

Year 5 – Sharing information

Unit introduction

In this unit, learners will develop their understanding of computer systems and how information is transferred between systems and devices. Learners will consider small-scale systems as well as large-scale systems. They will explain the input, output, and process aspects of a variety of different real-world systems. Learners will also take part in a collaborative online project with other class members and develop their skills in working together online.

Overview of lessons

Lesson	Brief overview	Learning objectives
1 Systems	This lesson introduces learners to the concept of a system. Learners will develop their understanding of components working together to make a whole. They will outline how digital systems might work and the physical and electronic connections that exist.	To explain that computers can be connected together to form systems <ul style="list-style-type: none">• I can explain that systems are built using a number of parts• I can describe that a computer system features inputs, processes, and outputs• I can explain that computer systems communicate with other devices
2 Computer systems and us	In this lesson, learners will consider how larger computer systems work. Learners will consider how devices and processes are connected. They will also reflect on how computer systems can help us.	To recognise the role of computer systems in our lives <ul style="list-style-type: none">• I can identify tasks that are managed by computer systems• I can identify the human elements of a computer system• I can explain the benefits of a given computer system

3 Transferring information	This lesson introduces the idea that parts of a computer system are not always in the same place or country. Instead, those parts of a system must transfer information using the internet. This lesson builds on the introduction to the internet in the Year 4 ‘What is the internet?’ unit, adding awareness of IP addresses and the rules (protocols) that computers have for communicating with one another.	To recognise how information is transferred over the internet <ul style="list-style-type: none"> ● I can recognise that data is transferred using agreed methods ● I can explain that networked digital devices have unique addresses ● I can explain that data is transferred over networks in packets
4 Working together	In this lesson, learners will consider how people can work together when they are not in the same location. They will discuss ways of working and start a collaborative online project. The online activity assumes that learners can make simple slides including text and images. If your learners are unsure how to do this, you may wish to spend some time on the Year 3 ‘Desktop publishing’ unit before this lesson.	To explain how sharing information online lets people in different places work together <ul style="list-style-type: none"> ● I can recognise that connected digital devices can allow us to access shared files stored online ● I can send information over the internet in different ways ● I can explain that the internet allows different media to be shared
5 Better working together	In this lesson, learners will reflect on how they worked together in the previous lesson and how their working together might be improved. Learners will work together on an unplugged activity and use that experience to develop their own ideas of good collective working practices.	To contribute to a shared project online <ul style="list-style-type: none"> ● I can suggest strategies to ensure successful group work ● I can make thoughtful suggestions on my group’s work ● I can compare working online with working offline
6 Shared working	In the previous two lessons, learners worked together online on a shared project. This lesson introduces another approach to online working: reusing and modifying work done by someone else. (Using someone else’s work needs to be done within the bounds of copyright)	To evaluate different ways of working together online <ul style="list-style-type: none"> ● I can identify different ways of working together online

	and with the relevant permissions.) This lesson uses the Scratch programming tool, which allows learners to use other people's work.	<ul style="list-style-type: none">• I can recognise that working together on the internet can be public or private• I can explain how the internet enables effective collaboration
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Progression

This unit progresses learners' knowledge and understanding of computing systems and online collaborative working.

Please see the learning graph for this unit for more information about progression.

Curriculum links

[National curriculum links](#)

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

[Education for a Connected World links](#)

- I can assess and justify when it is acceptable to use the work of others
- I can give examples of content that is permitted to be reused

Assessment

Summative assessment

Please see the assessment question and answer documents for this unit.

Subject knowledge

Enhance your subject knowledge to teach this unit through the following training opportunities:

Online training courses

- [Raspberry Pi Foundation online training courses](#)

Face-to-face courses

- [National Centre for Computing Education face-to-face training courses](#)

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