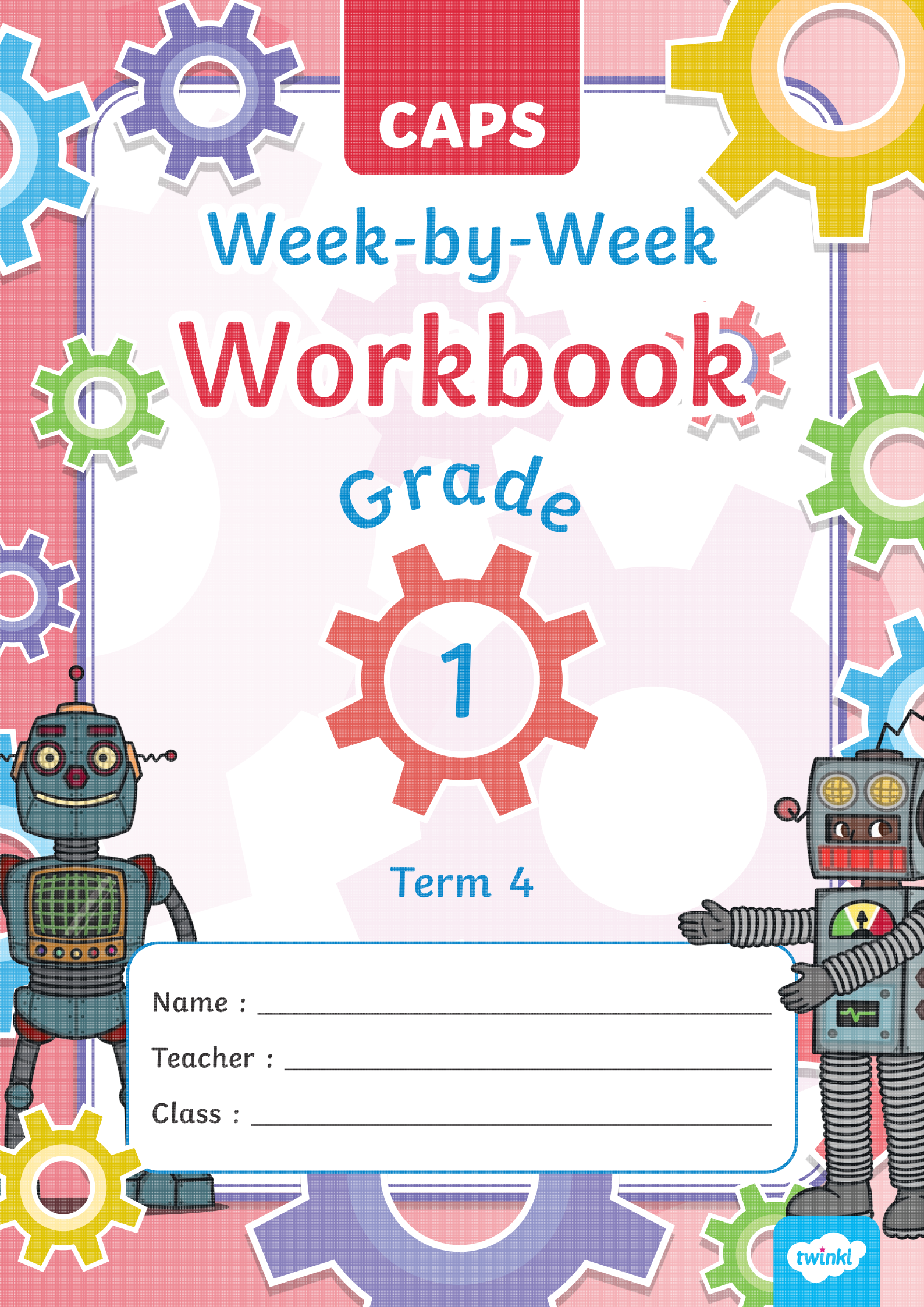


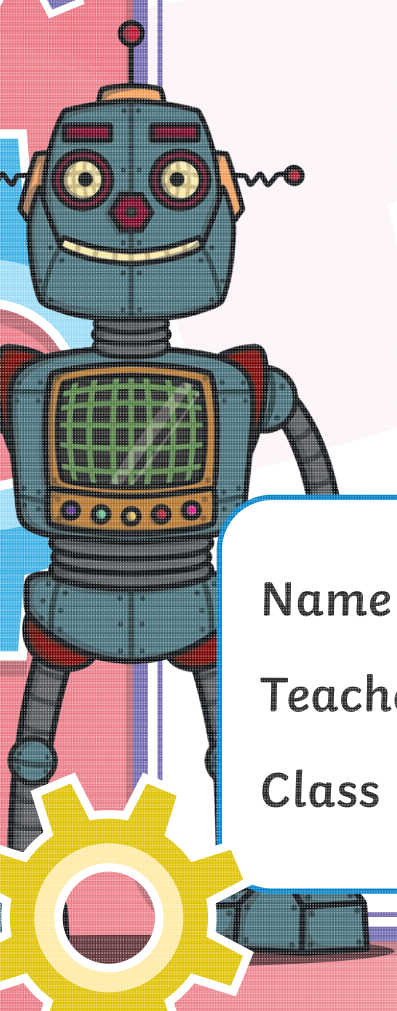


CAPS

Week-by-Week
Workbook
Grade

1

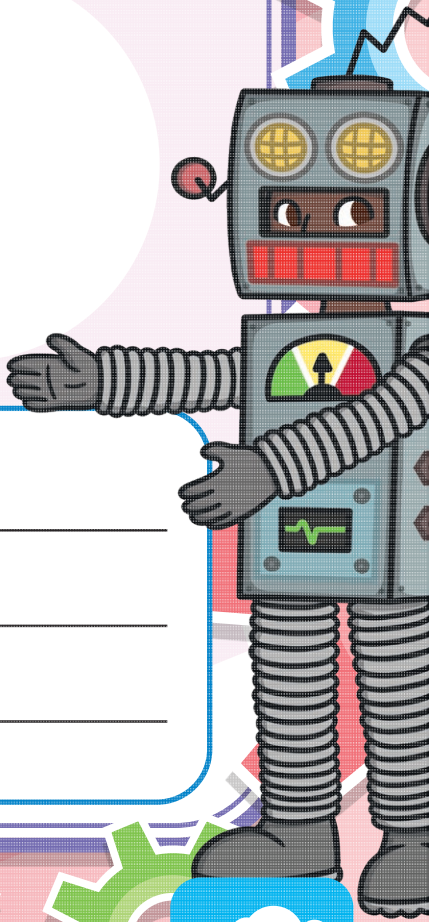
Term 4



Name : _____

Teacher : _____

Class : _____



Robotics and Coding Curriculum

The curriculum is divided into three topical areas.

Coding,

Robotics,

Digital skills.

Each of these has its own competencies which must be achieved at appropriate levels.

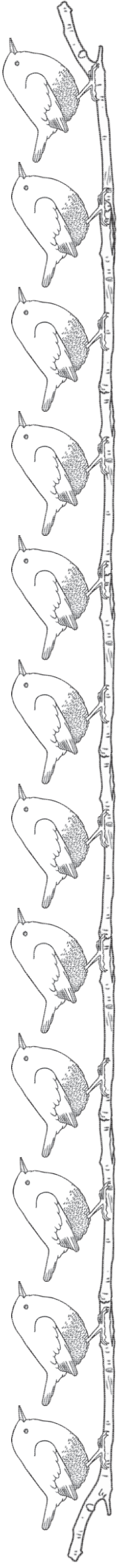
Coding

- C.1** Apply computational thinking skills to develop a set of logical instructions to solve a problem.
- C.2** Present a simple coding solution using symbolic or written statements representing sequences of commands, single repetition, and conditional constructs.
- C.3** Interpret and execute a given symbolic or written set of instructions.
- C.4** Debug a symbolic or written set of instructions.
- C.5** Evaluate a given solution towards potential improvement.
- C.6** Recognise and interpret patterns and symbolic sets of data or visualisations.
- C.7** Create or complete a pattern to represent a particular data set.

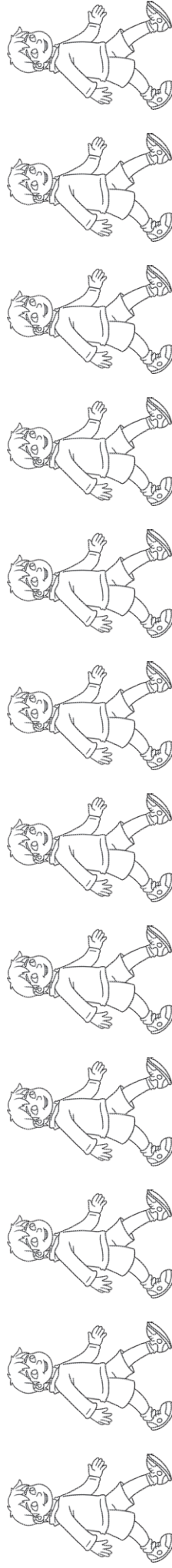
Robotics

- R.1** Explain what a robot is in simple terms.
- R.2** Identify different types of robots.
- R.3** Outline the different components of a robot.
- R.4** Present an understanding of how robots affect the world.
- R.5** Design a simple product (artefact) based on a set of design specifications.
- R.6** Mimic the operations of a robot.
- R.7.** Create, test, and execute a set of robotic instructions.



**Instructions:**

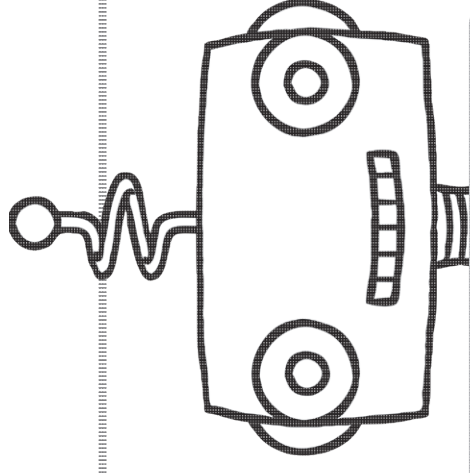
- Colour in the first bird yellow and green.
- Colour in the second bird pink and purple.
- Colour in the third bird red and green.
- Colour in the fourth bird blue and yellow.
- Now colour in all the birds to complete the pattern.

**Instructions:**

Colour the boys to make a pattern.

Pattern Recognition - Numbers

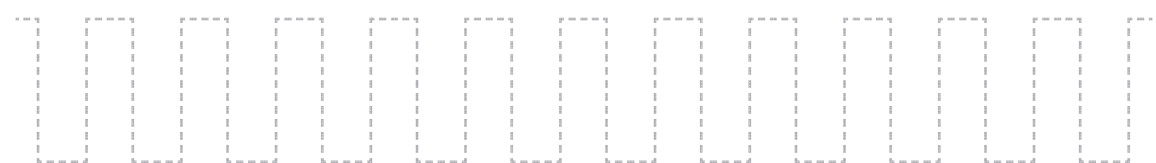
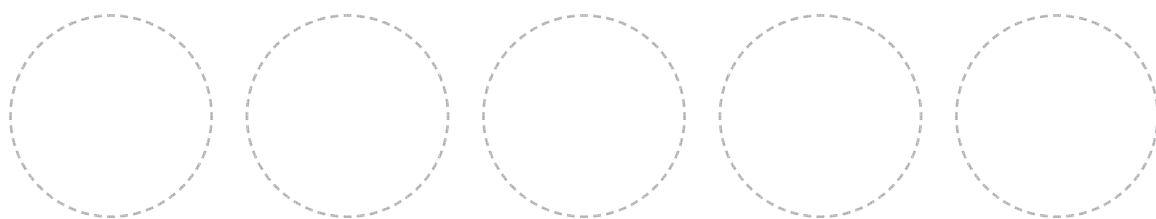
Complete the following patterns with two repetitions.
Make two rows of your own patterns.



5	7	5															
9	3	6															

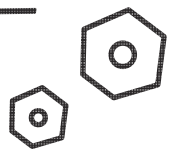
Robotics and Coding

Complete the Patterns



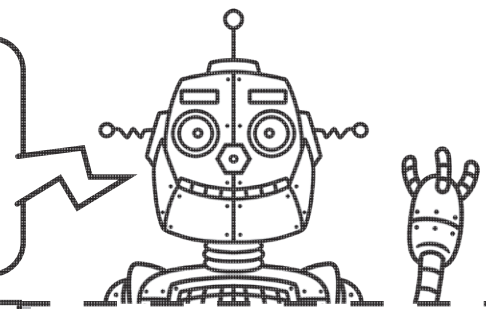


Grade 1: Coding and Robotics – Number Switch



Some of the numbers in this 100 square have been switched. Can you find them?

Colour in the numbers that have been switched.

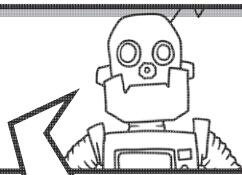


Counting in 2s

Write the numbers in the correct order in the empty column.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	25	16	17	18	28	20
21	22	23	24	15	26	27	19	29	39
31	32	33	34	35	36	37	38	30	40
41	42	44	43	45	46	47	57	49	50
51	52	53	54	56	55	48	58	59	60
61	63	62	64	65	66	67	68	69	70
71	72	73	74	75	76	78	88	79	80
81	82	93	84	85	86	87	78	89	90
91	92	83	94	95	97	96	98	99	100

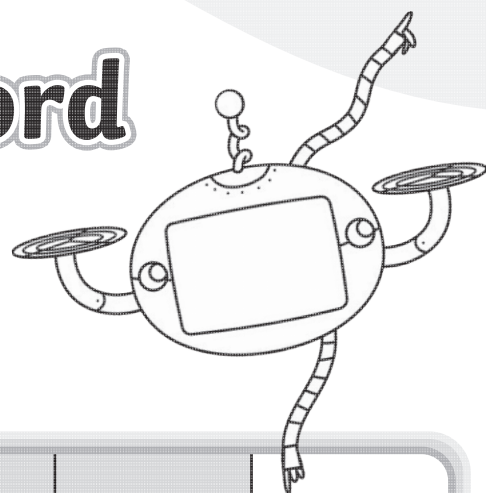
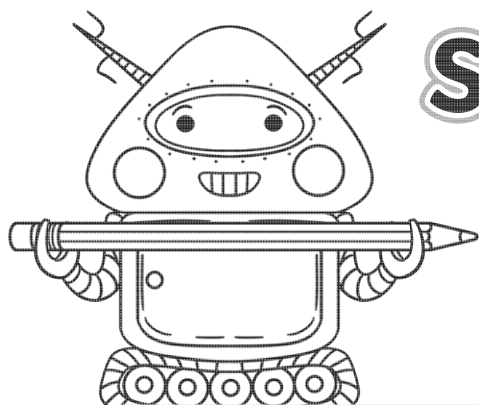
2	
6	
4	
10	
8	
12	
16	
14	



Draw a circle around the letters that have been switched.

a b d c e f h g i j k l n m o q p r s t v u w y x z

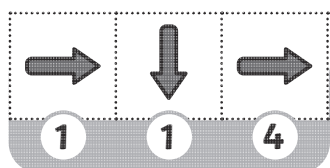
Spell the Word

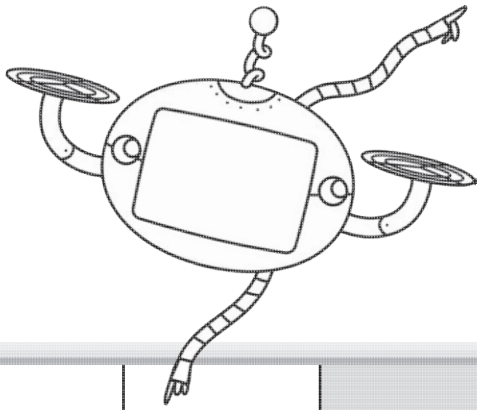
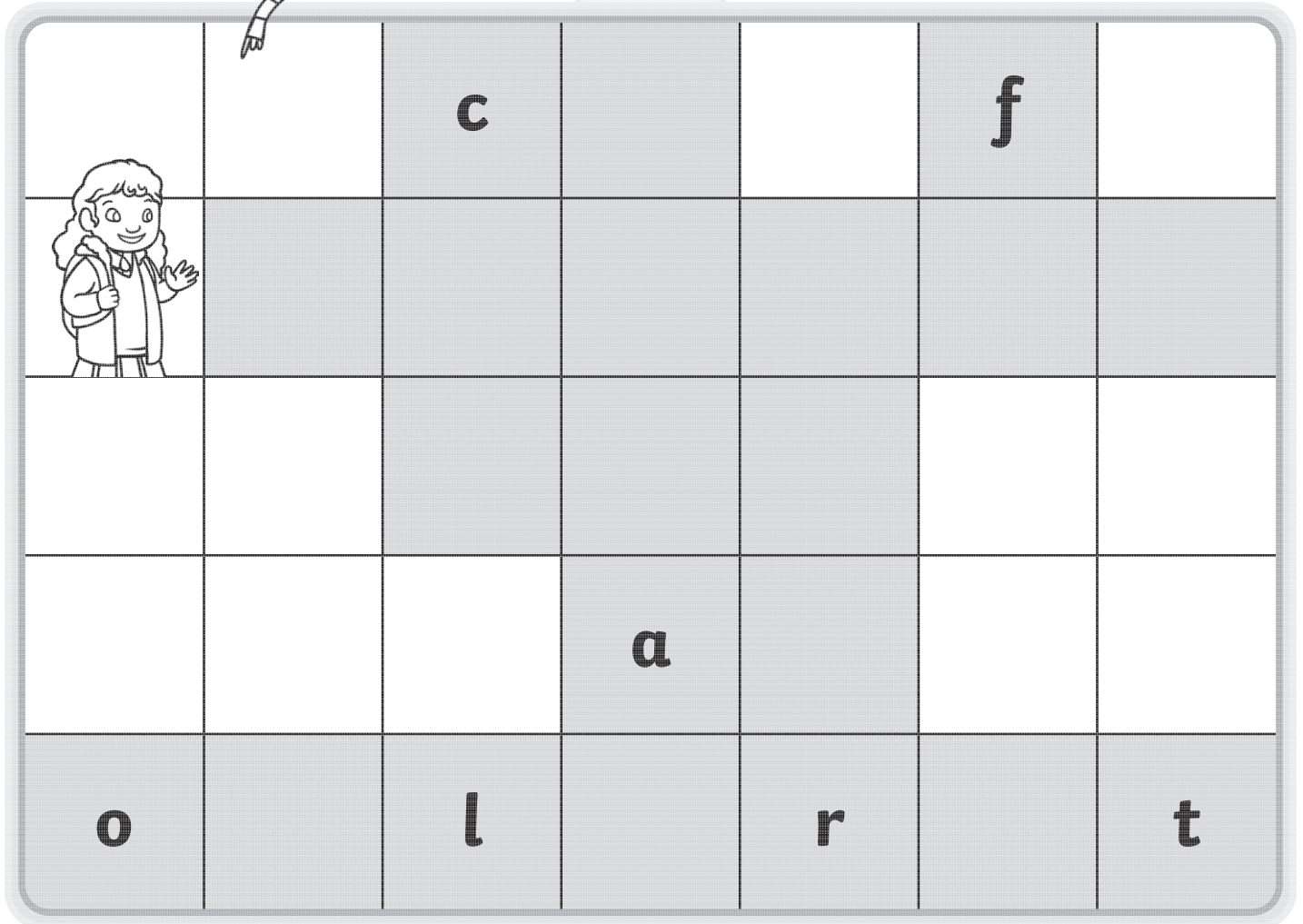


1

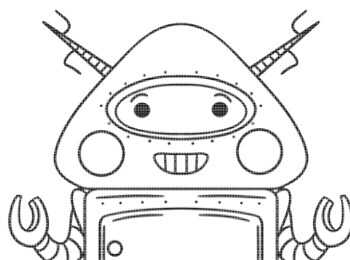
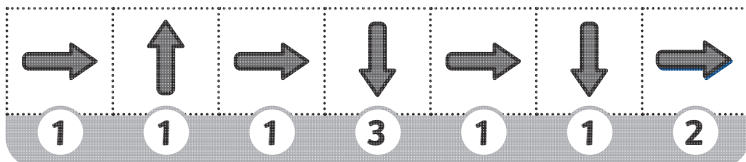
		c				
					n	
		b		o		
s				a		t
		e			l	

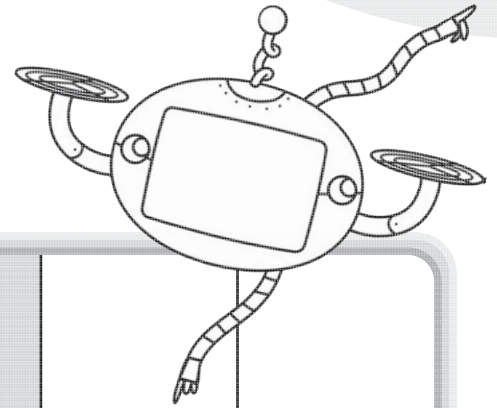
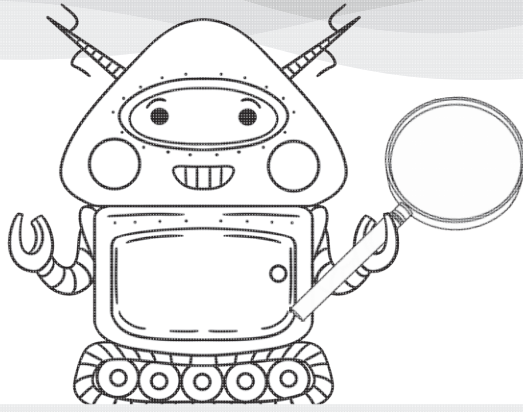
What word will Tom spell if he follows this code?




2


What word will Ann spell if she follows this code?

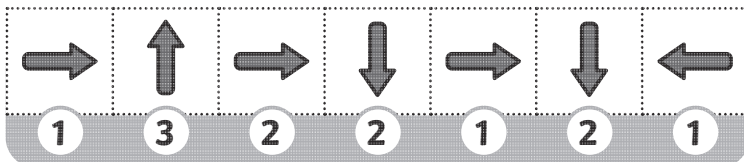




3

				o		
a						d
		l			o	
						
t		s		k		c

What word will Mpho spell if she follows this code?



Encoding and Decoding

Secret Message

Secret Agent Mark Mason received a message from an informer. Can you help him decipher it?

$5 - 4 =$

m

$6 - 3 =$

t

$3 + 2 =$

h

$4 + 3 =$

k

$5 + 4 =$

w

$1 + 1 =$

e

$3 + 1 =$

a

$4 + 2 =$

r

$5 + 3 =$

o

Use the clues below to work out the secret code.

1 2 2 3

1 2

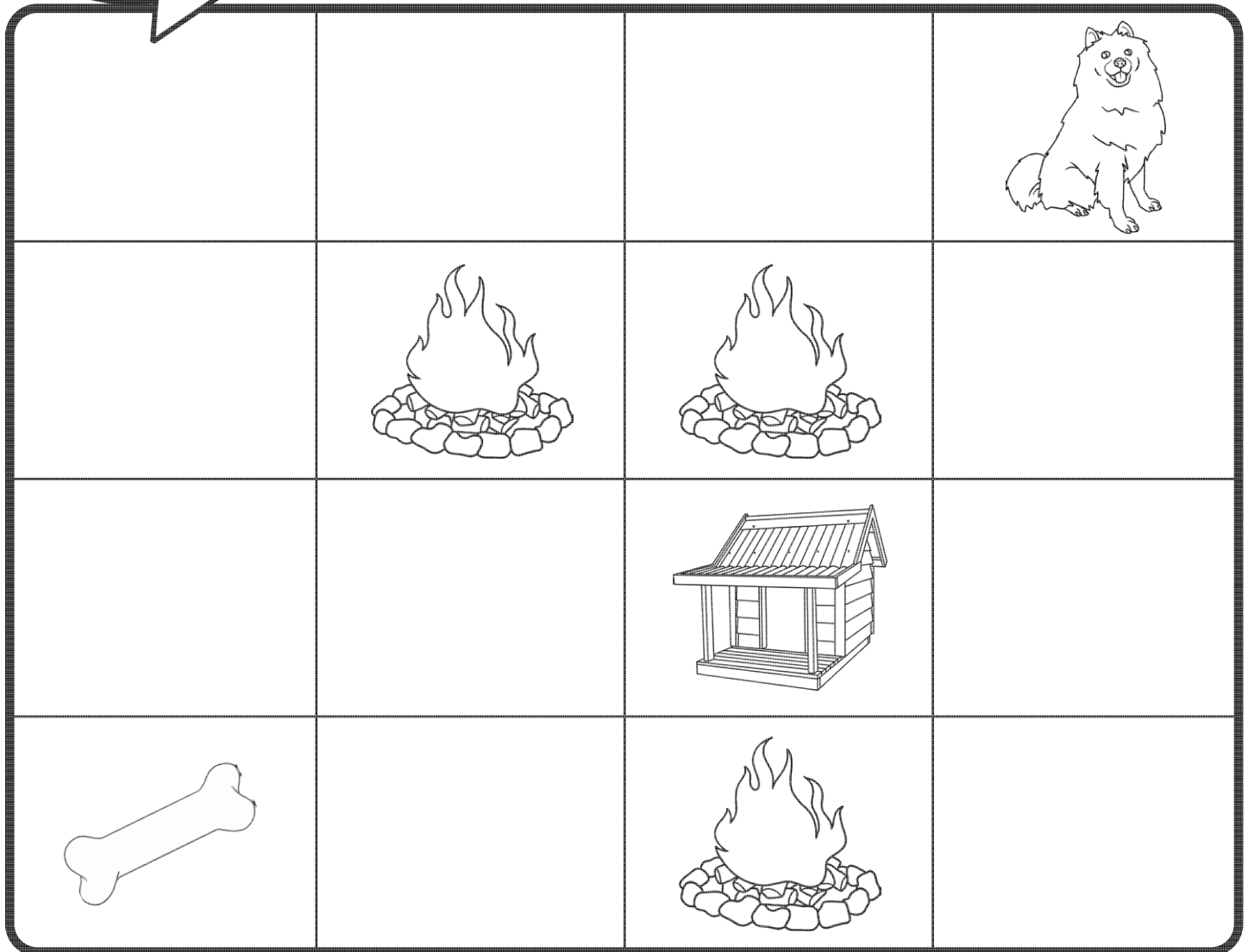
4 3

3 5 2

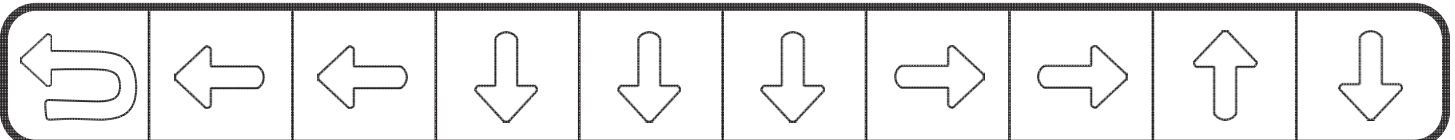
1 4 6 7 2 3

3 8 1 8 6 6 8 9

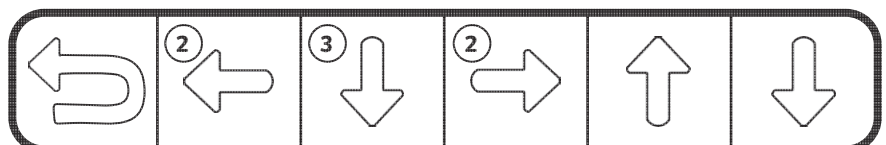
Introducing the Turn Sign

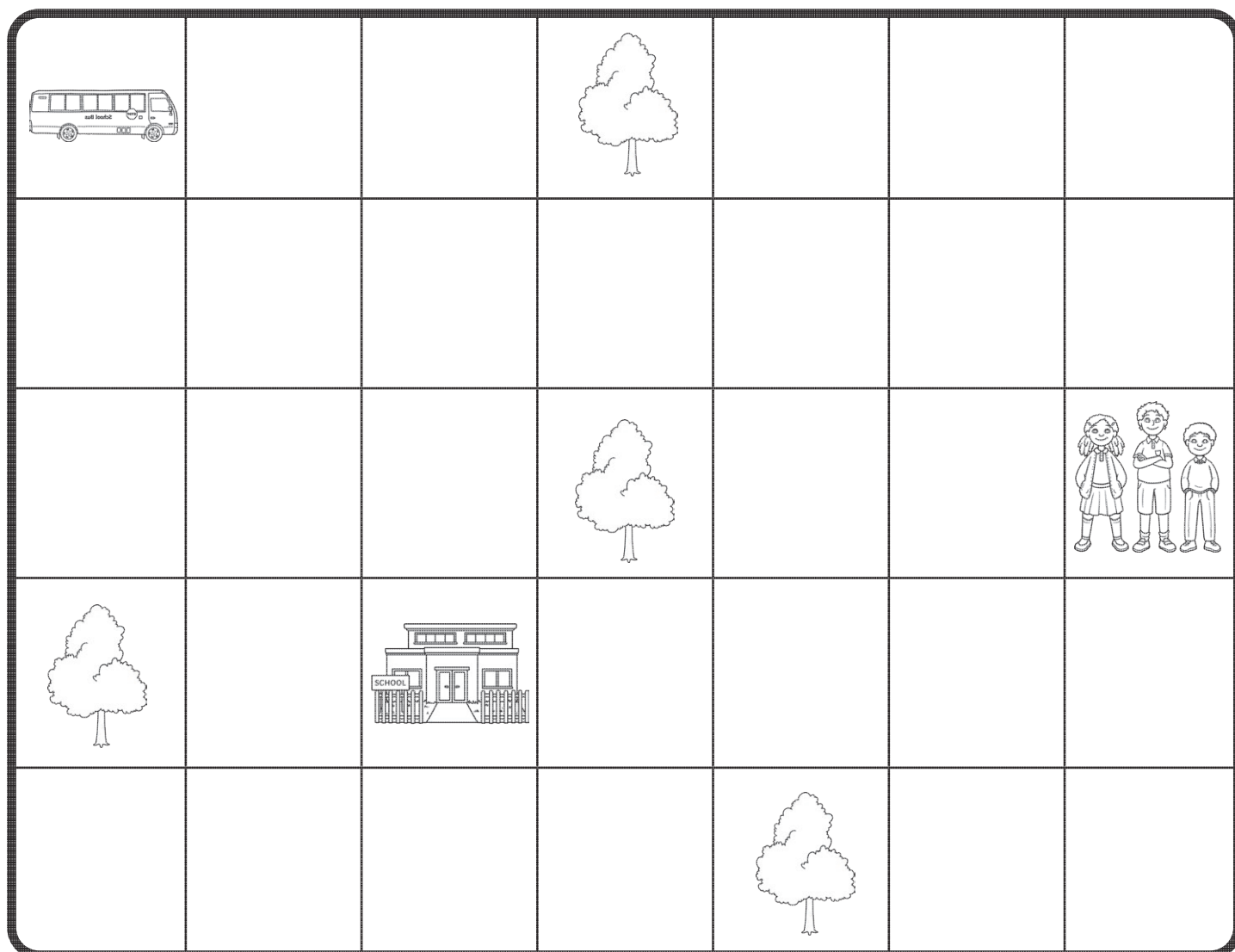


The  means turn around. The dog needs to turn around before he can walk. He needs to fetch his bone and return to his kennel.



simplified solution





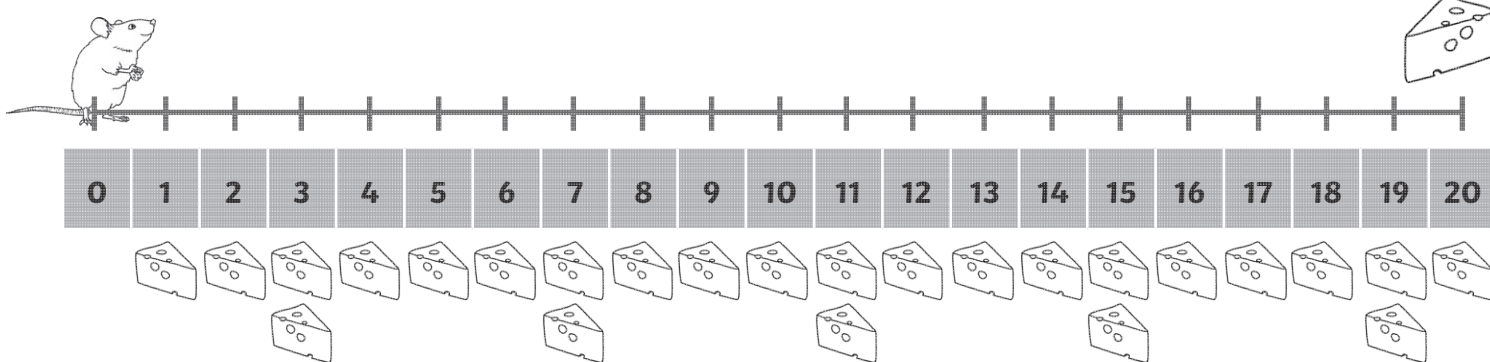
Write the code for the bus to pick up the children and take them to school.

--	--	--	--	--	--	--	--	--	--	--	--	--

Simplify the code if you can.

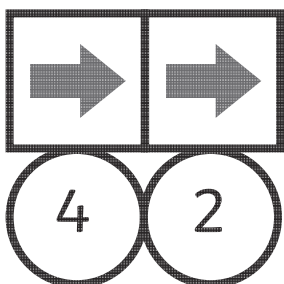
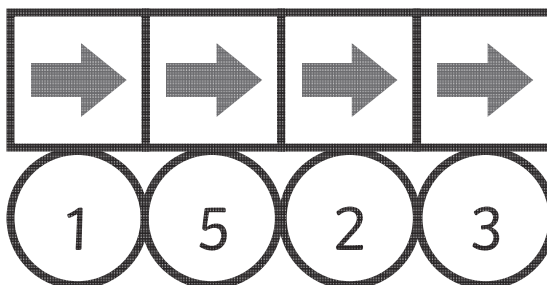
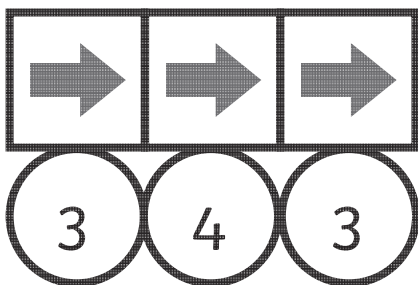
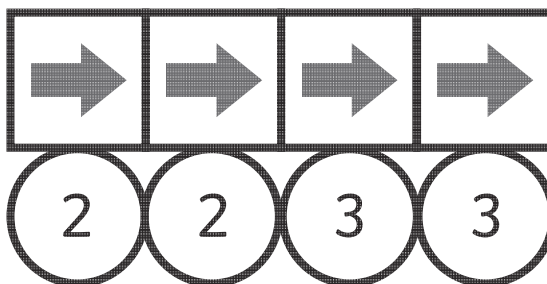
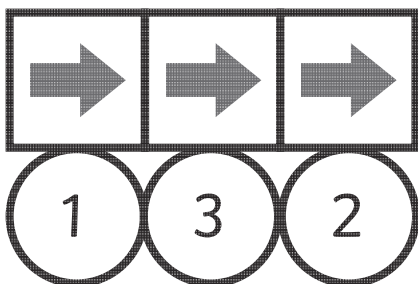
--	--	--	--	--	--	--	--	--	--	--	--	--

Coding Mathematics



The mouse always starts at 0.

How many blocks of cheese will the mouse collect if he follows these codes?



Components of a Robot

Instructions: Colour and use the words below to label the robot parts.

sensors

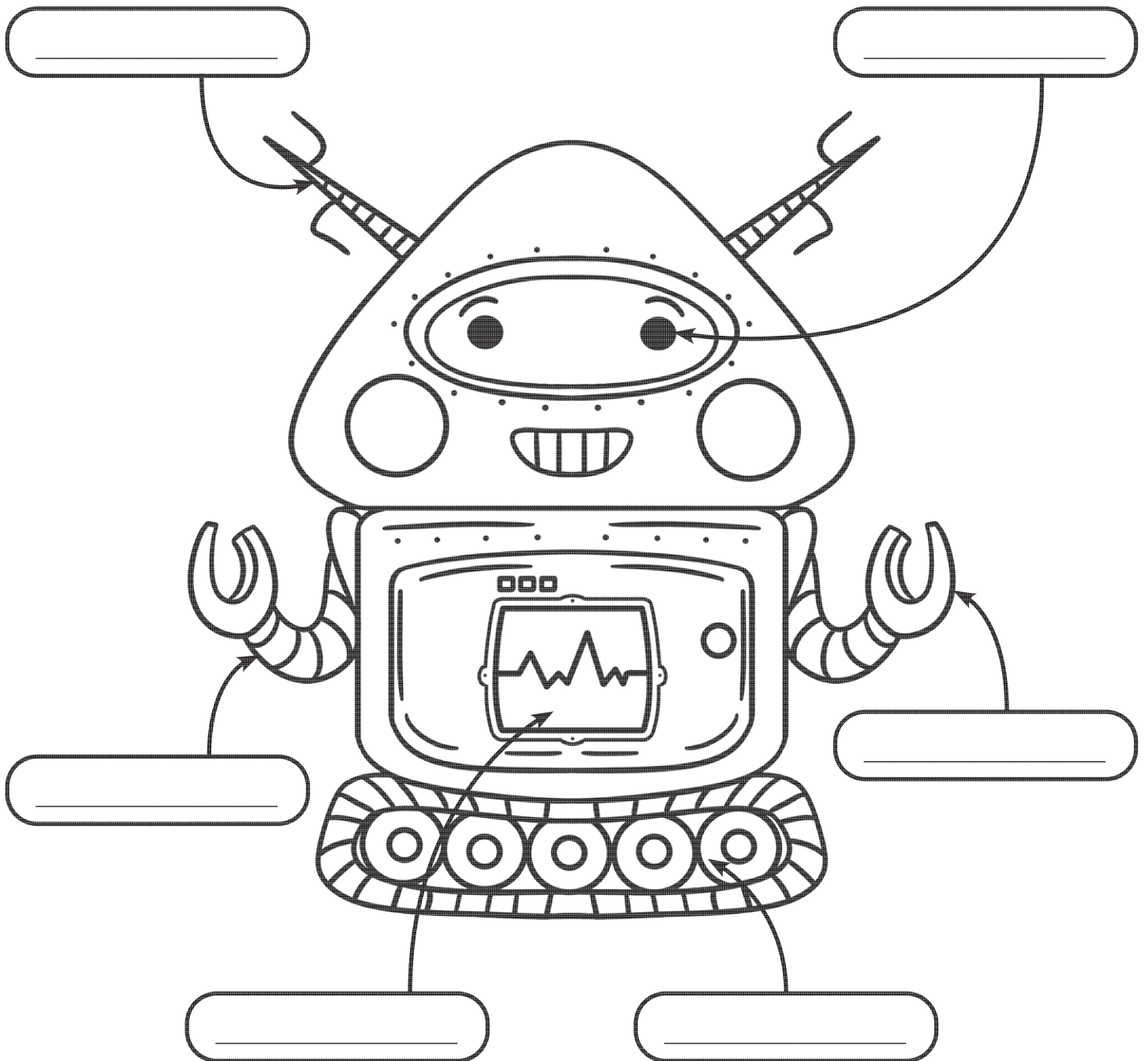
grippers

cameras

arm

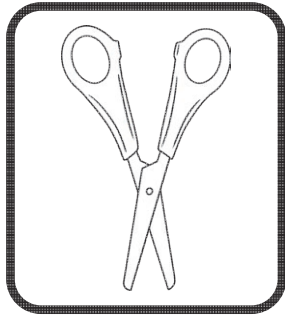
computer

wheels



How to Weave Paper

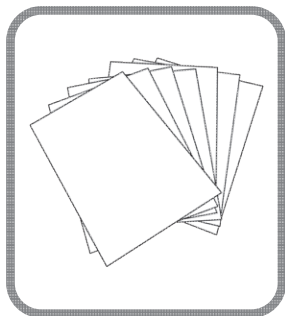
You will need:



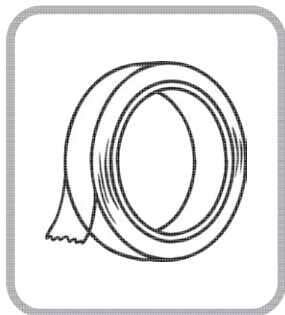
Scissors



Glue



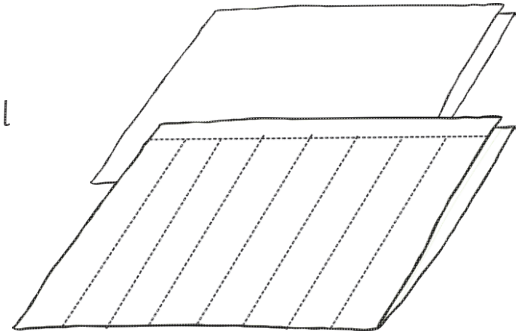
Coloured paper



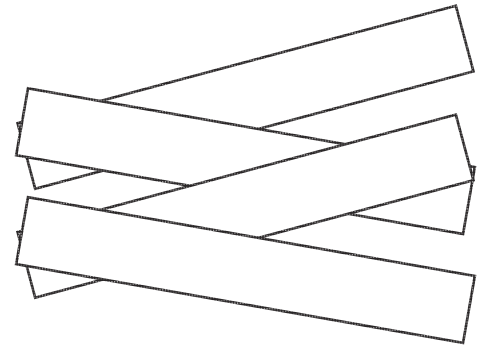
Sticky tape

Instructions:

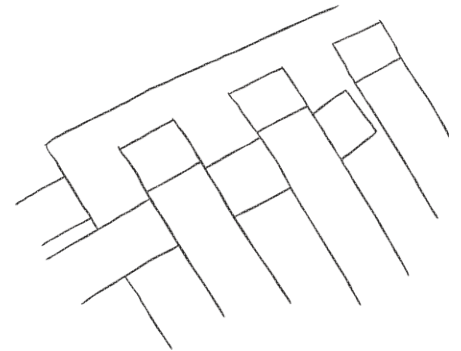
1. First, fold a piece of paper in half and cut slices into it. Be careful not to cut all the way through it and leave about a centimeter of the edge remaining.



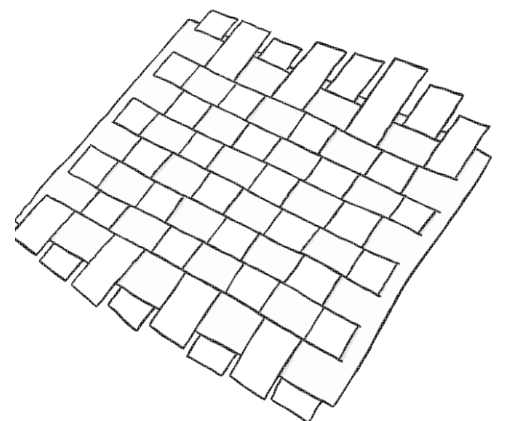
2. Next, cut complete strips of the same width from a second piece of paper. Use 2 colours of paper if you wish.



3. Now, thread the strips into the piece of paper you have sliced by weaving in and out.



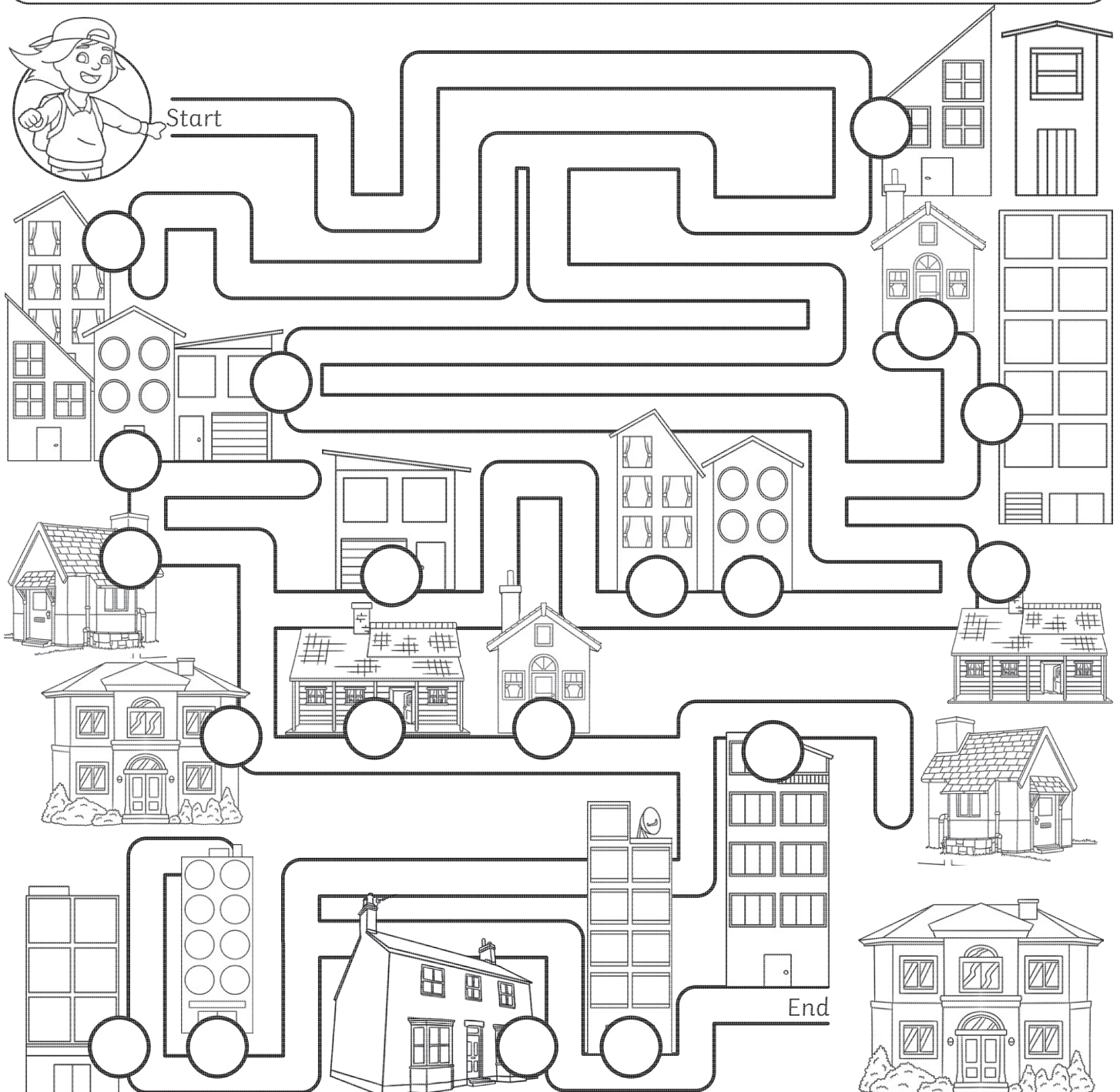
4. Glue or tape the edges so that the strips of paper don't slip out. You can try using your woven paper to decorate cards or even diaries and notebooks!



Digital Footprints

Whatever you do online leaves a 'footprint'. This remains forever and people who want to, can see where you have been and what you have been doing!

Instructions: Find your way to the end of the maze. Each time you pass a house, write the name or draw a picture of a place you visited online, an app you used or a game you played. For example: if you used WhatsApp draw that on a house; if you played Sonic draw that on a house.



Internet Safety

Do NOT share these with anyone online.

Colour in these words to help you remember.

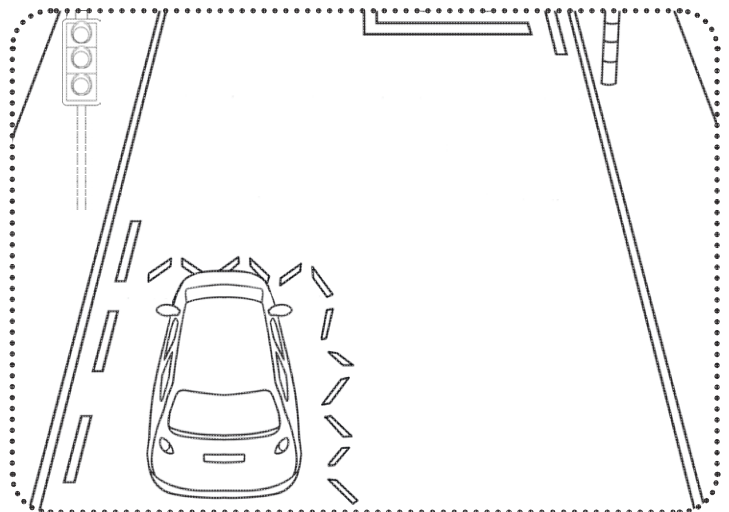
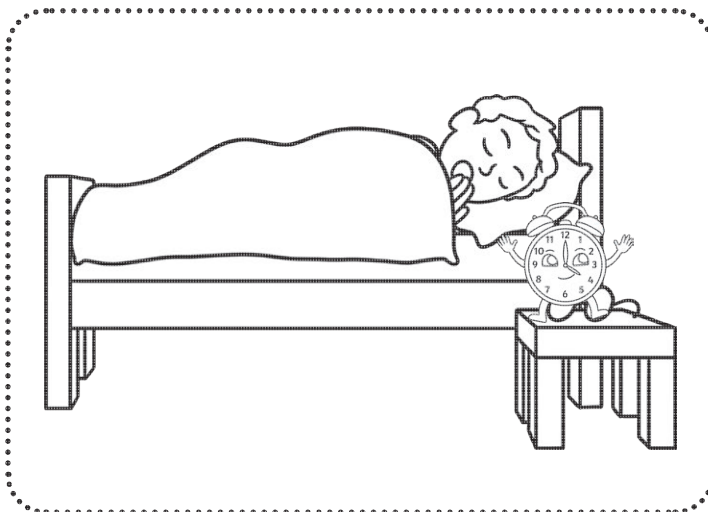
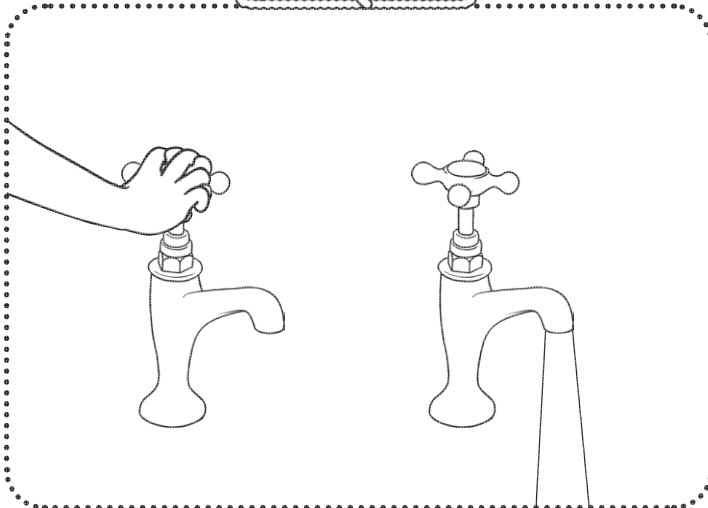
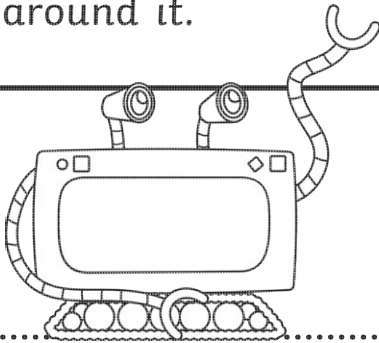
name password
family names photos
birthday address
username school

Input Events

An input event is an action that begins a sequence – the power on button.

Instructions:

In each of these, identify the input event by putting a circle around it.



Three Dot Colour Code

   a	   e	   i	   o	   u
---	--	--	---	--

Decode the words and draw a picture in the block.

b				l l			
d				c k			
d				g			
				n t			
t				n			
			n				
c							
b							k
f							t
	s					n	

Three Dot Colour Code

  	  	  	  	  
a	e	i	o	u

Write the following words using the code.

cat	
fun	
egg	
bun	
pot	
bin	
foot	
bike	
over	
peel	