STUDENT WORKBOOK

Digital Technologies:
For Years 5 - 6: Book 1

By Magda Parker

Contents

To access videos and websites providing background to this book go to:

https://www.readyed.net/digital-technologies-for-years-5-6-book-1/

Pages that are linked to online content will have this symbol on them:

Written Communication/Messages: In the past, people had to communicate by handwritten letters, and later by using a typewriter. Letters could take a long time to arrive and sometimes got lost in the post. Then, the fax machine was invented, which made sending messages much faster. Now, we can communicate almost instantly with text messages, social media, messaging apps and emails.

Music: Records were the original way to listen to music, and for almost a century, they were the main way people listened to music at home. Music was also played on the radio. In the early 1960s audiocassette tapes were invented making it easier to listen to music anywhere and anytime. CDs then replaced audiocassettes with better sound quality. In 2001, Apple released the first iPod, making it easy for music to be downloaded and stored on a device. Now, music is available for streaming or downloading from multiple sites and apps like Spotify, which offer endless song choices and can be played from most devices, making music more accessible and convenient than ever before.
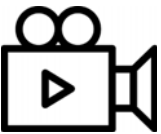
Videos: About 50 years ago, Video Cassette Recorders (VCR) were invented, allowing people to watch movies and shows at home instead of only live television. Following this, DVDs and Blu-rays were invented, providing better quality, and replacing VHS tapes. Similar to the music evolution, movies and TV shows can now be downloaded or streamed from multiple services, sites and apps, making it possible to watch them anytime on demand.

Images: Cameras started as large, heavy machines that were difficult to use, and required a roll of film that could only take 24-36 photos. After taking the photographs the film had to be developed at a store or in a darkroom. This took time and there was no way to check the photographs before they were developed. It was also expensive. Now, digital cameras and smartphones offer almost the same quality of photographs. They instantly display the photo, and can store many images. Printing these photos is quick and inexpensive.

Telephones: In the late 1950s Australians began having telephones installed in their homes. These early phones had to be attached to the wall with multiple wires and cords. To call a number, each digit had to be turned in a circular motion on the dial. The phone handset was attached to the base, making private conversations difficult, and communication was limited to the home or using a phone box in the street. In the 1990s the invention of the mobile phone changed everyday life dramatically, allowing calls to be made anytime from anywhere. Now, smartphones combine calling and messaging as well as internet access, camera capabilities and navigation.

Technology has an essential role in our daily lives and it's hard to imagine life without it. We use technology every day to make things easier, quicker, and more convenient.

❏ Imagine you were stuck on a desert island and could only bring 3 different pieces of technology to improve your quality of life. What would they be? Draw and explain why.

Example: My smartphone because I can use it to...
(Learn, play games, find out information that I need, call someone)

_____

_____

_____

_____

_____

_____

_____

_____

heh heh

Think about how life would have been simpler before internet access was so readily available.

❏ How would your parents' lives have been different to yours growing up? Draw in the thought bubbles, then list the differences.

Sample

Differences: _____

_____

_____

_____

_____

_____

To buy a house, your parents must sign a contract their real estate agent has sent them via email. For this, they need to print the document, sign it by hand and scan it, so that they can send it back to their agent via email.

❏ Create a flow chart to record the different devices they need and whether the peripheral devices used are input or output devices.

_____ device

_____ device

_____ device

FOR SALE

_____ device
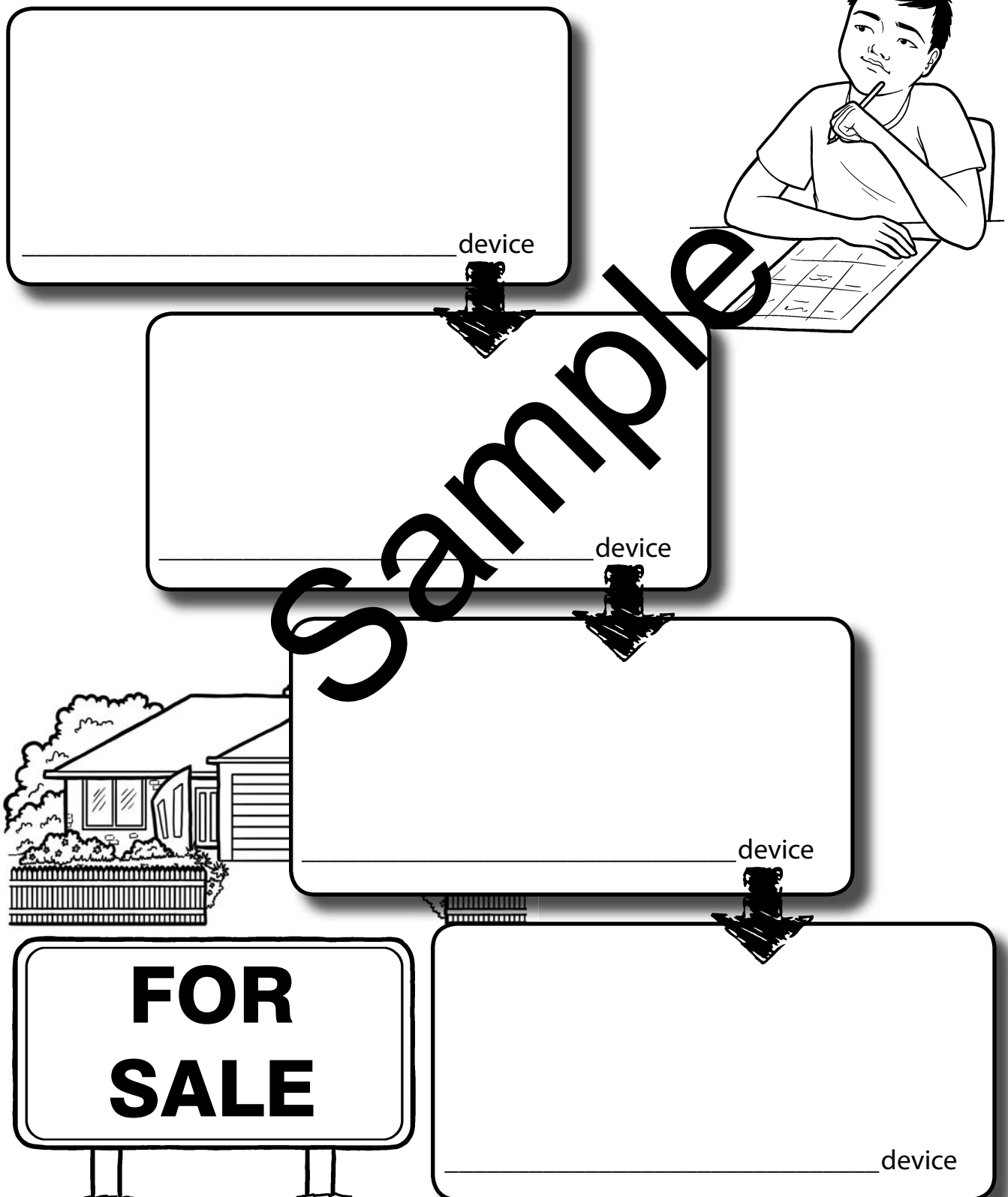
❏ Use the binary code below to decode the bee's message. The number of bees corresponds to a letter of the alphabet, e.g. 3 bees in a row represent the letter c. The message is read from left to right.

You are on a secret mission to uncover an important message that must be shared quickly to the entire world. The message was intercepted by people who do not want this important message to spread and it has been hidden in beehives at a honey factory. You need to find the message by wading through the swarms of bees and recording the number of lights on each hive using this binary code. You need to decipher it quickly.

Once you have decoded the message and have informed your superiors, create your own message you believe is important for the world to hear. Write it down like the message below.

❏ Can you work it out?

The message is:_____

Your message:

Activity 24 | Create Your Own Bitmap

❏ Create your own Bitmap picture and add the code needed to create your picture on the computer. Start by colouring in the square blocks to create a picture, such as a bird or a cat.

Then, write the code underneath that was needed to create the picture.

Key

➡ Move right

⬅ Move left

⬇ Move down

⬆ Move up

⬛ Colour square

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Activity 27 How Internet Searches Work 2
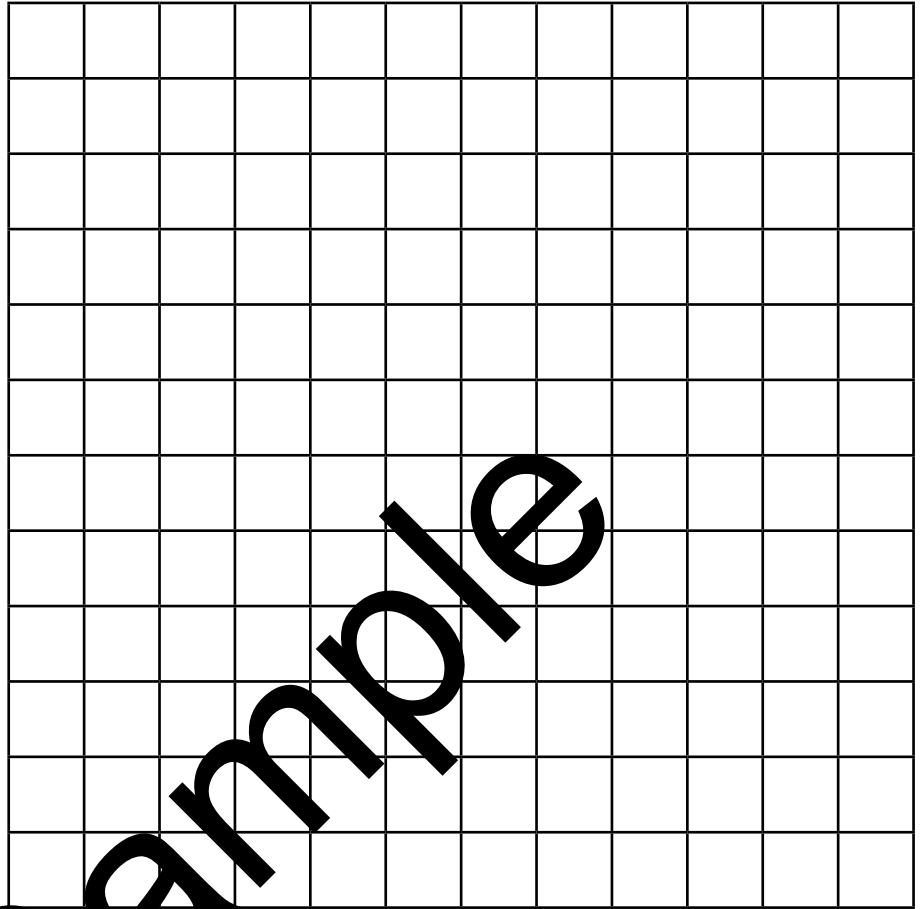
Chose a topic that interests you and research some specific information about it. 🔍

Topic:_____

_____

Information Researched: _____

_____

_____

_____

_____

_____

Write down any alternative words or group of words you could use to get better results.

_____

_____

_____

_____

How could you use the advanced search function? Are there any specific words, time frames or regions that you could use to refine your research?

_____

_____

_____

_____

Reflection:
What did you search in the advanced settings that gave you the most accurate results and why?

_____

_____