

## Home Learning Pack

This pack contains 10 maths and literacy tasks, which are to be completed daily. At the beginning of the 10 sheets there are instructions of how to complete each sheet and which one is to be done on which day.

There are 5 guided reading sheets. Which are to be every other day. In the day in between the children are to read a book of their choice.

There are 4 science sheets and 5 topic sheets to complete.

These are to be completed on alternative days.

There is one science sheet, which has a list of suggested experiments on to be completed over the two weeks.

## **Maths**

10, 10 minute activity mats to complete with answers - these have a mixture of questions on one sheet. To complete one a day as a warm-up.

### **Day 1**

Addition - children need to use the column method to answer each question.

### **Day 2**

Subtraction - children need to use the column method to answer each question.

### **Day 3**

Short multiplication - column method, the first one has been done as an example

### **Day 4**

Long multiplication - column method, the first one has been done as an example with an explanation at the bottom explaining each step to be taken

### **Day 5**

Division - bus stop method, first one has been done as an example

### **Day 6**

Place value - put the given numbers onto place value grid and answer the questions using the grid. Then follow the instructions on the lily-pads to find the final number

### **Day 7**

Times tables - complete the times tables grids, some have been done as examples

### **Day 8**







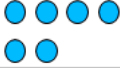



Positive and negative numbers - use the table to answer the questions. An answer sheet has been provided for this sheet

### **Day 9**

Fractions - answer each question on the sheet. The numerator (the top digit) represents the parts you have, the denominator (the bottom number) represents the amount of parts that makes the whole.

### **Day 10**

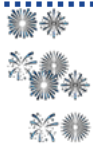
Fractions - add and subtract fractions, the denominator does not change. The children can colour on the bars to help them if needed

Tth	Th	H	T	O
				
				

What addition calculation does the place value chart represent?  
Can you give the other 3 fact family questions that relate to this question?



6,722 people attend a rugby match on Saturday. Sunday's match saw 14,566 people attend and Bank holiday Monday saw 7,432 attend. How many people attended altogether?



I buy a box of sequins that has 43,236 sequins in. I add my smaller pack of sequins, which holds 12,993, to the box. My sister adds a further four thousand, six hundred and eleven sequins. How many sequins do I have altogether?

Calculate the answer to:  
thirty-eight thousand, four hundred and ninety-one add seventeen thousand, nine hundred and sixty-nine.



A business has a balance in their account of £65,239. They deposit a further £15,987 in their account. What is their final balance that day?

I have 5 ten thousand place value counters, 32 thousands, 1 hundred and 68 ones. I add this to the number forty-nine thousand, five hundred and eighty-eight. What is my new number?



Rosie earns £37,239 a year. Leanna earns £21,324 a year. Malachi earns £21,324 every 6 months. What is the amount of their total annual salary?



Use the column method for subtraction to answer the following questions.

10,000s	1,000s	100s	10s	1s

$47,301 - 23,562 =$

$87,109 - 69,003 =$

Tth	Th	H	T	O

10,000s	1,000s	100s	10s	1s

$57,591 - 19,097 =$

$64,523 - 46,873 =$

Tth	Th	H	T	O



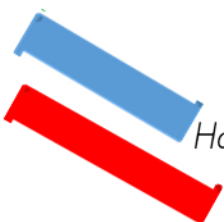
A plane is flying at 42,473 feet.  
During the flight the plane descends 13,254 feet.  
What height is the plane now flying at?




Zach earns £69,524 pounds a year.  
Tia earns £57,752 a year.  
How much more money does Zach earn than Tia?




There are 93,725 fans at a football match.  
55,483 fans are male. How many fans are female?

The factory produces ribbons of blue and red colors.  
The factory produced 156,951 metres of blue and red ribbons.  
How many metres of blue ribbon did the factory produce if factory produced 78,543 metres of red ribbon?


$$\begin{array}{r} 725 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 973 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 344 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 226 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 575 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 897 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 919 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 843 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 427 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 784 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 148 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 991 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 987 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 328 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 684 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 143 \\ \times 2 \\ \hline \end{array}$$

1.				
		1	6	1
x			2	3

2.				
		2	3	2
x			2	6

3.				
		6	1	4
x			1	8

4.				
		9	6	9
x			9	5

5.				
		7	4	0
x			9	6

6.				
		3	6	2
x			5	8

7.				
		3	0	5
x			7	1

8.				
		3	7	0
x			6	4

9.				
		5	8	4
x			1	5

10.				
		8	5	1
x			8	9

11.				
		7	4	9
x			9	8

12.				
		4	8	2
x			2	3

13.				
		6	4	6
x			1	0

14.				
		7	0	9
x			1	7

15.				
		9	1	4
x			5	7

16.				
		7	1	8
x			4	5

1.							
2	4	1					

2.							
8	2	5	7				

3.							
9	3	9	9				

4.							
5	2	1	4				

5.							
7	5	4	5				

6.							
9	8	6	7				

7.							
5	4	3	3				

8.							
5	1	3	7				

9.							
7	4	3	9				

$$. 429 \div 3 =$$

$$592 \div 4 =$$

$$. 560 \div 4 =$$

$$684 \div 2 =$$

$$. 615 \div 5 =$$

$$328 \div 4 =$$

$$. 764 \div 4 =$$

$$648 \div 8 =$$

$$. 288 \div 3 =$$

$$684 \div 6 =$$

$$. 670 \div 5 =$$

$$954 \div 9 =$$

$$. 488 \div 2 =$$

$$637 \div 7 =$$

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

345,110    112,669

709,834    819,602

1. What does the digit 4 represent in the number 345,110?
2. What does the digit 4 represent in the number 709,834?
3. The digit 7 in 709,834 represents 70,000. True or false?
4. What does the digit 6 represent in 819,602?
5. The digit 2 in 112,669 represents 2 thousand. True or false?
7. The digit 2 in 819,602 represents 2 tens. True or false

Lily Pad Leap!

451,423

Add  
10

Subtract  
100

Add  
10,000

Add  
10,000

What number  
do you finish on?

827,401

subtract  
100,000

Add  
1,000

Add  
1

subtract  
10,000



x	2	5	10
2			
5			
3			
4			
10			
9			
7			
8			
6			

x	4	6	3
8			
3			
7			
4			
2			
10			
5			
9			
6			

	2	3	5	1
3	6	9		
1	2			
2				
4				

	10	6	7	9
9	90	54		
8	80			
7				
6				

	2	3	5	1
5				
3				
2				
4				

	4	5	1	3
3				
2				
1				
4				

	5	4	2	3
4				
1				
3				
5				

	7	9	8	10
10				
6				
7				
8				

	9	7	6	8
8				
9				
10				
6				

Our playground temperatures during  
November at 2am.

1st	4°C	11th	-4°C	21st	-4°C
2nd	2°C	12th	-5°C	22nd	-7°C
3rd	4°C	13th	-5°C	23rd	-6°C
4th	3°C	14th		24th	-8°C
5th	0°C	15th	-6°C	25th	-8°C
6th	-1°C	16th	-4°C	26th	-4°C
7th	0°C	17th	-3°C	27th	
8th	-3°C	18th	-2°C	28th	-9°C
9th		19th	-2°C	29th	-7°C
10th	-4°C	20th	-4°C	30th	-7°C

How many degrees does the temperature fall from  
November 1st to November 5th?

On the 9th November the temperature rises by 2 degrees.  
What is the new temperature? Fill in the table.

How many degrees does the temperature rise from  
November 15th to November 19th?

On the 14th November the temperature falls by 2 degrees.  
What is the new temperature? Fill in the table.

How many degrees does the temperature fall from  
November 21st to November 28th?

On the 27th November the temperature falls by 4 degrees.  
What is the new temperature? Fill in the table.

Our playground temperatures during  
November at 2am.

1st	4°C	11th	-4°C	21st	-4°C
2nd	2°C	12th	-5°C	22nd	-7°C
3rd	4°C	13th	-5°C	23rd	-6°C
4th	3°C	14th	-7°C	24th	-8°C
5th	0°C	15th	-6°C	25th	-8°C
6th	-1°C	16th	-4°C	26th	-4°C
7th	0°C	17th	-3°C	27th	-8°C
8th	-3°C	18th	-2°C	28th	-9°C
9th	-2°C	19th	-2°C	29th	-7°C
10th	-4°C	20th	-4°C	30th	-7°C

How many degrees does the temperature fall from  
November 1st to November 5th? -4 degrees

On the 9th November the temperature rises by 2 degrees.  
What is the new temperature? Fill in the table.

How many degrees does the temperature rise from  
November 15th to November 19th? 4 degrees

On the 14th November the temperature falls by 2 degrees.  
What is the new temperature? Fill in the table.

How many degrees does the temperature fall from  
November 21st to November 28th? -5 degrees

On the 27th November the temperature falls by 4 degrees.  
What is the new temperature? Fill in the table.

I can show an understanding of a fraction.

A) Label the fraction with the correct vocabulary and give a definition for each word.

$$\frac{2}{4}$$

← The \_\_\_\_\_ tells us \_\_\_\_\_ . us \_\_\_\_\_ .

B) Look at the following visual representations of fractions. The \_\_\_\_\_ tells us \_\_\_\_\_ . us \_\_\_\_\_ .

representations of fractions.

What fraction does each image show?














C) Always, sometimes, or never. Circle your answer and explain your reasons.

\_\_\_\_\_ times or never. Circle and explain your reasons.

If I split a shape into 4 parts I have split it into quarters.



always sometimes never

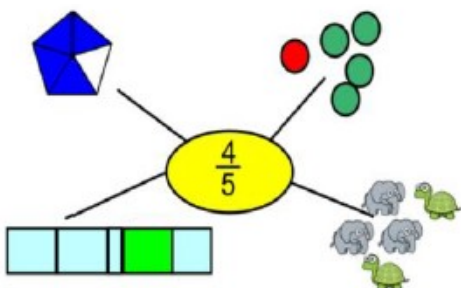
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D)

Circle the representations of  $\frac{4}{5}$  which are incorrect. Explain your answer.




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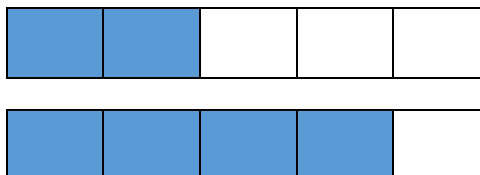
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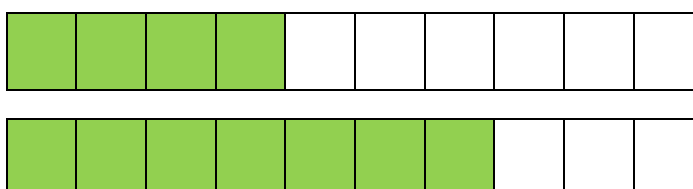
I can add and subtract fractions.

A) Using the bar models calculate the answer to the following number sentences. When needed give your answer as a mixed number and improper fraction.

$$\frac{2}{5} + \frac{4}{5} = \boxed{\phantom{00}} = \boxed{\phantom{00}}$$



$$\frac{4}{10} + \frac{7}{10} = \boxed{\phantom{00}} = \boxed{\phantom{00}}$$



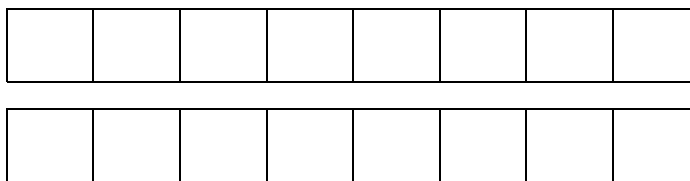
$$\frac{6}{10} - \frac{3}{10} = \boxed{\phantom{00}} = \boxed{\phantom{00}}$$



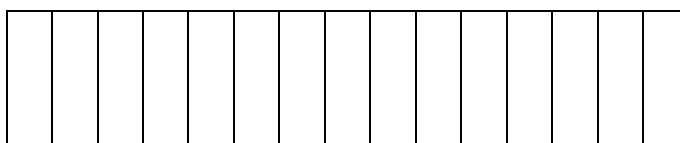
$$\frac{7}{12} - \frac{4}{12} = \boxed{\phantom{00}} = \boxed{\phantom{00}}$$



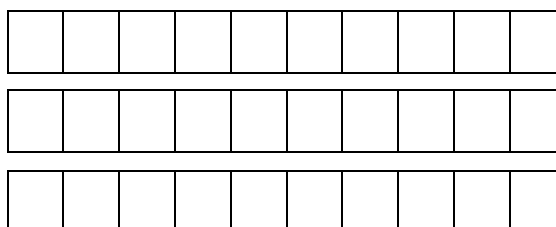
$$\frac{7}{8} + \frac{5}{8} = \boxed{\phantom{00}} = \boxed{\phantom{00}}$$



$$\frac{13}{15} - \frac{7}{15} = \boxed{\phantom{00}} = \boxed{\phantom{00}}$$



$$\frac{6}{10} + \frac{3}{10} + \frac{3}{10} = \boxed{\phantom{00}} = \boxed{\phantom{00}}$$



## Literacy

### Day 1

Fronted adverbials - Fronted adverbials can be of time place or manner and they go at the beginning of a sentence with a comma after.

### Day 2

Parenthesis - Parenthesis adds extra information into a sentence. It is shown by two pieces of the same punctuation either side of the information. It can be - - or , , or ( )

### Day 3

Hyphens - hyphens create compound words (two words put together) or to avoid ambiguity

### Day 4

Standard English - Correct forms of English rather than slang

### Day 5

Sentence types - There are three types of sentences: statement (most common), question and command (telling someone to do something).

### Day 6

Past and present - Using the correct form of the verb. First question asks you to circle the second asks you to cross out

### Day 7

Spelling - Correct the spellings in the sentences

### Day 8

Spelling - Correct the spellings in the sentences

### Day 9

Story writing - Write a story about what you think is happening in the story.

### Day 10

Diary - Write a diary entry about your time off school. Remember to include your thoughts and feelings.

## Fronted Adverbials

1a. Circle the sentence below which has used a fronted adverbial.

- A. We all went into the cinema before it rained.
- B. Finally, we all went to the cinema.
- C. We all went to the cinema quickly.



VF

## Fronted Adverbials

1b. Circle the sentence below which has used a fronted adverbial.

- A. Firstly, you should visit the museum.
- B. You should visit the museum before you do anything else.
- C. We will certainly visit the new exhibition.



VF

2a. Insert a comma after the fronted adverbial in the sentence below.

Eventually we all made it to Harriet's birthday party.



VF

2b. Insert a comma after the fronted adverbial in the sentence below.

Sadly Emma lost her dog at the beach.



VF

3a. True or false? The adverbial used in the sentence below is an adverbial of place and can be moved to the front of the sentence.

I bought an expensive chocolate bar from the corner shop.



VF

3b. True or false? The adverbial used in the sentence below is an adverbial of time and can be moved to the front of the sentence.

You will find many tasty snacks in the top cupboard.



VF

4a. Identify which adverbial in the sentence below can be moved to the beginning of the sentence.

I parked my car under the bridge this morning.



VF

4b. Identify which adverbial in the sentence below can be moved to the beginning of the sentence.

The ladies were still dancing in high heels at midnight.



VF

## Recognising Parenthesis

1a. Name the punctuation used for parenthesis in the following sentences.

- A. My neighbour, who is ninety-two years old, was a soldier during the War.
- B. My cousins – who live in Edinburgh – are visiting next weekend.



VF

## Recognising Parenthesis

1b. Name the punctuation used for parenthesis in the following sentences.

- A. Dinosaurs (which are now extinct) lived millions of years ago.
- B. The park, which has a petting farm, is open to the public everyday.



VF

2a. Circle the punctuation used for parenthesis in the sentence below.

The children – who were going to the zoo on a school trip – had to be in school for half past eight.



VF

2b. Circle the punctuation used for parenthesis in the sentence below.

The spotty dog, which lives at the end of our street, chases after the postman.



VF

3a. Underline the parenthesis in the sentence below.

The trim-trail, which had been recently installed in our playground, was enjoyed by all the children.



VF

3b. Underline the parenthesis in the sentence below.

The alien – which was green with yellow eyes – had three heads.



VF

4a. True or false? Commas are used correctly for parenthesis in the sentences below.

	T	F
A. I went to the museum (with my dad) at the weekend.		
B. My brother, who is three years older than me, has just left college.		



VF

4b. True or false? Commas are used correctly for parenthesis in the sentences below.

	T	F
A. The football team, who had just lost a game, were downcast.		
B. Last week, I went to my friend's house for a sleepover.		



VF



I can use hyphens to create compound words

A) What is a compound word?

\_\_\_\_\_

B) Look at the words in the following table. Use the words to create six compound words.

mid	going	dressed	bad
custom	good	September	built
well	looking	tempered	easy

C) Read the following sentences and place a hyphen in the correct place.

- 1) The good looking man was the King of the Nile.
- 2) Cleopatra kept giving her husband the cold shoulder.
- 3) Tutankhamun was a well liked pharaoh.
- 4) Many pharaohs were known to be cold hearted.

D) Look at the following sentences. What is the differences between the two sentences shown.

- 1) I have twenty pound notes.  
I have twenty-pound notes.

- 2) Mike was a man eating shark.  
Mike was a man-eating shark.

Challenge

What does ambiguity mean?

\_\_\_\_\_

I can use the correct forms of standard English.

A) Which sentence is written in Standard English?

Tick *one*.

My friend was tidying the classroom.

☐

Today the children done their school play.

☐

The teachers was going to send a letter next

☐

B) Circle the correct **verb form** in each underlined pair to complete the sentences below.

The last place I saw Jack and Gwen was / were in the playground.

At the museum, there was / were many interesting exhibits.

The bikes was / were lined up for the start of the race.

C) Complete each sentence below with *is* or *are*.

The good news \_\_\_\_\_ that the trip can still go ahead.

I can recognise differences between sentence types.

A) What is a statement?

\_\_\_\_\_

B) What must I punctuate a question with?

\_\_\_\_\_

C) How do I identify a command?

\_\_\_\_\_

D) What must an exclamation start with?

\_\_\_\_\_

E) Which sentence must end with a question mark? Tick one.

What happened that day might never be known ☐

What really happened that day ☐

Someone must know what really happened that day ☐

I'd like to know what happened that day ☐

F) Complete the table below. Only tick one box for each sentence.

Sentence	Question	Statement	Command
In autumn, many trees lose their leaves			
Look at the trees carefully			
Scientists are studying how trees can live for thousands of years			
How can you tell a tree's age			

G) Rearrange the words in the statement below to make it a question. Use only the given words.

Statement: They are listening to music.

Question: \_\_\_\_\_

# Present Perfect and Simple Past Verb Tenses

Circle the correct word or phrase from the brackets to complete each sentence.

e.g. I (have) / has ) been to school today.

1. My friends and I ( has / have ) made a den in the garden.
2. The film ( has / have ) begun so come and sit down.
3. What ( has / have ) you got there?
4. ( Has / Have ) you ever been to France?
5. Mum and Dad ( has / have ) gone to the cinema tonight.
6. The fox ( has / have ) eaten everything out of the bin.
7. James ( has / have ) got blonde hair.
8. We ( hasn't / haven't ) finished our project yet.

Choose the correct word or phrase from the brackets to complete each sentence.

e.g. I ( **went** / ~~have been~~ ) to school yesterday.

1. You need to line up because the bell ( rang / has rung ).
2. Sam had a headache at lunchtime because he ( didn't drink / hasn't drunk ) enough water.
3. If you ( finished / have finished ) your dinner, you can go out to play.
4. I ( haven't / didn't have ) any money so I couldn't buy an ice-cream.
5. Ammara ( called / has called ) for you earlier but you weren't here.
6. Look how neat the hedge is now – Dad and I ( trimmed / have trimmed ) it.
7. When you ( went / have gone ) to school this morning, was it raining?
8. My sister ( learned / has learned ) to ride a bike when she was four.
9. My hair is wet because I ( went / have been ) swimming.

# Correcting Spelling Mistakes 1

The spelling mistakes in these sentences have been circled. Write the correct spelling for each circled word in the box.

1. The athleet won gold at the sports carnival.
2. I felt nervus as I waited for the race to start.
3. He sat down in a cumftabul armchair.
4. Sarah carefully opened the treshure chest.
5. He made a good choise.
6. She caught a tropical diseese and had to go to the hospital.
7. I shouted lowdly at the referee.
8. The sercumfrense of the circle was 18 centimetres.

[illegible]

Each sentence has one word that is incorrect. Write the correct spelling of the word in the box.

1. She staggered around feeling dizzy and confused.
2. It was a perfect day at the beach.
3. I heard an incredible story on the news about a boy surviving an explosion.
4. You will receive a certificate if you complete the course.
5. Many people spend their holidays in foreign countries.
6. The man cheerfully whistled a familiar tune.
7. I wandered happily through the ancient house.
8. It is important to have confidants in your own abilities.

[illegible]

## Correcting Spelling Mistakes 2

The spelling mistakes in these sentences have been circled. Write the correct spelling for each circled word in the box.

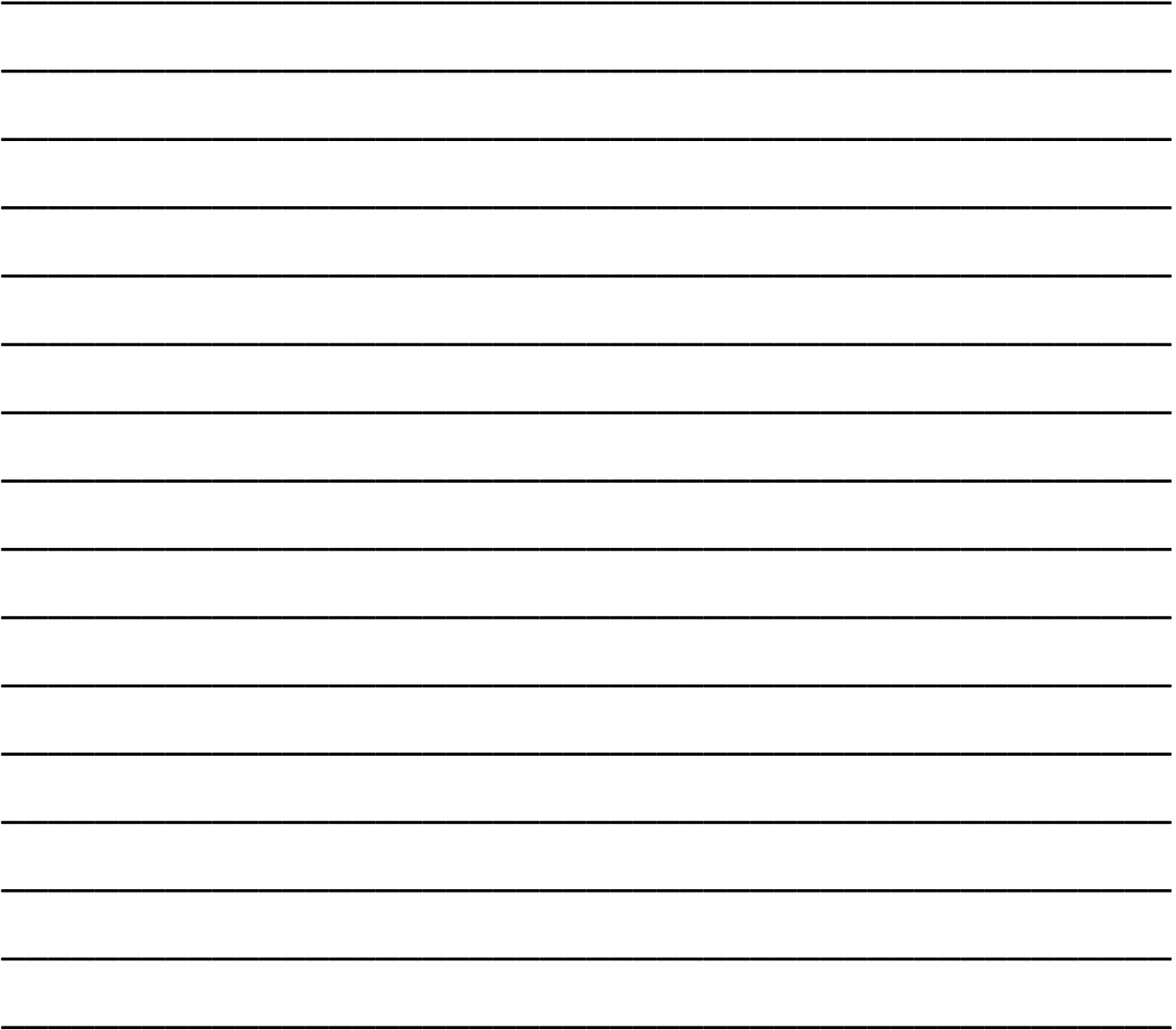
1. In the end, he made the right disishon.
2. The school fair was a great suckses.
3. I couldn't stop larfing!
4. Answer the questions carefully.
5. Do you have all the ingredients you need for the recipe?
6. He cleaned the kitchen thuraly.
7. A misterios noise came from the old abandoned house.
8. It is iraspensible to go off without telling someone where you are going.

[illegible]

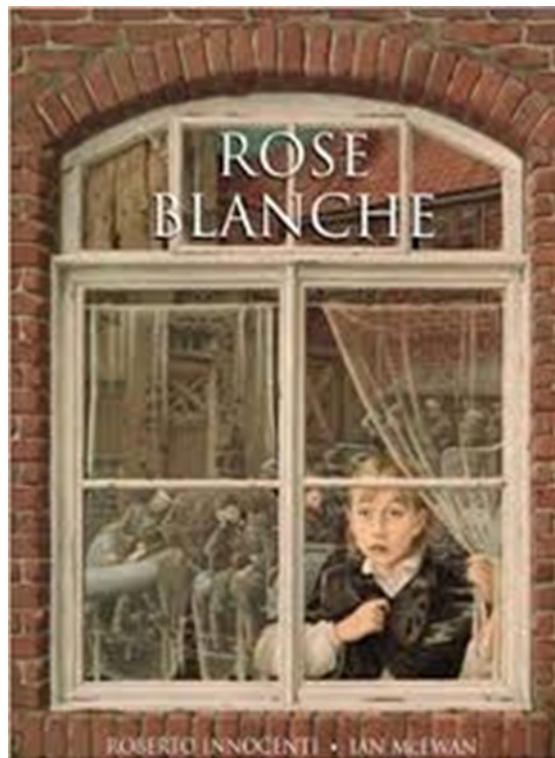
Each sentence has one word that is incorrect. Write the correct spelling of the word in the box.

1. Laura giggled as she listened to the comedian's jokes.
2. My sandle broke and I had to walk with bare feet.
3. There are many interesting books in the library.
4. The dialog between the two characters built the tension in the play.
5. I was feeling misrable after losing my private diary.
6. The girl's disapearance was very distressing for her relatives.
7. The ancient temple had huge decorative colums.
8. She shrieked loudly when she saw the hideous monster!

[illegible]



Reading - inference



Study the illustration closely and use clues and your general knowledge and knowledge of similar texts to answer the following questions. Ensure you use evidence from the front cover to support your answers.

Why is this girl on the front cover?

---

Is this story set in recent times?

---

Is the girl rich?

---

What is going through her mind?

---

Why is she grasping her shawl?

---

What has happened?



## Reading - inference

If possible listen to the song and then in each box write what you think the lyrics mean.

From now on by Hugh Jackman (The Greatest Showman)

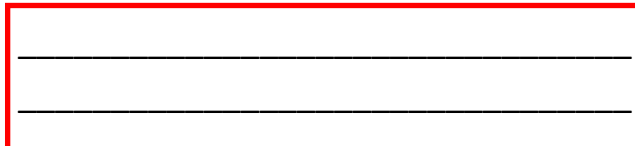
I saw the sun begin to dim  
And felt that winter wind  
Blow cold

A man learns who is there for him

When the glitter fades and the walls won't hold  
Cause from then, rubble  
What remains  
Can only be what's true

If all was lost  
Is more I gain

Cause it led me back  
To you



From now on

These eyes will not be blinded by the light

From now on

What's waited till tomorrow starts tonight

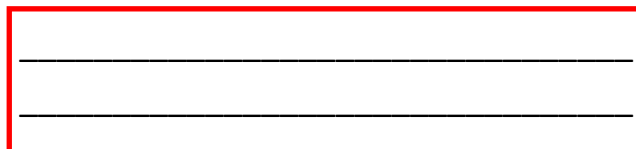
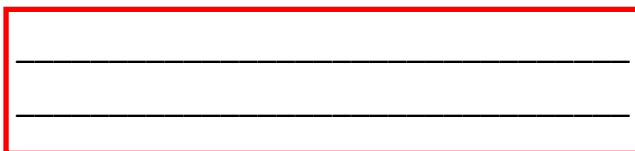
Tonight

Let this promise in me start

Like an anthem in my heart

From now on

From now on



I drank champagne with kings and queens

The politicians praised my name

But those are someone else's dreams

The pitfalls of the man I became

For years and years

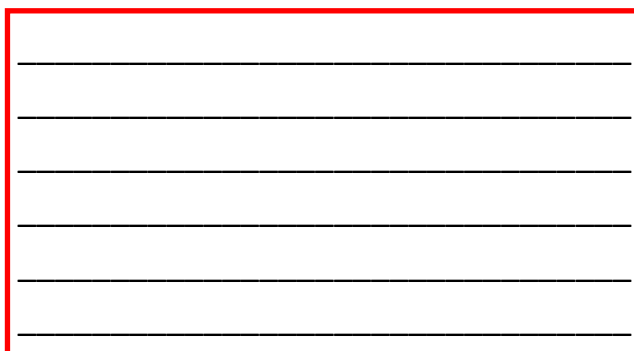
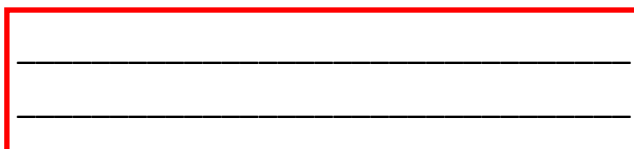
I chased their cheers

The crazies be always needed more

But when I stop

And see you here

I remember who all this was for



# The Space Times

## Solar Eclipse at Eclipseville



3 People flocked to  
6 Hopkinsville, USA (now  
9 affectionately referred to  
13 as 'Eclipseville') on August  
18 21st 2017 to watch the  
22 first total solar eclipse  
27 observable from the USA in  
30 nearly 39 years. 82 long the eclipse lasted,"  
33 The previously little- 85 said one visitor.  
37 known town was declared 89 "It wasn't pitch black,  
43 by NASA to be the best 94 but felt very gloomy and  
47 place to see 'totality' 97 slightly spooky," said  
52 (meaning the sun would be 98 another.  
56 in complete shadow). They 103 You only have to wait  
60 were right and totality 107 another seven years until  
65 lasted for an unrivalled 2 113 the next full solar eclipse in  
68 mins 41.2 secs. 117 USA. But will Eclipseville  
73 "I made a pinhole camera 122 be the best place to  
78 and was amazed by how 124 view again?

## Quick Questions



1. Which word means 'better than everything else'? \_\_\_\_\_



2. What does 'totality' mean? \_\_\_\_\_



3. Why were people so keen to go to Hopkinsville on 21st August 2017? \_\_\_\_\_



4. Why does the author use the word 'affectionately'? \_\_\_\_\_

# The Meteor Shower



**10** We had been learning about space in school and our  
**19** teacher had told us about the expected Perseid meteor  
**29** shower. I managed to convince my mum that I 'needed'  
**40** to stay up to watch it, so we converted my trampoline  
**50** into a viewing station, with warm blankets, flasks of hot  
**59** chocolate, my binoculars, a torch and notebook and pen  
**63** (to record our sightings).

**73** Although it had been drizzling most of the week, the  
**80** sky cleared that evening! Excitement bubbled inside  
**92** me like a lava lamp and I got cosy, lying back, staring  
**104** at the vast, inky sky. As my eyes adjusted, I began to  
**113** see more sparkling stars. Suddenly, I spotted my first  
**123** meteor, closely followed by another. It was going to be  
**126** an amazing evening...

# Quick Questions



1. Find three words that are linked to 'seeing something'?

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2. Where does the child watch the meteor shower?

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3. Will it be 'an amazing evening'? Why do you think this?

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4. Why does the author put 'needed' in inverted commas?

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# Predict What Happens Next

A man walks a dog on a beach.

The man's name is Jim.

He's been out walking for some time now. He's not sure he wants to return home.

Who would notice if he never went back?

What if he just slipped away?

He could join the circus. He could travel the USA in a camper van. He could be a life guard on an Australian beach.

- A) Predict what you think will happen next
- B) Explain why you think that.



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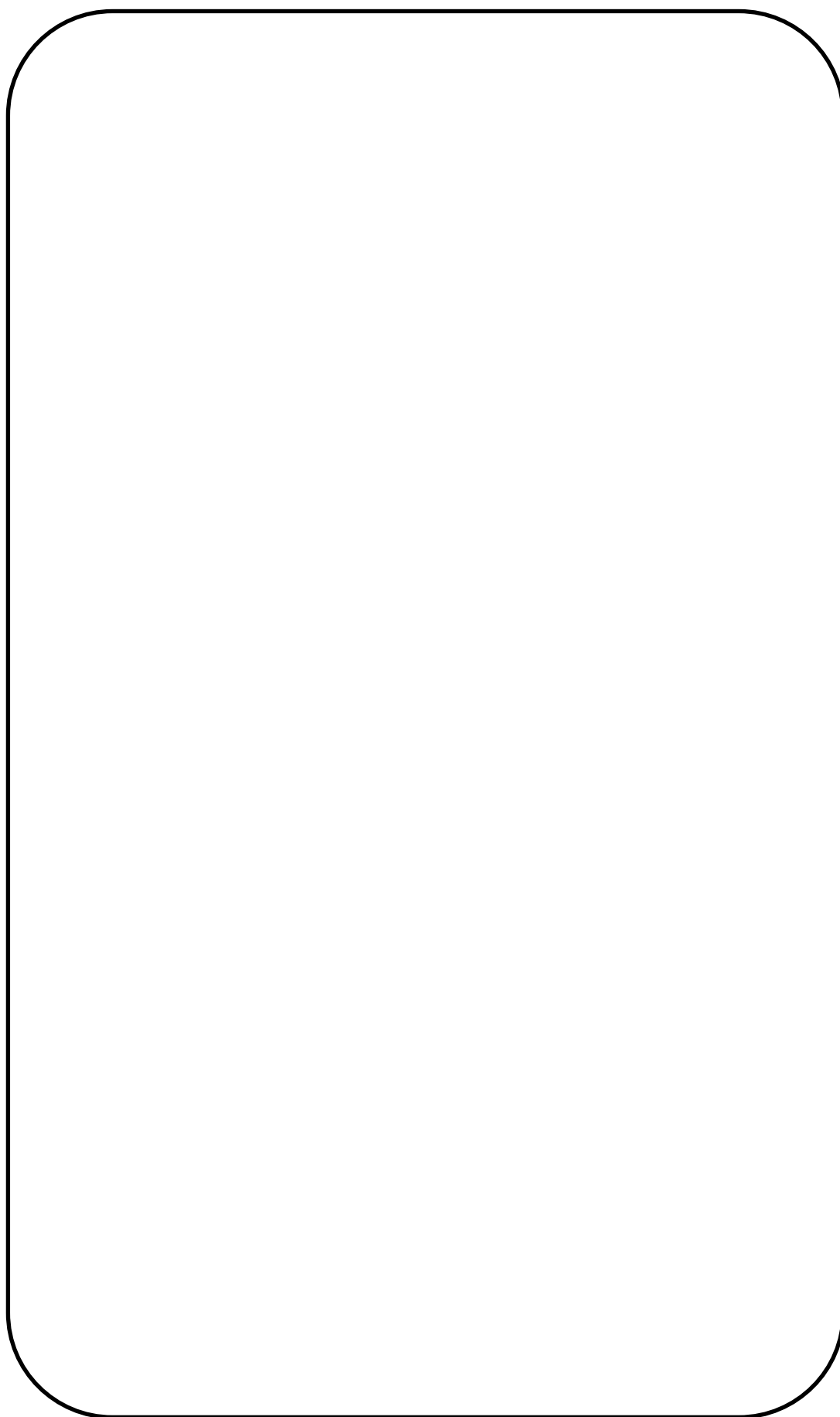
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**Design your own Roman shield**



**Create a fact file poster explaining everything you know about the Romans**



# History Hackers: Roman Rescue

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

antique

armour

banquet

brigante

caldarium

Charlie

fortress

journal

musket

peasant

Roman

strigil

Tilda

time travel

tribune

York

# The Day Vesuvius Erupted Diary

Imagine you were living in Pompeii in 79AD and your home is near Mount Vesuvius. What were you doing, thinking and feeling when you saw the ash cloud suddenly appear?

Complete the diary entry to describe what happened the day the volcano began to erupt. Write about events the order they happened and describe how you felt during the eruption.

Dear Diary,

What an unforgettable day! I was busy collecting water from the well, when the sun mysteriously disappeared from the sky.

[illegible]



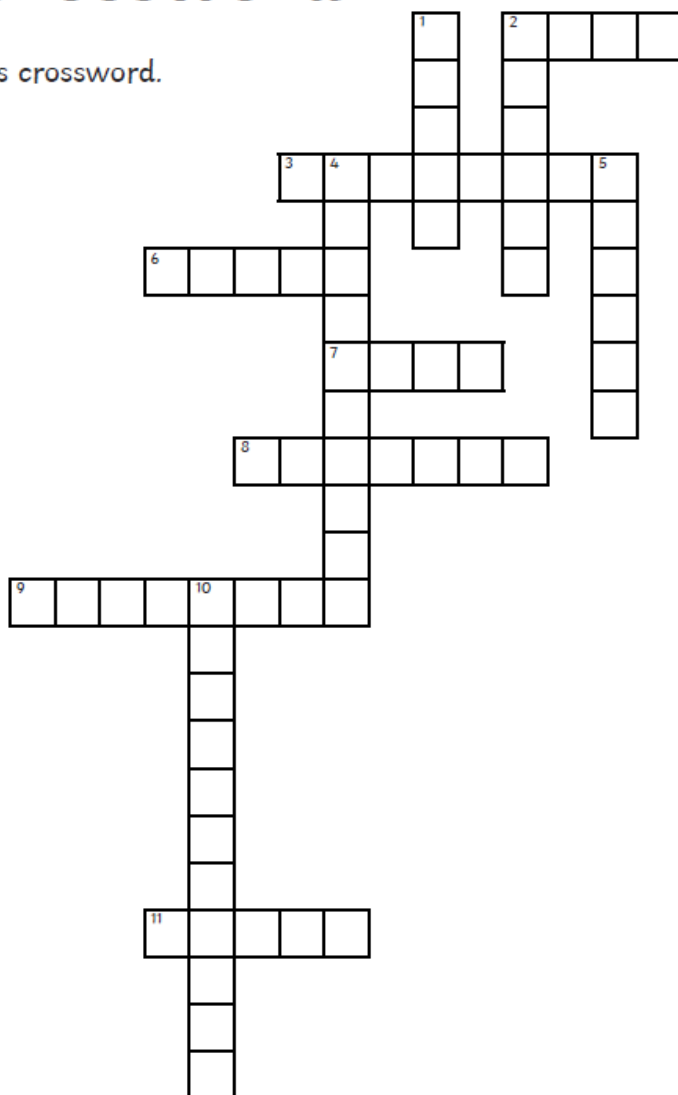


# Forces Crossword

Use your knowledge of forces to complete this crossword.

Use these words to help you:

force  
friction  
streamlined  
moving  
same  
opposite  
gravity  
pivot  
resistance  
mass  
slows  
Newton



## Across

2. Scientifically, \_\_\_\_\_ is measured in kilograms and weight is measured in newtons.
3. All surfaces create \_\_\_\_\_ on an object moving across them.
6. Friction \_\_\_\_\_ moving objects down.
7. Galileo Galilei conducted an experiment to prove that all objects fall at the \_\_\_\_\_ rate, no matter what their mass is.
8. \_\_\_\_\_ is a pulling force exerted by the Earth.
9. When two gears are connected, they always

turn in \_\_\_\_\_ directions to one another.

11. A lever always rests on a \_\_\_\_\_.

## Down

1. A lever can be used to make a smaller \_\_\_\_\_ lift a larger load.
2. Air pushes against any object \_\_\_\_\_ through it.
4. Aeroplanes are streamlined so they do not experience much air \_\_\_\_\_.
5. Isaac \_\_\_\_\_ discovered more about gravity.
10. Objects that do not experience much air or water resistance are called \_\_\_\_\_.

# Paper Helicopter Investigation

Make a paper helicopter and investigate the effects of air resistance and gravity.

A helicopter hovers in the air as its propellers rotate. Use the template and follow the instructions to create a paper helicopter that spins as it slowly falls to the ground.

Time how long your paper helicopter takes to fall to the ground. Can you make a new paper helicopter that falls more slowly? Think about the forces of gravity and air resistance, and how you can use them to make the helicopter fall slower.

Draw a picture of your new helicopter below and explain how you made it fall slower.



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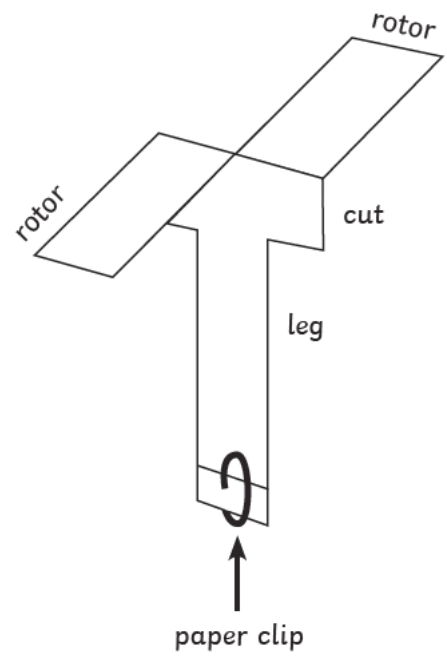
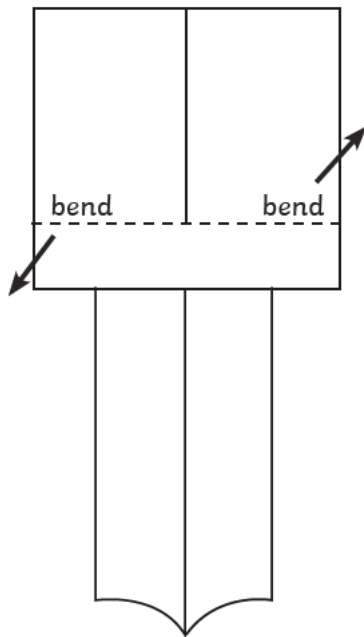
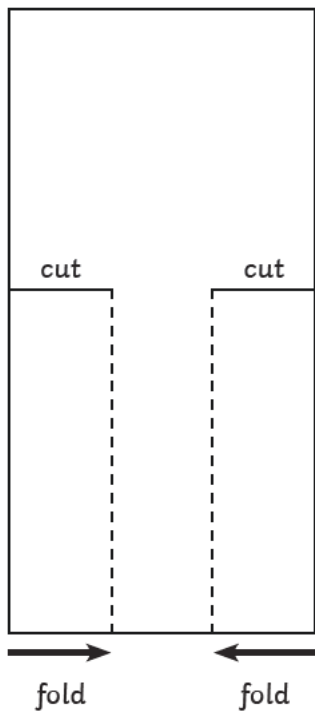
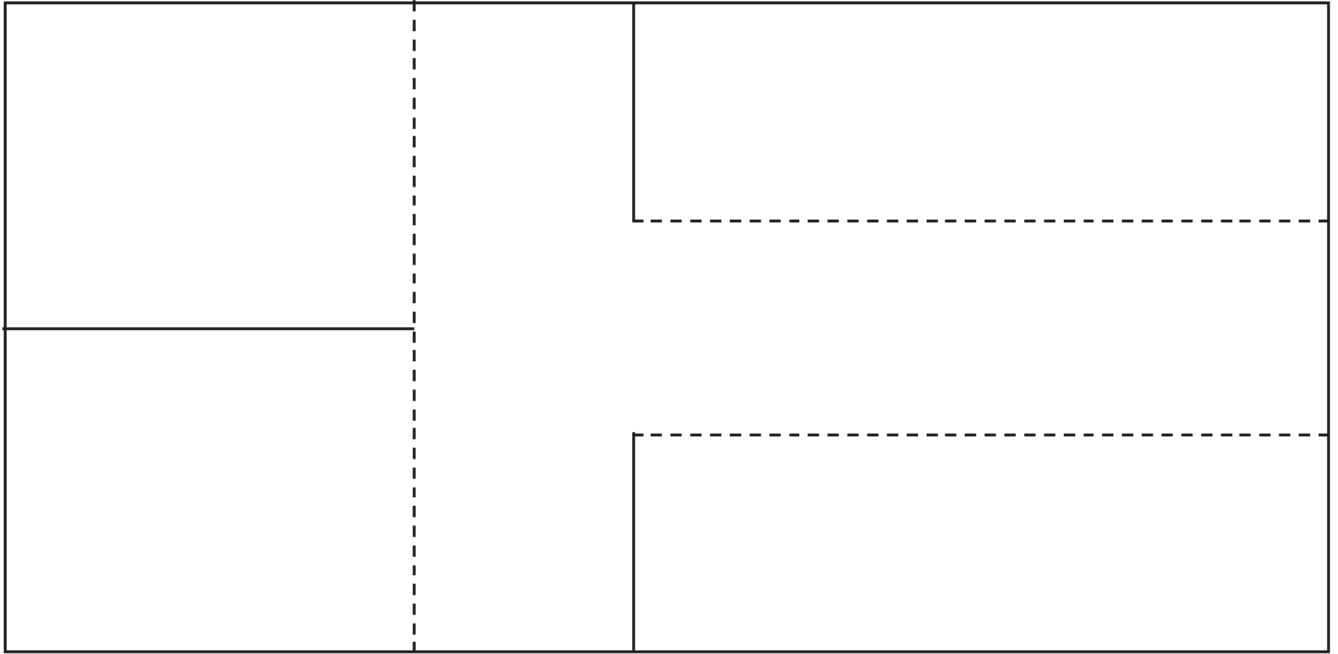
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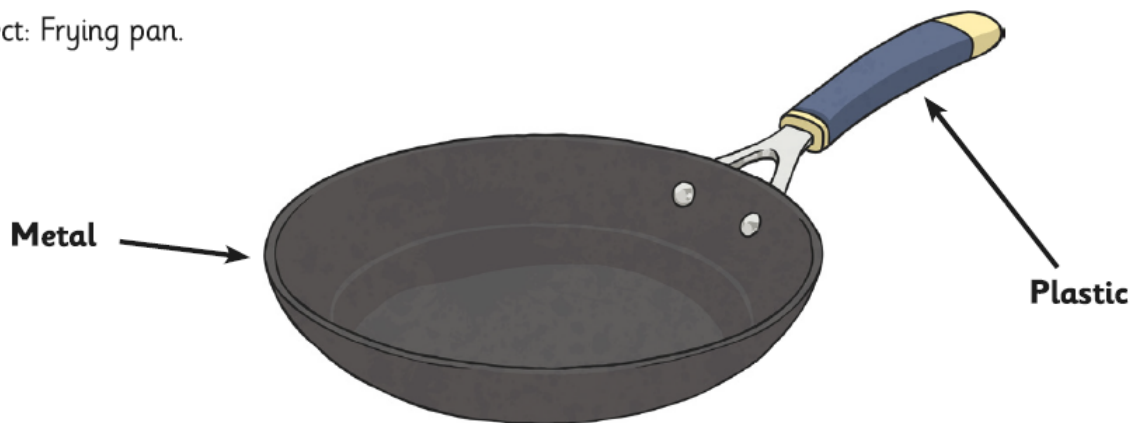
# Materials and Properties

Objects are made from different materials. The materials used to make an object are chosen for their properties.

Choose an object from around your home or school. Draw a picture of it and label the different materials it is made from. Identify the properties these materials have, and why they were chosen to make the object.

Have a look at this example, then try your own:

Object: Frying pan.



Materials:

Metal to conduct heat from the hob and allow the food in the pan to heat up and cook.

Plastic to insulate against the heat, so that you can hold the pan without getting burnt.

Object:

Materials:

# Chemical Creations

Scientists use chemical reactions to create useful new materials.

Can you create a fact file about a scientist and the new material they made?

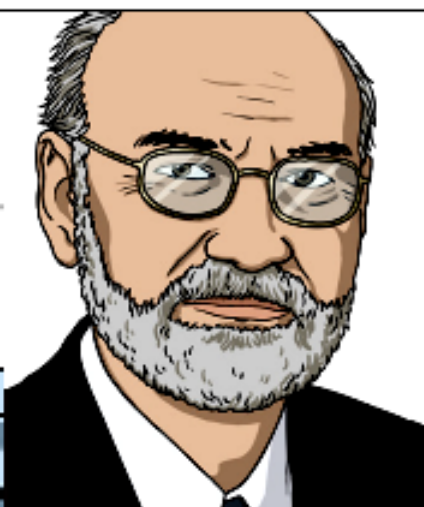
You should research the scientist and their life, such as when and where they lived, and what they did. You should also find out about the new material, its properties and how it is useful.

Your fact file could be written on a piece of paper, made into a book or created using a computer. Include pictures and diagrams to add interest!

Examples of scientists and the new materials they made include:



Ruth Benerito, who invented wrinkle-free cotton.



Spencer Silver, who invented the glue for sticky notes.



Leo Baekeland, who invented a plastic called Bakelite.



Harry Brearley, who invented stainless steel



John McAdam, who invented tarmac.



Or maybe you have your own idea!

### **Fun science experiments to do at home**

You will be able to find full instructions for these experiments online and youtube. It would be brilliant to see these on Seesaw or Twitter.

- Coloured celery (celery, glass jar, water, food colouring)
- Rain cloud in a glass (glass jar, food colouring, boiling water, ice cubes, hairspray)
- Skittles rainbow (paper plate, skittles, water)
- Moving water (food colouring, water, 3 glass cups, kitchen roll)
- Lava lamp (large clear bottle, water, cooking oil, alka seltzer, food colouring)
- Exploding coke (Coke, mentos)
- Static (Balloon)