

# **INSPIRE COMPUTING**

*International*

Workbook

**YEAR 1**

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Pearson

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# Welcome to Inspire Computing

We are all living in a continually evolving digital world. By supporting learners in becoming confident and knowledgeable users of technology we can ensure you are better prepared for the future.

Inspire Computing makes important topics accessible for all learners. You will understand how to stay safe online while still enjoying the freedom to explore the World Wide Web. You will delve deeper into understanding algorithms through creative approaches, exploring networks and systems, and create and film exciting animation projects!

Each topic includes easy to understand theory, real-world examples, and ideas for further investigation. You will also have the chance to show off your knowledge and understanding through supportive assessments and student checkpoints!

## Lesson 4 Debugging an algorithm



1. Match each word to its meaning.

debug  
bug

an error in an algorithm  
to find and fix an error in an algorithm

2. Look at the algorithm for making toast.



**Step 1:** Get a loaf of bread.



**Step 2:** Put two slices of bread in the toaster and set timer for two minutes.



**Step 3:** Wait two minutes.



**Step 4:** Put the two slices of toast on a plate.



**Step 5:** Spread butter on the toast.



**Step 6:** Carefully take the hot toast out of the toaster.

Which steps are in the wrong order?

Steps \_\_\_\_\_

Finish the sentence.

Step \_\_\_\_\_ should go between step \_\_\_\_\_ and step \_\_\_\_\_.

3. Maryam has written an algorithm to draw a robot.

**Maryam's robot**

**Step 1:** Draw a square body.

**Step 2:** Draw a square head.

**Step 3:** Add 3 eyes.

**Step 4:** Add 4 legs.

**Step 5:** Add 2 spikes.

**Step 6:** Add 2 buttons.

## Unit 4 Exploring algorithms

In this unit you will learn about algorithms. You will learn how to read algorithms and how to make your own algorithms. Then, you will learn how to check for mistakes in algorithms. You will fix the instructions that are wrong. After that, you will use what you know about algorithms to plan and run an algorithm activity event.

### Unit 4 Checkpoints

I understand what an algorithm is.	😊 <input type="checkbox"/>	😐 <input type="checkbox"/>	😞 <input type="checkbox"/>
I can put the steps for an algorithm in order.	😊 <input type="checkbox"/>	😐 <input type="checkbox"/>	😞 <input type="checkbox"/>
I understand directional language (forward, backward, quarter turn left and quarter turn right).	😊 <input type="checkbox"/>	😐 <input type="checkbox"/>	😞 <input type="checkbox"/>
I can write my own algorithms.	😊 <input type="checkbox"/>	😐 <input type="checkbox"/>	😞 <input type="checkbox"/>
I can debug algorithms.	😊 <input type="checkbox"/>	😐 <input type="checkbox"/>	😞 <input type="checkbox"/>

# Unit 1

## What digital technology do we use?

Years ago people did not have digital technology, but now we use it to do many different things. In this unit you will learn what digital technology is and how it has changed over time. Then, you will think about what devices might be like in the future.

You will learn how to make, save and open digital images. You will use images to give a talk about what you have learned.

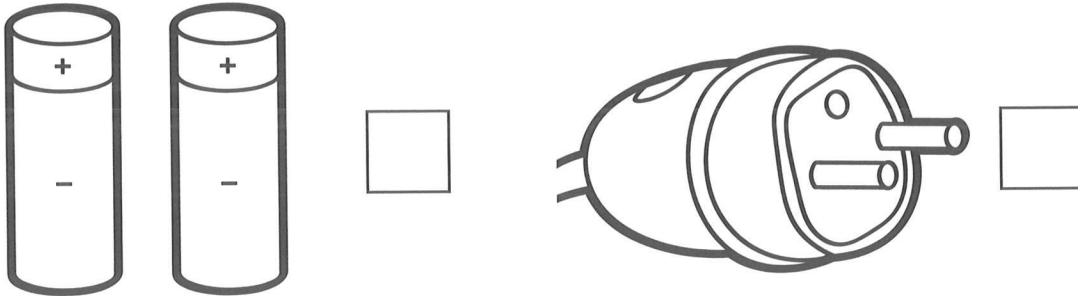


# Lesson 1

## What is digital technology?

1. Draw a digital device that you might see in a classroom. Write labels to show the main parts.

2. What does the device on page 3 need to work?  
Draw a tick ✓ or a cross ✗.



3. Is it a digital device? Draw a tick ✓ or a cross ✗.  
One has been done for you.

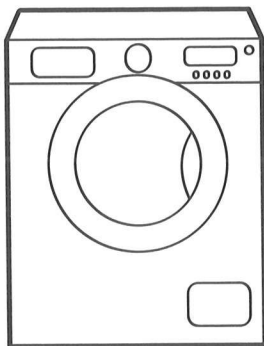
laptop computer

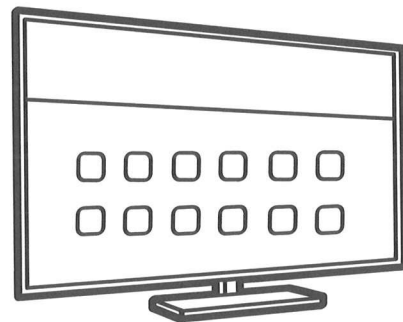
car

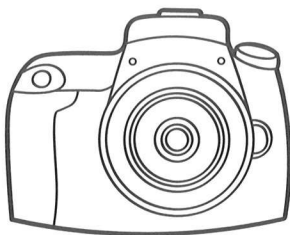
games console

bicycle

4. Look at the pictures. Which things have a microchip?  
Draw a tick ✓ or a cross ✗.

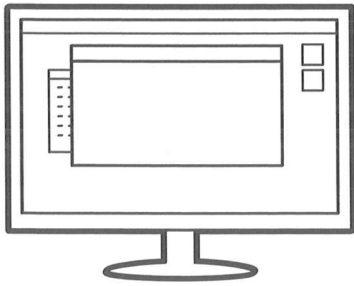




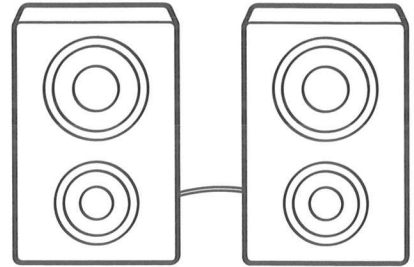




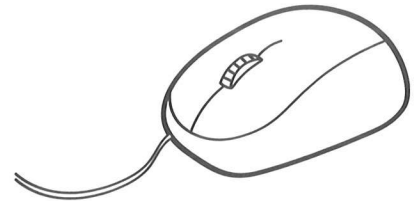
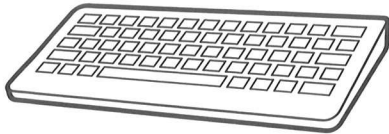
5. Draw lines to match the input and output devices to their labels. One has been done for you.



input



output



### Extra activity

Finish the sentences.

An input is \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

An output is \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

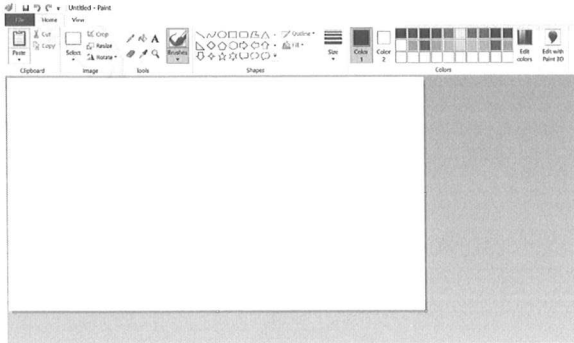
\_\_\_\_\_



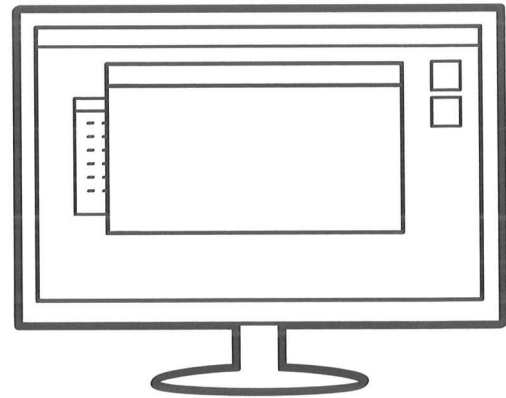
## Lesson 2

# Exploring how to draw pictures with a computer

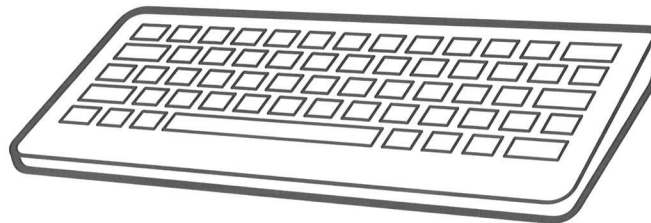
1. Look at each picture. Write if it shows hardware or software.



---

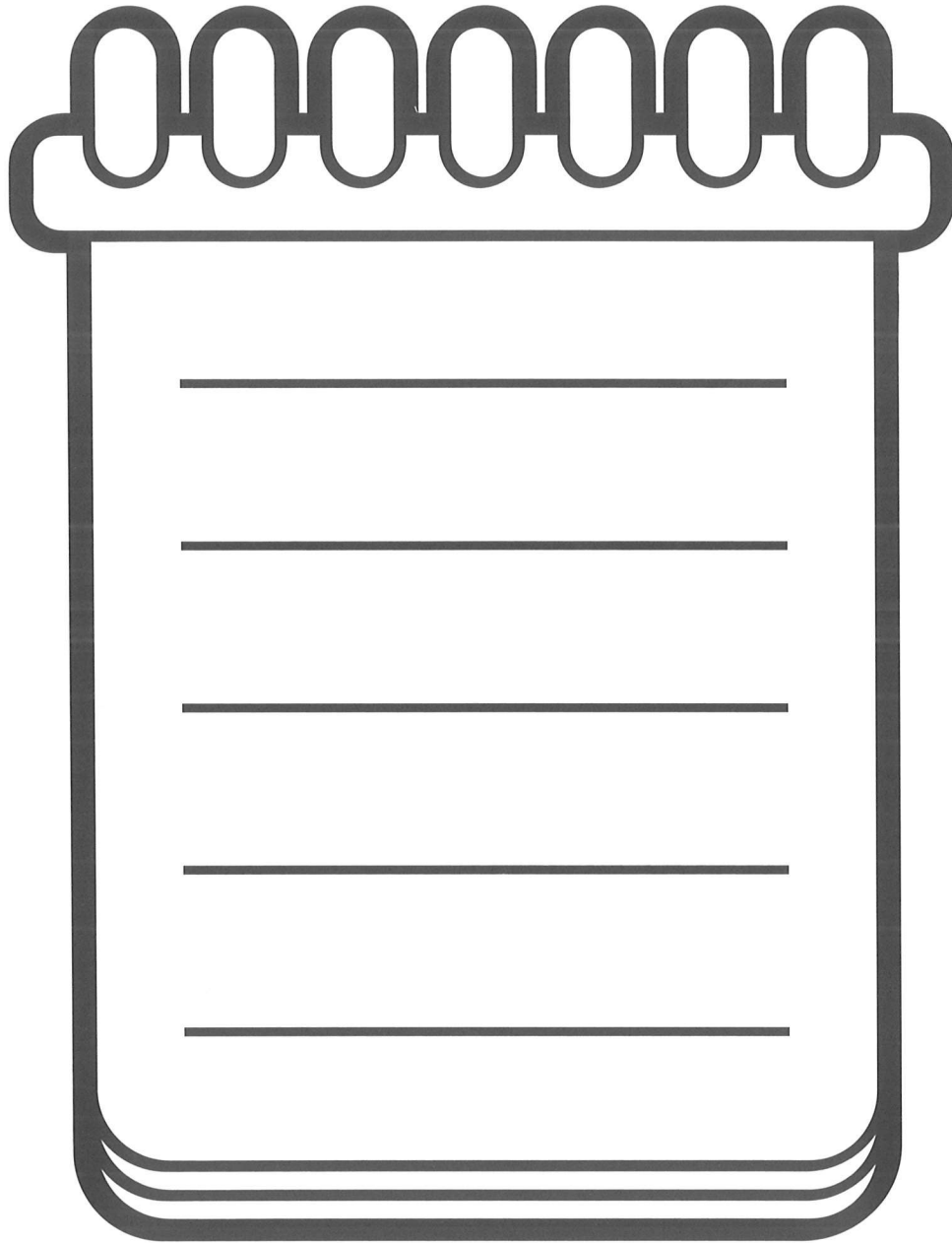


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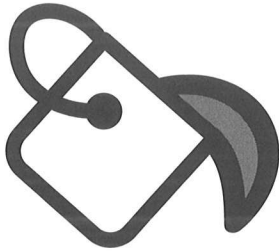
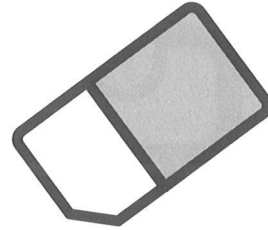
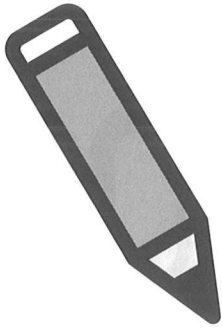
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2. Go on a hardware hunt! Write the names of the hardware that you find.  
Ask an adult if you need help.



**Adult:** Closely supervise children as they carry out their hardware hunt.

3. Use software to create a digital image. Which of these will you use to help your drawing?



What did you draw?

---

---

How did you draw it?

---

---

---

4. Write the names of two pieces of software you use.

1 \_\_\_\_\_

2 \_\_\_\_\_

5. Think about one item of software.

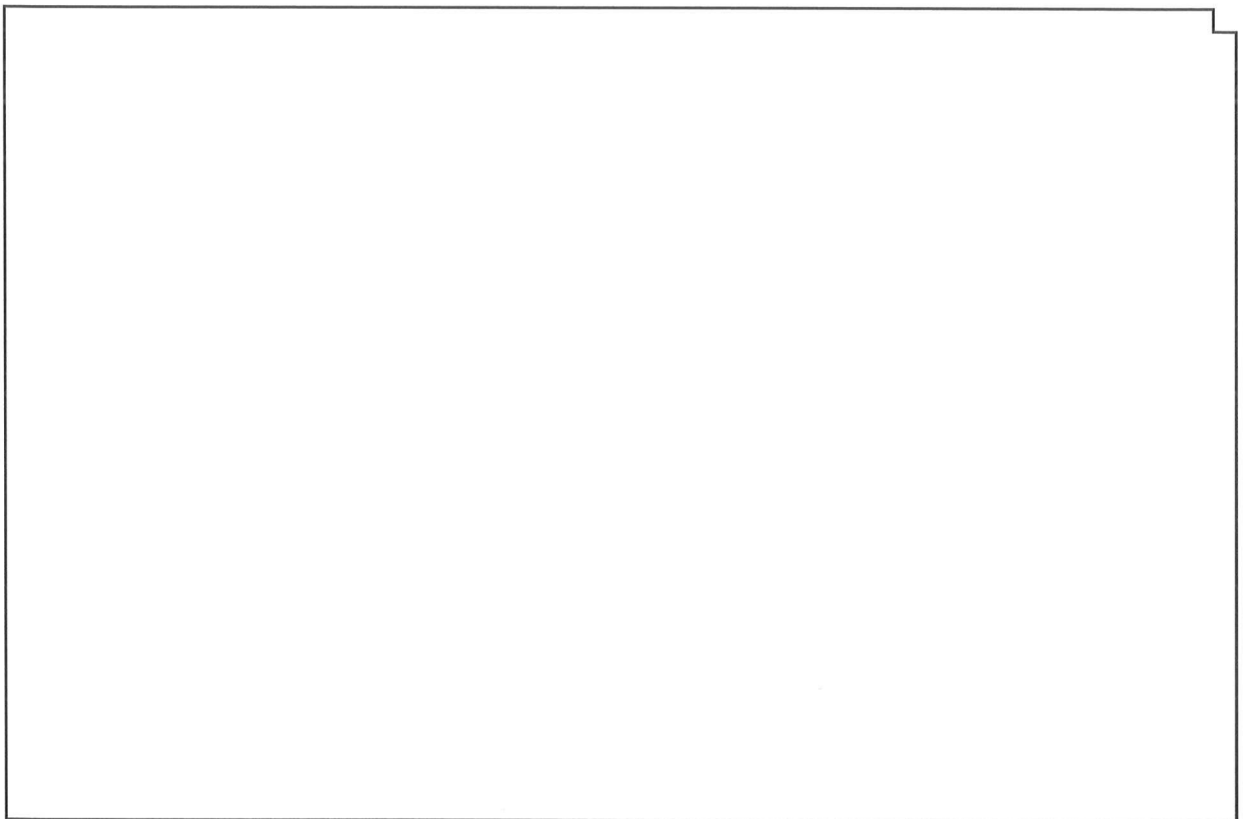
What does it do?

\_\_\_\_\_

\_\_\_\_\_

6. Draw one tool from your drawing software.

Write what it does.



\_\_\_\_\_

# Lesson 3



## Sorting digital technology

I. Match the objects to the places they are used.

computer

things we  
use at home

whiteboard

things we  
use at school

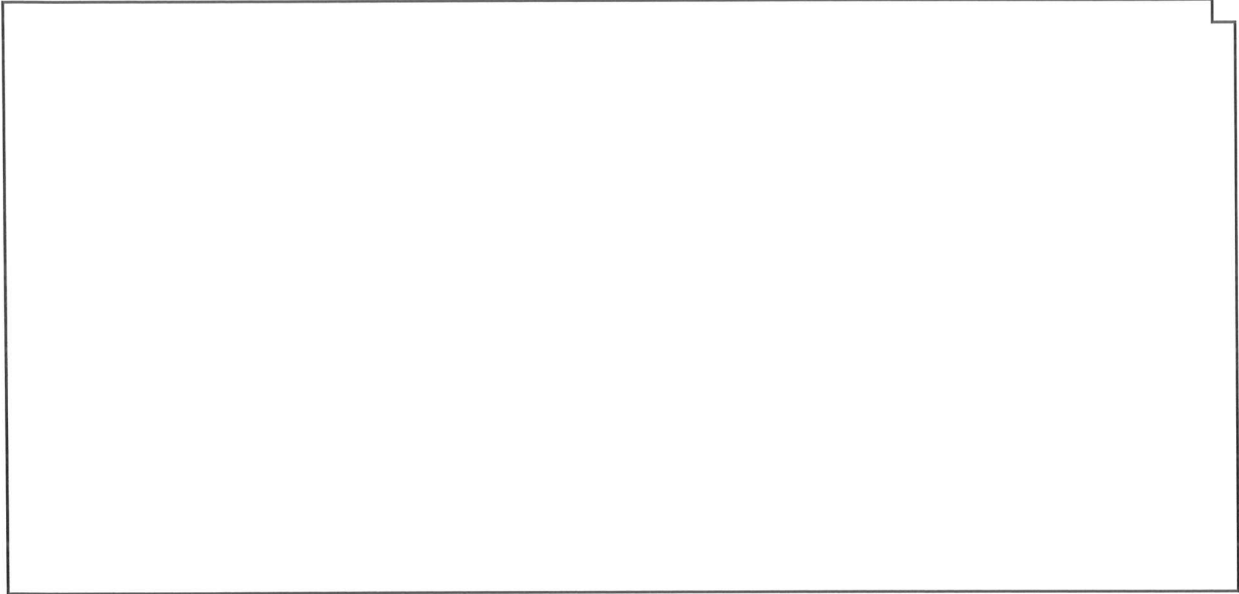
gaming  
console

TV remote

things we use at  
school and at home

2. On your own or with a partner, think of other devices you use at home or at school.

Draw them here.



Write their names in the correct boxes.

At home

■ \_\_\_\_\_

■ \_\_\_\_\_

At school

■ \_\_\_\_\_

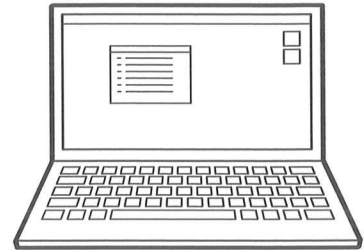
■ \_\_\_\_\_

# Lesson 4



## Saving and loading work

1. Order the steps to save your work. The first one has been done for you.



- Click 'File' and 'Save As'.
- Click 'Save'.
- 1 Type something using your keyboard, or paint a picture.
- Type a good filename.

2. Order the steps to load your work. The first one has been done for you.

- Click 'Open'.
- 1 Click 'File' and 'Open'.
- Find the file that you want.