web page loads

Think (30 s) · Pair discussion (1 min) · Share

Explain the meaning of this idea and give a relevant example:

The server responds; the browser displays the page.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · How a web page loads

Model response · Correct misconceptions

The server responds; the browser displays the page.

EXAM TIP / EXTENSION

Use this worked context to add detail: HTTPS uses encryption to protect communication.

07 Cookies and digital footprints · Foundations

One clear idea to explain before moving to practice

Cookies can remember sessions and preferences.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

Cookies and digital footprints — key points

- Cookies can remember sessions and preferences.
- Sites may use tracking cookies for analytics or advertising.

Worked context: Discuss the difference between useful and intrusive tracking.

Cookies and digital footprints — connect the ideas

Follow the concept from left to right

01

Cookies can remember sessions and preferences.

→

02

Sites may use tracking cookies for analytics or advertising.

Apply the principles to this example: Discuss the difference between useful and intrusive tracking.

Try it · Cookies and digital footprints

Think (30 s) · Pair discussion (1 min) · Share

Describe when this principle applies:

Sites may use tracking cookies for analytics or advertising.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · Cookies and digital footprints

Model response · Correct misconceptions

Sites may use tracking cookies for analytics or advertising.

EXAM TIP / EXTENSION

Use this worked context to add detail: Discuss the difference between useful and intrusive tracking.

08 Cookies and digital footprints · Applications

One clear idea to explain before moving to practice

A digital footprint comes from online activity.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

Cookies and digital footprints — key points

- A digital footprint comes from online activity.
- Review privacy settings and account permissions.

Worked context: Discuss the difference between useful and intrusive tracking.

Cookies and digital footprints — connect the ideas

Follow the concept from left to right

01

A digital footprint comes from online activity.

→

02

Review privacy settings and account permissions.

Apply the principles to this example: Discuss the difference between useful and intrusive tracking.

Try it · Cookies and digital footprints

Think (30 s) · Pair discussion (1 min) · Share

Identify the key technical terms and describe their roles:
Review privacy settings and account permissions.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · Cookies and digital footprints

Model response · Correct misconceptions

Review privacy settings and account permissions.

EXAM TIP / EXTENSION

Use this worked context to add detail: Discuss the difference between useful and intrusive tracking.

09 Threats and protection · Foundations

One clear idea to explain before moving to practice

Phishing attempts to obtain sensitive information.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

Threats and protection — key points

- Phishing attempts to obtain sensitive information.
- Malware can damage data or compromise systems.

Worked context: Multi-factor authentication adds another verification step.

Threats and protection — connect the ideas

Follow the concept from left to right

01

Phishing attempts to obtain sensitive information.

→

02

Malware can damage data or compromise systems.

Apply the principles to this example: Multi-factor authentication adds another verification step.

Try it · Threats and protection

Think (30 s) · Pair discussion (1 min) · Share

Compare this concept with a related alternative:
Malware can damage data or compromise systems.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · Threats and protection

Model response · Correct misconceptions

Malware can damage data or compromise systems.

EXAM TIP / EXTENSION

Use this worked context to add detail: Multi-factor authentication adds another verification step.

10 Threats and protection · Applications

One clear idea to explain before moving to practice

Authentication checks a user’s identity.

TEACHER EXPLANATION

Discuss why this principle matters in real computer systems.

Threats and protection — key points

- Authentication checks a user’s identity.
- Use strong unique passwords, updates and backups.

Worked context: Multi-factor authentication adds another verification step.

Threats and protection — connect the ideas

Follow the concept from left to right

01

Authentication checks a user’s identity.

→

02

Use strong unique passwords, updates and backups.

Apply the principles to this example: Multi-factor authentication adds another verification step.

Try it · Threats and protection

Think (30 s) · Pair discussion (1 min) · Share

Apply this idea to a new computer science scenario:
Use strong unique passwords, updates and backups.

YOUR TASK

Use accurate technical vocabulary. Add a second point or a specific example where possible.

Teacher check · Threats and protection

Model response · Correct misconceptions

Use strong unique passwords, updates and backups.

EXAM TIP / EXTENSION

Use this worked context to add detail: Multi-factor authentication adds another verification step.

Five essential ideas

Recall these without looking at the teaching slides

01 Internet and World Wide Web

02 URLs, DNS and web access

03 How a web page loads

04 Cookies and digital footprints

05 Threats and protection

End-of-chapter challenge

Answer in your notebook, then compare with a partner

What does DNS do? Explain one benefit of HTTPS.

TEACHER MODEL ANSWER

DNS resolves domain names to IP addresses; HTTPS protects data in transit.