

5

A load of rubbish



Arfan and Beth are next-door neighbours. One Saturday they meet at the local recycling centre. Arfan has brought a load of newspapers to the paper bins. Beth has brought a load of bottles to the bottle bank.

Arfan and Beth think it would be a good idea to form a recycling group. They hope to persuade other neighbours to recycle their waste.

Talk about it

Do you recycle rubbish?

What different ways are there to get rid of rubbish?

What kinds of rubbish can you recycle?

What kinds of rubbish can you not recycle?

What numeracy skills are required for recycling rubbish?

What are the advantages of recycling rubbish?

What are the disadvantages of recycling rubbish?

These are the skills you will practise in this unit.

Which are the most useful for you? Tick the boxes.

- ☐ Extracting information from lists
- ☐ Sorting and classifying objects
- ☐ Constructing representations and diagrams

Skill code

HD1/E1.1

HD1/E1.2

HD1/E1.3

On my list

Everyone finds it useful to keep lists.

What lists do you find useful?

What other lists can you think of?

Arfan keeps a list of the things he must do today.

TO DO LIST

- ☐ Contact rubbish tip
- ☐ Take rubbish to tip
- ☒ Collect prescription
- ☐ Write letter home
- ☐ Meet Beth and Cory



Activity 1

- 1 How many items does Arfan have on his list?
- 2 What is the first item on Arfan's list?
- 3 What is the second item on Arfan's list?
- 4 Who is Arfan meeting today?
- 5 Why do you think one of the boxes is ticked?



Activity 2

- 1 Make your own list of things to do today.

TO DO LIST

- ☐
- ☐
- ☐
- ☐
- ☐

- 2 Give your list to another person. Ask them some questions about your list.

Arfan also keeps a list of things he must do this week

Monday	Tuesday	Wednesday	Thursday	Friday
<i>Take rubbish to tip</i> <i>Meet Beth and Cory</i>		<i>Dentist appointment</i> <i>Meet Edward</i>	<i>Return library books</i>	<i>Visit grandmother</i>



Activity 3

- 1 How many items does Arfan have on his list?
- 2 What is Arfan doing on Thursday?
- 3 What day is Arfan's dentist appointment?
- 4 Which people will Arfan meet this week?
- 5 Complete Arfan's diary to include the following:
 Take cat to the vet on Tuesday.
 Go to the cinema on Friday night.
 Meet Farooq after going to the library.



Activity 4

- 1 Make your own list of things to do this week.

Monday	Tuesday	Wednesday	Thursday	Friday

- 2 Give your list to another person. Ask them some questions about your list.



Review

Do you need more practice extracting information from lists?

Yes ☐ No ☐

For more work on this, go to H1 (page 13).

Contacting the Council

Arfan needs to contact the rubbish tip. He wants to find out when the tip is open.

He looks in the Council Directory to find the information.

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To find the correct number, Arfan places a ruler under the word 'rubbish'.



Activity 5

Use a ruler to help you to answer the following questions.

- 1 What is the page number for education?
- 2 What is the page number for Social Services?
- 3 What information will you find on page 10?
- 4 On what page would you find health information?.....

Arfan finds this list of rubbish tips on page 12.

Your local rubbish tips

	<i>Telephone</i>
Amble	852 834
Bamburgh	852 902
Haltwhistle	853 205
Ninebanks	852 947
Ponteland	854 384
Rochester	857 838
Wallsend	854 070



Activity 6

- 1 How many rubbish tips are listed in the directory?
- 2 What is the telephone number of the rubbish tip in Ninebanks?
.....
- 3 What is the telephone number of the rubbish tip in Wallsend?
.....
- 4 Which rubbish tip has the telephone number 857 838?



Activity 7

Here are the opening times for Arfan's nearest rubbish tip.

AMBLE RUBBISH TIP Amble Lanes, N4 4DH		
Monday	Open	8 o' clock to 4 o' clock
Tuesday	Open	8 o' clock to 4 o' clock
Wednesday	Open	8 o' clock to 1 o' clock
Thursday	Closed	
Friday	Open	8 o'clock to 4 o' clock
Saturday	Closed	
Sunday	Closed	

The list shows that on Thursday the tip is closed all day.

On Friday the tip is open from 8 o'clock to 4 o'clock.

- 1 On which days is the rubbish tip open?
- 2 On which days is the rubbish tip closed?
- 3 What time does the rubbish tip open on a Monday?
- 4 What time does the rubbish tip close on a Monday?
- 5 What time does the rubbish tip close on a Wednesday?



Review

Do you need more practice extracting information from lists?

Yes ☐

No ☐

For more work on this go to H3 (page 13) .

This work links to mini-project M1 (page 16).

Paper chase

Beth collects paper for her local paper bank. Here are two types of paper.

The paper can be divided into newspapers and magazines.

Which are newspapers and which are magazines?



Activity 8

Beth carefully places the paper into different bags.

Place these papers into the correct bags. The first one has been done for you



Activity 9

Cliff takes bottles to his local bottle bank. Here are the bottles he will take this week.



- 1 How many green bottles are there?
- 2 How many brown bottles are there?
- 3 How many bottles are there altogether?

Here are two more bottles.



- 4 Describe these bottles.

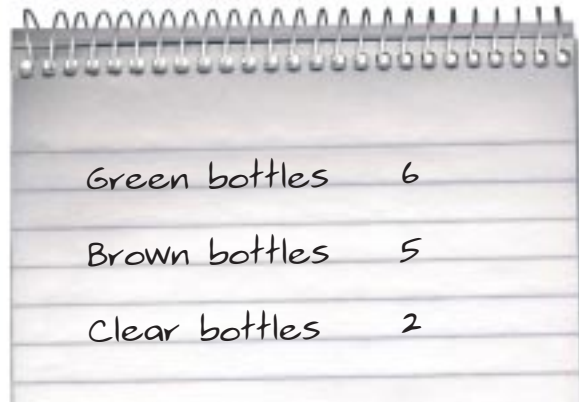
.....

.....



Activity 10

Cliff makes a list of his bottles.



Green bottles	6
Brown bottles	5
Clear bottles	2

- 1 How many green bottles are there?
- 2 How many brown bottles are there?
- 3 How many clear bottles are there?
- 4 How many clear and brown bottles are there?
- 5 Draw a picture in the space below to show the bottles.



Activity 11

Davin also takes his bottles to the bottle bank. The bottle bank has different sections for the different colours.

Davin carefully places the bottles in the different sections.

Place these bottles into the correct sections of the bottle bank. The first one has been done for you.



Review

Do you need more practice sorting and classifying objects?

Yes ☐

No ☐

For more work on this, go to H2 (page 14).

This work links to mini-projects M2 and M3 (page 16).

Giving to charity

Edward has been collecting crisp packets for charity.

Here are some of the crisp packets he has collected so far.



There are different ways to sort the crisps.

You could classify them by **make** (or brand)

What makes of crisp are there?

.....

You could classify them by **flavour**.

What flavours of crisp are there?

.....

You could classify them by **size**.

What sizes of crisp packet are there?

.....

Check your answers with your teacher.



Activity 12

Crispy Crisps is donating money to charity for each empty packet collected.

1 How many cheese and onion crisp packets has Edward got?

2 How many crisp packets are normal size?

3 How many Crispy Crisps packets are there?

4 Draw a circle around all the Crispy Crisps packets.

5 How many crisp packets cannot be used to raise money?

6 How many of the Crispy Crisps packets are normal size?

7 How many of the Crispy Crisps packets are family size?



Activity 13

Fleur has also been collecting crisp packets for charity.

Here are some of the crisp packets she has collected so far.



- 1 How many packets of cheese and onion crisps are there?
- 2 How many packets of salt and vinegar crisps are there?
- 3 How many family size packets are there?
- 4 How many Crispy Crisps packets are cheese and onion?
- 5 How many Crunchy Crisps packets are family size?



Review

Do you need more practice sorting and classifying objects?

Yes ☐ No ☐

For more work on this, go to E1 (page 15).

This work links to mini-project M2 (page 16).

Sorting the rubbish

Arfan is looking at the contents of his rubbish bin. What items of rubbish can you see in the rubbish bin?

Arfan decides to put the rubbish into piles. Here are all the bottles.



Activity 14

A better way to show this information might be as follows:



This is called a **pictogram**.

- 1 How many green bottles are there?
- 2 How many clear bottles are there?
- 3 How many brown bottles are there?
- 4 Which bottle is the most common?



Activity 15

Here are some cans.



Show this information as a pictogram on this grid below. Draw all the cans the same size.

Colour of cans

Blue cans						
Orange cans						
Silver cans						

Key:  represents one can



Activity 16


Here are some packets of crisps.

Show this information as a pictogram.



Crisp flavours

Plain crisps						
Cheese and onion crisps						
Salt and vinegar crisps						

Key:  = 1 crisp packet




Activity 17

Arfan carries out a survey to see how many people recycle the rubbish.

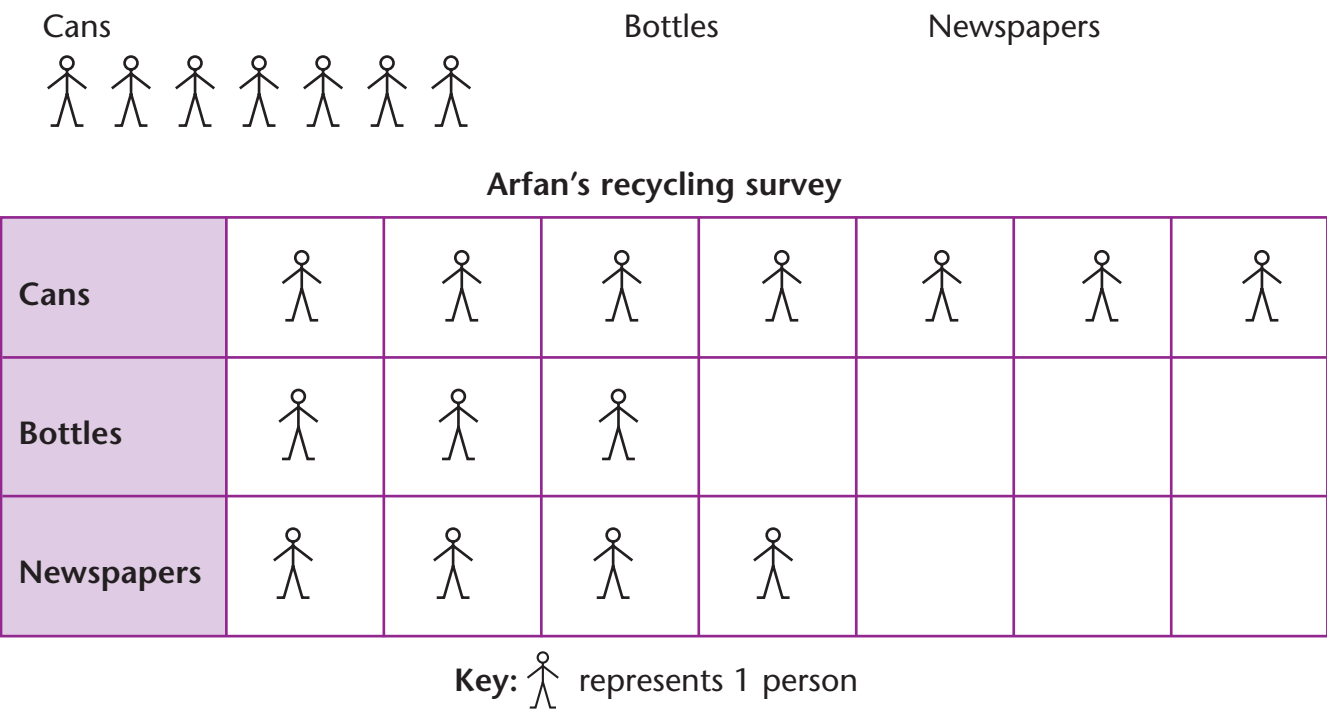
His results are given in the following table.

Recycle cans?	7 people
Recycle bottles?	3 people
Recycle newspapers?	4 people

Arfan uses a pictogram to show this information.

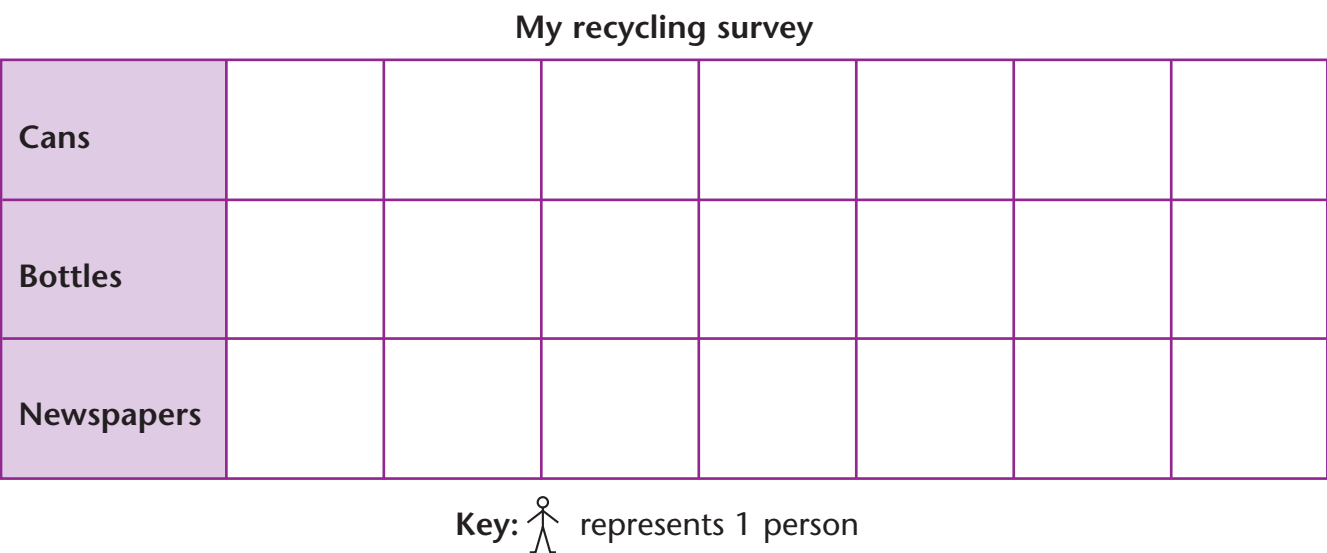
He uses a  to represent one person.


1 Draw Arfan's pictogram to show these results. The first part has been completed for you.



2 Now carry out your own survey on recycling.

Draw a pictogram to show your results. Use the grid below.





Review

Do you need more practice sorting and classifying objects?

Yes ☐ No ☐

For more work on this, go to H4 (page 14) or E2 (page 15).

This work links to mini-project M3 (page 16).

Activity H1

Here is Andrea's shopping list.



Write down how many cans of each Andrea wants to buy.

1 spaghetti 2 dog food 3 baked beans

How many cans does she want to buy altogether?

Activity H2

Place these bottles into the correct sections of the bottle banks. The first one has been done for you.





Activity H3

Beth uses this directory in the hotel where she works.

<u>TELEPHONE</u>	
DEPARTMENT	EXTENSION NUMBER
Duty manager	4346
Fitness centre	4452
Housekeeping	4360
Porter	4345
Reception	4340
Restaurant	4572

Use the directory to find the following extension numbers.

- 1 What is the extension number for reception?
- 2 What is the extension number for the restaurant?
- 3 Who will you find on extension number 4345?
- 4 Who will you find on extension number 4346?



Activity H4



- 1 Show this information as a pictogram on this table.

Jarad's drink cans

Key:  represents 1 can



Extension



Activity E1

Katie has been collecting crisp packets for charity.

Here are some of the crisp packets she has collected so far.



- 1 How many packets of plain crisps are there?
- 2 How many packets of salt and vinegar crisps are there?
- 3 How many normal size packets are there?
- 4 How many Crunchy Crisps packets are cheese and onion?
- 5 How many Crispy Crisps packets are family size?



Activity E2

Beth carries out a survey to see how many people recycle their rubbish.

Five people recycle cans, four recycle bottles and three recycle newspapers.

Draw a pictogram to show these results.

What people recycle

Cans							
Bottles							
Newspapers							

Key: represents 1 person



Mini-projects



Activity M1

Collect a list of things that can be recycled.

A few examples are already given...

Bottles to the bottle bank
Paper to the paper bins
Clothes to the secondhand shop



Activity M2

Look at the contents of your rubbish bin.

What items of rubbish can you find?

Classify your rubbish as paper, metal, glass, plastic and food.



Draw a picture or write a list to show the contents of your rubbish bin.

Compare your picture or list with another person's.

What do you notice?



Activity M3

What recycling facilities are there in your area?

Have you ever used these facilities?

Carry out a survey. See how many people recycle bottles, cans, newspapers and aluminium.

Show this information as a pictogram.

Check it

Activity C1

Beth keeps a list of things she must do this week.

Monday	Tuesday	Wednesday	Thursday	Friday
Go to bottle bank Meet Arfan and Cory	Visit health centre		Work in charity shop Lunch with Gwen	Work in charity shop

- How many items does Beth have on her list?
- What is Beth doing on Tuesday?
- Which people will Beth meet this week?
- What days does Beth work at the charity shop?
- Complete Beth's diary to include the following:
Work in hotel on Wednesday.
Interview at art gallery on Friday.
Meet Hannah after visiting health centre.

Activity C2

BAMBURGH LIBRARY		
Bamburgh High Street, N11 7PL		
Monday	Closed	
Tuesday	Open	9 o' clock to 4 o' clock
Wednesday	Open	9 o' clock to 4 o' clock
Thursday	Closed	
Friday	Open	9 o' clock to 7 o' clock
Saturday	Open	9 o' clock to 4 o' clock
Sunday	Closed	

- Which days is the library closed?
.....
- Is the library open on a Tuesday morning?
.....
- What time does the library open on a Friday?
.....
- What time does the library close on a Friday?
.....



Activity C3

Beth makes a list of her bottles.

Green bottles	4
Brown bottles	7
Clear bottles	2

- 1 How many green bottles?
- 2 How many brown bottles?
- 3 How many clear bottles?
- 4 Draw a pictogram to show the number of bottles.

Beth's bottles

Green bottles								
Brown bottles								
Clear bottles								

Key: represents 1 bottle

How am I doing?

Now look back at the skills listed on page 1.

Then complete the sentences below.

I am confident with

.....
.....

I need more practice with

.....

Date

Activity 1

- 1 5
- 2 Contact rubbish tip
- 3 Take rubbish to tip
- 4 Beth and Cory
- 5 Arfan has already collected the prescription.

Activity 2

Check with teacher.

Activity 3

- 1 6
- 2 Returning library books
- 3 Wednesday
- 4 Beth, Cory, Edward and his grandmother
- 5

Monday	Tuesday	Wednesday	Thursday	Friday
Take rubbish to tip Meet Beth and Cory	Cat to vet	Dentist appointment Meet Edward	Return library books Meet Farooq	Visit grandmother Go to cinema

Activity 4

Check with teacher.

Activity 5

- 1 5
- 2 14
- 3 Housing
- 4 8

Activity 6

- 1 7
- 2 852 947
- 3 854 070
- 4 Rochester

Activity 7

- 1 Monday, Tuesday, Wednesday and Friday
- 2 Thursday, Saturday and Sunday
- 3 8 o'clock
- 4 4 o'clock
- 5 1 o'clock

Activity 8



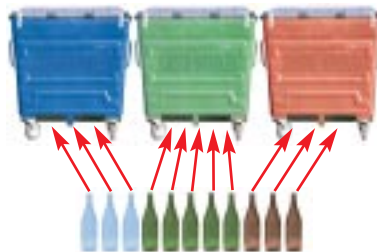
Activity 9

- 1 3
- 2 2
- 3 5
- 4 Check with your teacher.

Activity 10

- 1 6
- 2 5
- 3 2
- 4 7
- 5 Check with your teacher.

Activity 11



Activity 12

Makes are Crispy Crisps and Crunchy Crisps. Flavours are plain, salt and vinegar and cheese and onion.

Sizes are normal and family

- 1 3
- 2 5
- 3 5
- 4



- 5 2
- 6 3

Activity 13

- 1 3
- 2 3
- 3 5
- 4 1
- 5 3



Activity 14

- 1 5
- 2 6
- 3 3
- 4 clear

Activity 15

Colour of cans

Blue cans	x	x	x	x	x	
Orange cans	x	x	x			
Silver cans	x	x	x			

Key: x represents 1 can

Activity 16

Crisp flavours

Plain crisps	■	■	■			
Cheese and onion crisps	■	■	■	■	■	
Salt and vinegar crisps	■	■	■	■		

Key: ■ represents 1 crisp packet

Activity 17

1

Arfan's recycling survey

Cans	👤	👤	👤	👤	👤	👤	👤
Bottles	👤	👤	👤				
Newspapers	👤	👤	👤	👤			

Key: 👤 represents 1 person

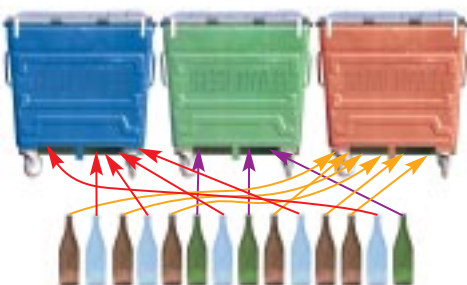
2 Check with teacher

Help

Activity H1

- 1 3
- 2 2
- 3 2
- 4 8

Activity H2



Activity H3

- 1 4340
- 2 4572
- 3 Porter
- 4 Duty manager

Activity H4

Jarad's drink cans

Cola	x	x	x	x	x		
Lemonade	x	x	x				
Water	x	x	x	x			

Key: x represents 1 can

Extension

Activity E1

- 1 3
- 2 2
- 3 5
- 4 2
- 5 2

Activity E2

What people recycle

Cans	👤	👤	👤	👤	👤		
Bottles	👤	👤	👤	👤			
Newspapers	👤	👤	👤				

Key: 👤 represents 1 person

Mini-projects

M1, M2, M3

Check with teacher.

Check it

Activity C1

- 1 6
- 2 Going to health centre
- 3 Arfan, Cory and Gwen
- 4 Thursday and Friday
- 5

Monday	Tuesday	Wednesday	Thursday	Friday
Go to bottle bank	Trip to health centre	Work in hotel	Work in charity shop	Work in charity shop
Meet Arfan and Cory	Meet Hannah		Lunch with Gwen	Interview at art gallery



Activity C2

- 1 Monday, Thursday and Sunday
- 2 Yes
- 3 9 o'clock
- 4 7 o'clock

Activity C3

- 1 4
- 2 7
- 3 2
- 4

Beth's bottles

Green bottles	x	x	x	x				
Brown bottles	x	x	x	x	x	x	x	
Clear bottles	x	x						

Key: x represents 1 bottle