



Year 6 – Communication and collaboration

Unit introduction

In this unit learners explore how data is transferred over the internet. Learners initially focus on addressing, before they move on to the makeup and structure of data packets. Learners then look at how the internet facilitates online communication and collaboration; they complete shared projects online and evaluate different methods of communication. Finally, they learn how to communicate responsibly by considering what should and should not be shared on the internet.

Software and Hardware requirements

Learners will need a device with access to the internet. Lesson 3 Involves learners working collaboratively. The screenshots use the platform Google Slides, however alternative collaborative presentation tools are available, such as Microsoft PowerPoint 365 or Padlet.

If you've adapted this unit to better suit your school, please [share your adapted resources](#) with fellow teachers in the STEM community. Alternatively, if this unit isn't quite right for your school, why not see if an adapted version which better suits has already been shared?

Overview of lessons

Lesson	Brief overview	Learning objectives
L1 Internet addresses	Learners explore what is necessary for effective communication and the importance of agreed protocols. They apply this understanding to IP addresses and the rules (protocols) that computers have for	To explain the importance of internet addresses <ul style="list-style-type: none">I can recognise that data is transferred using agreed methods

	communicating with one another. Learners also use a Domain Name Server (DNS) to translate web addresses into IP addresses.	<ul style="list-style-type: none"> • I can explain that internet devices have addresses • I can describe how computers use addresses to access websites
L2 Data packets	Learners are introduced to the concept of packets. They complete an activity based on transferring an image across the internet, to see that as well as messages (text), other types of data (images, video, and audio) are also transferred over the internet. They gain an understanding of the key parts of a packet: the header and the data payload.	<p>To recognise how data is transferred across the internet</p> <ul style="list-style-type: none"> • I can identify and explain the main parts of a data packet • I can explain that data is transferred over networks in packets • I can explain that all data transferred over the internet is in packets
L3 Working together	Learners consider how people can work together when they are not in the same location. They discuss ways of working and complete 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.	<p>To explain how sharing information online can help people to work together</p> <ul style="list-style-type: none"> • I can recognise how 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
L4 Shared working	Learners are introduced to another approach to online working: reusing and modifying work done by someone else. (Note: Using someone else’s work needs to be within the bounds of copyright and with the relevant permissions.) This lesson involves the Scratch programming tool, which allows learners to use other people’s work.	<p>To evaluate different ways of working together online</p> <ul style="list-style-type: none"> • I can identify different ways of working together online • I can recognise that working together on the internet can be public or private

		<ul style="list-style-type: none"> I can explain how the internet enables effective collaboration
L5 How we communicate	Learners deepen their understanding of the term 'communication'. They explore different methods of communication, before they consider internet-based communication in more detail. Finally, learners evaluate which methods of communication suit particular purposes.	<p>To recognise how we communicate using technology</p> <ul style="list-style-type: none"> I can explain the different ways in which people communicate I can identify that there are a variety of ways to communicate over the internet I can choose methods of communication to suit particular purposes
L6 Communicating responsibly	Learners use information provided in the lesson and their own prior knowledge to categorise different forms of internet communication. They then choose which method(s) they would use for the scenarios discussed in the previous lesson. Through these activities, learners explore issues around privacy, information security and how to report concerns about inappropriate content online.	<p>To evaluate different methods of online communication</p> <ul style="list-style-type: none"> I can compare different methods of communicating on the internet I can decide when I should and should not share information online I can explain that communication on the internet may not be private I can explain how to report inappropriate content online

Subject knowledge and CPD opportunities

In this unit, you will need to have an understanding of the way data is sent over the internet. Some key terms you will need to be familiar with are Internet Protocol (IP) addresses; Domain Name Server (DNS); and data packets, including the main parts of a packet (header and data payload). The terms are discussed in more detail within the lesson plans.

Continual Professional Development

Enhance your subject knowledge to teach this unit through the following free CPD:

- [Getting started in Year 6 – short course](#)
- [Teaching computing systems and networks to 5- to 11-year-olds](#)
- [Introduction to primary computing remote or face to face](#)

Teach primary computing certificate

To further enhance your subject knowledge, enrol on the [teach primary computing certificate](#). This will support you to develop your knowledge and skills in primary computing and gain the confidence to teach great lessons, all whilst earning a nationally recognised certificate!

Progression

This unit progresses students' knowledge and understanding of computer systems and networks developed in the [Year 5 Systems and Searching](#) unit, looking at how data is transferred and how the internet facilitates communication and collaboration online.

Common misconceptions

Within this unit, pupils work on shared projects, collaborating via the internet. Because pupils are likely in the same room, though not working on the same device, this can create a misconception that to work collaboratively over the internet you still need to be physically close. To prevent this, if an additional adult is available, you may want to split the pairs between two locations so that they cannot physically see each other when working collaboratively. If this is not possible, ensure you keep reminding pupils that they can only communicate over the internet because this way of working together works if you are next to each other, or if you are hundreds of miles apart.

Curriculum links

Computing

- 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

Managing Online Information

- I can identify, flag and report inappropriate content

Self-image and identity

- I can describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline

Relationships Education, Relationships and Sex Education (RSE) and Health Education

Online relationships

- Pupils should know how information and data is shared and used online

Internet safety and Harms

- ✎ Pupils should know that for most people the internet is an integral part of life and has many benefits
- ✎ Pupils should know where and how to report concerns and get support with issues online

Assessment

Formative assessment

Assessment opportunities are detailed in each lesson plan. The learning objectives and success criteria are introduced in the slide decks at the beginning of each lesson and then reviewed at the end. Learners are invited to assess how well they feel they have met the learning objective using thumbs up, thumbs sideways, or thumbs down.

Summative assessment

Please see the summative assessment document of multiple-choice questions for this unit. This can be downloaded as a paper copy, with answers, or in a digital format to be shared.

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The original version can be made available on request via info@teachcomputing.org.