

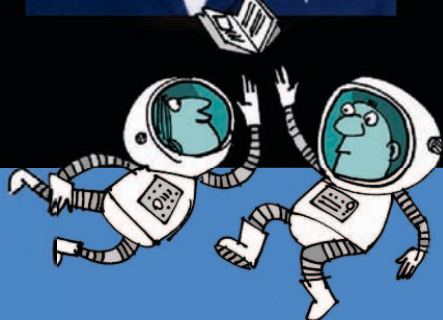
The search is on for the UK's next astronaut – and Major Tom wants your pupils' help in selecting the best person for the job. He's found six well-suited candidates, all with different qualifications – but it's up to you to decide which one will win  
**The Race into Space!**



**Major Tom**

**BISA**

**The Race Into Space**



**Whole School  
Challenge**

**STEM Day**



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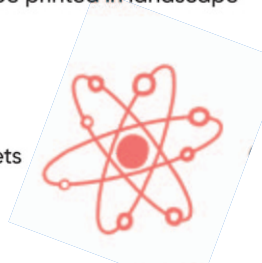
**As Creatives  
Connect**

# The Race Into Space



The two essential elements of this activity are the opening film –which should be shown to every participating class – and the Classroom Missions. However, there are plenty more resources here for you, all available in age-differentiated formats. And if you decided to use everything, we'd suggest the following structure ...

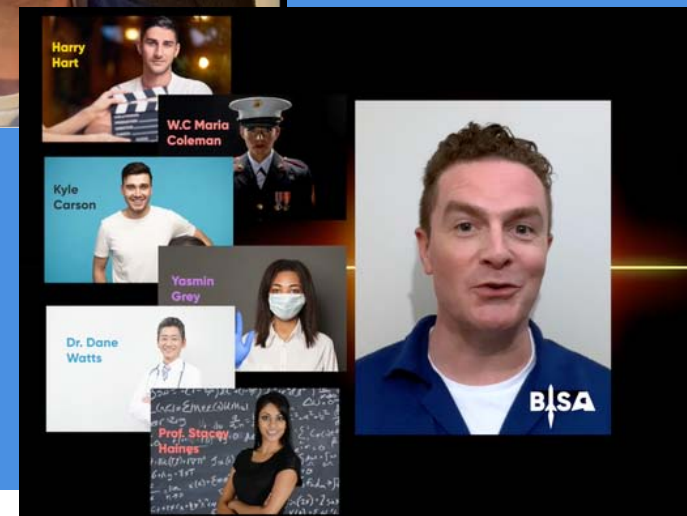
1. Opening Film – you'll need audio for this
2. Where Would You Go? (literacy) – PowerPoints and worksheets
3. Maths Warm-Up (maths) – worksheets (which need to be printed in landscape format)
4. Classroom Mission (maths/science) – PowerPoints
5. Going into Space (literacy) – PowerPoints and worksheets
6. Closing Film – you'll need audio for this



There's also a short introductory film just for you and your colleagues – in which Major Tom, of the British Isles Space Agency explains exactly what's going on!



## Opening and Closing Films



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## The Race into Space – Maths Warm Up

1. How many rockets? 	
2. Which is the biggest planet? A  B  C	
3. Who comes next? A or B	
4. This is one planet. Draw five planets in the box. 	
5. Is this an odd number or an even number? 	
6. Is this bigger or smaller than 10? 	
7. What shape is the window in the rocket? 	
8. This is one star. Draw six stars in the box. 	
9. Is this bigger or smaller than 10? 	
10. Which is the smallest rocket? A  B	

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## Maths Warm Up Activities



# EYFS / KS1

## Bone Density

BISA Test 1

Look at Maria. To find out how high her bone density is, you need to multiply her Bone Element by 5 ... and then add Key Number 1 ...

Candidate	Bone Element	x 5	Key No. 1	Bone Density A
Harry	2	10	23	33
Maria	4	20	22	
Kyle	6		21	
Yasmin	10		7	
Dr Dane	8		22	
Stacey	9		11	

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There is hardly any gravity in the International Space Station ...

So life is very different!

Some people cope better with this than others.

© As Creatives



There is almost no gravity on the International Space Station ...







... which affects the **bone density** of the astronauts who work there.

Some people cope better with this than others.

© As Creatives



## The Candidates

Who?	Job?
 Harry	Actor
 Maria	Pilot
 Kyle	Racing Driver
 Yasmin	Scientist
 Dr Dane	Doctor
 Stacey	Mathematician



BISA

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## Ability to Work in Small and Confined Spaces

BSA Test 1

To make **fair comparisons**, we need to adjust each candidate's actual time by multiplying it by five.

Candidate	Minutes taken for Jigsaw 1	Adjusted Time (A)
Harry	32	160
Maria	36	180
Kyle	32	
Yasmin	26	
Dr Dane	24	
Stacey	23	

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## Kidney Function

BSA Test 1







What about Yasmin? Work out what number should go in Column A for Yasmin ...

Candidate	Kidney Function	Day 1	A	Day 2	B	Day 3	C
Harry	100	$\frac{1}{4}$	25	$\frac{1}{5}$	20	$\frac{1}{2}$	50
Maria	100	$\frac{1}{5}$	20	$\frac{3}{4}$	75	$\frac{3}{10}$	30
Kyle	100	$\frac{1}{2}$	50	$\frac{1}{4}$	25	$\frac{3}{20}$	15
Yasmin	100	$\frac{1}{5}$		$\frac{1}{4}$		$\frac{3}{5}$	
Dr Dane	100	$\frac{1}{10}$		$\frac{7}{10}$		$\frac{1}{20}$	
Stacey	100	$\frac{2}{5}$		$\frac{1}{10}$		$\frac{3}{10}$	

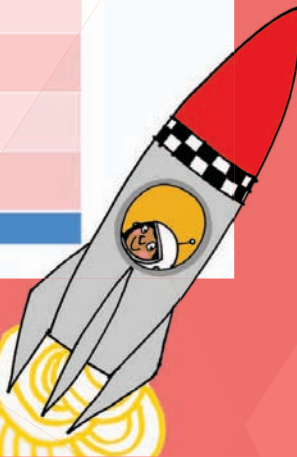
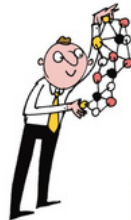
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## The Candidates

Who?	Job?
 Harry	Actor
 Maria	Pilot
 Kyle	Racing Driver
 Yasmin	Scientist
 Dr Dane	Doctor
 Stacey	Mathematician

BSA



## Optic Fluid - Quantity

Analysing the Results

Now look at Kyle. Determine the factor pairs for Standardised Result 1 and for Standardised Result 2 – and calculate his **total** number of factor pairs.

BSA Table 2: Factor Pairs

Candidate	Standardised Result (1)	Factor Pairs (1)	Standardised Result (2)	Factor Pairs (2)	Total of Factor Pairs
Harry	24	1 & 24, 2 & 12, 3 & 8, 4 & 6	10	1 & 10, 2 & 5	6
Maria	27	1 & 27, 3 & 9	18	1 & 18, 2 & 9, 3 & 6	5
Kyle	42	1 & 42, 2 & 21, 3 & 14, 6 & 7	26	1 & 26, 2 & 13	6
Yasmin	22		15		
Dr Dane	32				
Stacey	36				

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Y5

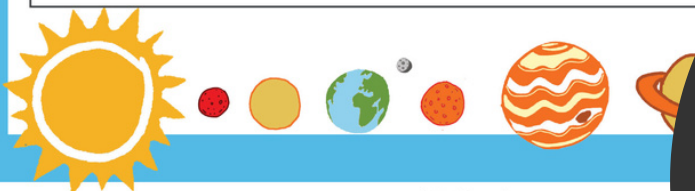


Name: \_\_\_\_\_

If you were an astronaut, where would you like to travel to? The Moon? Or one of the planets – Mercury, Venus, Mars, Jupiter, Saturn, Uranus or Neptune? What about little Pluto?

Write the **name of the place** you would visit in the first box – and **draw a picture** of it underneath.

Use the other box to write a paragraph about your destination – and why you would like to go there. Make sure you include at least **three facts** about your destination.



## Follow-up literacy activities



Name: \_\_\_\_\_

It's official – mathematician Stacey will be the UK's next astronaut! It's time to tell the world about her – and Major Tom needs your help again!

He would like you to create an **acrostic poem about Stacey** – where the initial letters of each line spell out her full name: "**STACEY HAINES**". You might like to think about who she is, what she does, what she has achieved or what skills she has – it's up to you!

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Name: \_\_\_\_\_

It's official – mathematician Stacey will be the UK's next astronaut! It's time to tell the world about her – and Major Tom needs your help again!

He wants you to finish this **Character Profile** for Stacey. You might have to use a bit of imagination!



Stacey Goes into Space!

**Character Profile:**

**Name:** Stacey Haines

**Job:** Mathematician

**Age:**

**Hobbies:**

**Favourite Food:**

**Favourite Place:**

**Favourite Memory:**



**Dr Colorado Smith, has returned from Egypt with all of the clues required to solve the age old Riddle of the Sphinx. But as she can't do it by herself, she's on the lookout for schools to use their understanding of concepts of "measurement" to help her!**

**Whole School  
Challenge**





## Opening and Closing films

## The Riddle of the Sphinx



The two essential elements of this activity are the opening film – which should be shown to every participating class – and the Classroom Challenges. However, there are plenty more resources here for you, all available in age-differentiated formats. And if you decided to use everything, we'd suggest the following structure ...

1. Opening Film – you'll need audio for this
2. What Would You Do? (literacy) – PowerPoints and worksheets
3. Maths Warm-Up (maths) – worksheets
4. Classroom Mission (maths) – PowerPoints
5. Join the Team! (literacy) – PowerPoints and worksheets
6. Closing Film – you'll need audio for this

*There's also a short introductory film just for you and your colleagues – in which Dr Colorado Smith, our resident Egyptologist, explains exactly what's going on!*



### The Riddle of the Sphinx – Maths Warm Up

Y5/P6

1. The huge door into the pyramid was a **rectangle**. Between them, the two sides measured **14 metres** each. The top measured half of one of the sides. **What did the bottom measure?**

2. That door was made of **10 blocks** of stone – all the same size. Each block was **20 centimetres** wide. **How tall was each block?**

3. It was a square-based pyramid – and each side of the base measured **30 metres**. **What was its area?**

4. Cleopatra loved her cat – and gave it a solid gold collar. What is the most likely weight of the collar?  
A: 20g?  
B: 200g?  
C: 2kg?

5. The cat had five brothers – and each one ate **50 grams** of food. Each brother ate **25 grams** of food. How much food did the cat eat?



### The Riddle of the Sphinx – Maths Warm Up

Answers

1. Which pair are the same <b>height</b> ?		
2. Which pair are the same <b>width</b> ?		
3. Which is the <b>biggest</b> group?		
4. Which is the <b>smallest</b> group?		
5. In real life, which is the <b>biggest</b> ?		

## Maths Warm-Up Activities



# The Riddle of the Sphinx

Join the Team!



aligned to the  
Maths  
curriculum



There are lots of things to do in Egypt. Here are a few of them – but some of the letters are missing! Can you fill in the blanks?



Visit the py \_ \_ \_ ids



See the a \_ \_ \_ als



S \_ \_ l on the Nile



\_ \_ \_ bathe

What would **you** do? One of these – or something else? Draw a picture showing what you would do – and write something about it.

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What can we use to help us measure?



How Much Money Do We Need?



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Power Point  
Challenges for every  
year group



## The Riddle of the Sphinx

### Join the Team!



Name: \_\_\_\_\_

Date: \_\_\_\_\_

Well done – you’ve cracked The Riddle of the Sphinx! Dr Colorado Smith and her team are now able to enter The Inner Sanctum – but she needs your help again already ...

Dr Smith is already planning her next adventure – to search in the Rain Forest. And she needs a new member of the team.

She wants you to **draw a picture** to show what the Guide would be holding.

Underneath your picture, Dr Smith also wants you to **write** what sort of person the Guide should be.



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## The Riddle of the Sphinx

### What Would You Do?



## The Riddle of the Sphinx

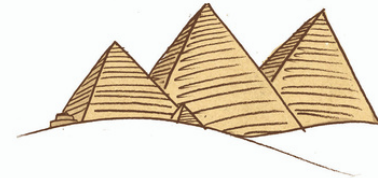
### What Would You Do?



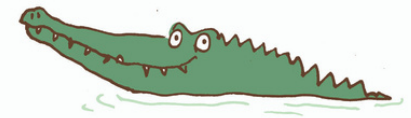
Name: \_\_\_\_\_

Date: \_\_\_\_\_

There are lots of things to do in Egypt. Here are a few of them ...



Visit the pyramids



See the animals



Sail on the Nile



Sunbathe

What would **you** do? One of these – or something else?

**Write** your choice in the first box on the next page – and **draw a picture** of it underneath.

You are a tour guide, welcoming tourists to the activity. Use the other box to **write a speech**. Make sure you give your guests all the information they need (including any ... while keeping your speech warm and cheerful, of course. And start it with a ...

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Follow-up literacy  
activities



**As Creatives  
Connect**

**Eccentric millionaire Benny Factor has amassed a fortune over the last few years – and it's now time to give something back to a village that's very close to his heart: Amberton. The trouble is, though, that with so many community groups within the village to choose from, he can't quite decide how to carve his money up!**



**Money-Based  
Maths**



**The Benefactor!**



**Whole-school  
Challenge**





## The Benefactor



The two essential elements of this activity are the opening film – which should be shown to every participating class – and the Budget Challenges. However, there are plenty more resources here for you, all available in age-differentiated formats. And if you decided to use everything, we'd suggest the following structure ...

1. Opening Film – you'll need audio for this
2. Working With a Windfall (literacy) – PowerPoints and worksheets
3. Maths Warm-Up (maths) – worksheets
4. Budget Challenges (maths) – PowerPoints
5. Helping Hands (literacy) – PowerPoints and worksheets
6. Closing Film (\*two versions)– you'll need audio for this

There's also a short introductory film for you and your colleagues – in which Benny Factor, our philanthropic inventor, explains exactly what's going on!

\*Please note that there are **two versions** of the **Closing Film**. You should use the version titled "whole school" if the whole school has been involved in The Benefactor – and the other version when only an individual class/year group has been working on the challenge.

### The Benefactor

Name:

Date:



### The Benefactor

1. Which sweet could you buy with this? A: B: C:

2. Which toy could you buy with this? A: B: C:

3. How much money is this?

4. How much money is this?

5. How much money is this?

Name:

Date:

1. You have got this much money ... A sandwich costs £2.00. A cold drink costs £1.00

Which three coins will you use for your meal?

2. You have got this much money ... A burger costs £3.00. A pack of 50p. You have to pay money – and you want many coins as possible buy all three items – will you use?

3. You have got this much money ... You need to make sure that you have got £1.50 left for the bus home.

Which box of chocolates will you buy?

4. You have got this much money ... Between: cakes or

Your friend has got this much money ... Even if you add together, which can't you afford?

### The Benefactor

6. Before 1971, there was a coin called a half crown. There were eight half crowns in a pound.

How much would two half crowns be worth in today's money?

7. A 1p coin is 1.6mm thick ... A 2p coin is 0.6mm thicker than a 1p coin ... A 5p coin is 0.3mm less thick than a 2p coin ... A 10p coin is 0.1mm thicker than a 5p coin.

How thick is a 10p coin?

8. Benny bought some balloons for a party to launch the project. Red balloons cost £1.00 each. Yellow balloons were twice as expensive as red ones. The price of a green balloon was exactly halfway between the price of a red balloon and the price of a yellow balloon.

Blue balloons only cost half as much as red ones. Benny had £22.00 to spend – and chose 2 red balloons, 1 yellow one, 8 green ones and 2 blue ones.

Benny wanted to use all of the rest of the money to buy exactly four balloons – but he didn't want any more red ones.

Which four balloons did Benny buy?

9. Benny laid out eight coins or piles of coins to make a number sequence.

- Pile 1: 1 x 1p
- Pile 2: 1 x 2p
- Pile 3: 2 x 2p
- Pile 4: 1 x 5p, 1 x 2p, 1 x 1p
- Pile 5: 1 x 10p, 1 x 5p, 1 x 1p
- Pile 6: 1 x 20p, 1 x 10p, 1 x 2p
- Pile 7: 1 x 50p, 1 x 10p, 2 x 2p

What is the smallest number of coins that Benny could have used to build Pile 8?

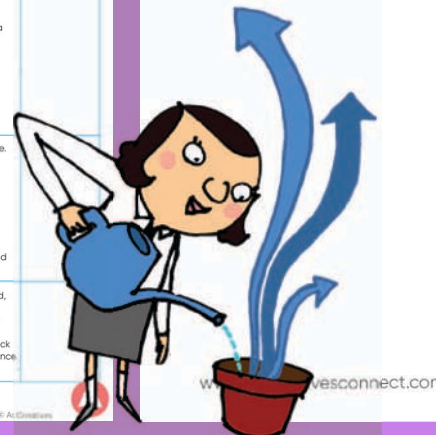
10. Benny changed £200.00 into Euros, for a trip to Paris. For every pound, he got 1.2 Euros.

He only spent half of those Euros – so he changed what he had left into dollars, for a trip to New York. For every Euro, he got 1.1 dollars.

He only spent half of those dollars – so he changed what he had left back into pounds, for a trip to come home again. For every Euro, he got 80 pence. How much did Benny end up with?

## Opening and Closing films

## Maths Warm-Up Activities





## Helping Hands



You've worked really hard to help Benny – and Cherry Tree will get her Community Garden!



## Strawberry's Music Festival



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# £161!



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How much have we spent so far?

$$£20 + £16 = ?$$

$$£20 + £16 = £36$$

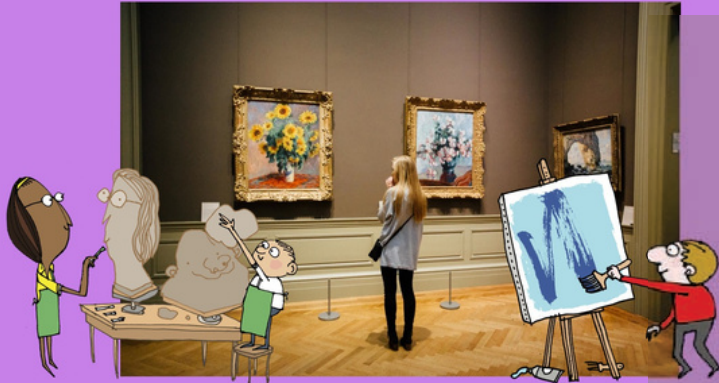


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**Classroom challenges for every year group....**



How much does Toby want to spend altogether?



## Dr Frankie's Shopping List

Item	Cost
Artist's Fee	£3,200.00
Clay	£600.00
Bronze	£4,500.00
Marble	
Construction	
Sub-Total	
Emergencies	
Total	



£1,328!



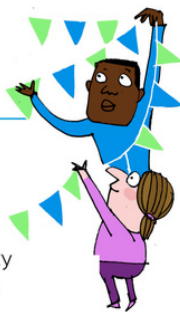
## Emily Weir's Inclusive Football Club

When buying equipment for "one match", you'll need to get enough for both teams!



Classroom challenges for every year group....

# The Benefactor – Helping Hands

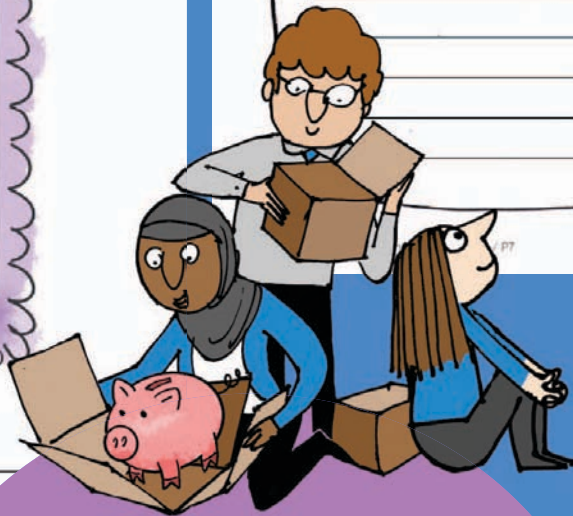
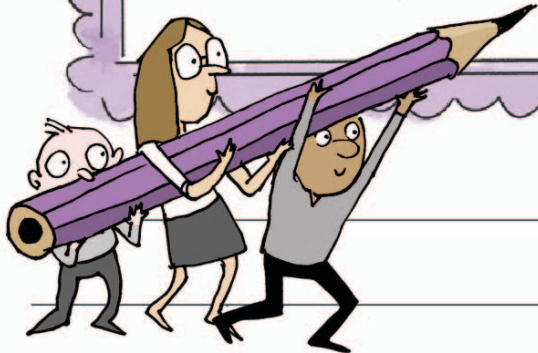
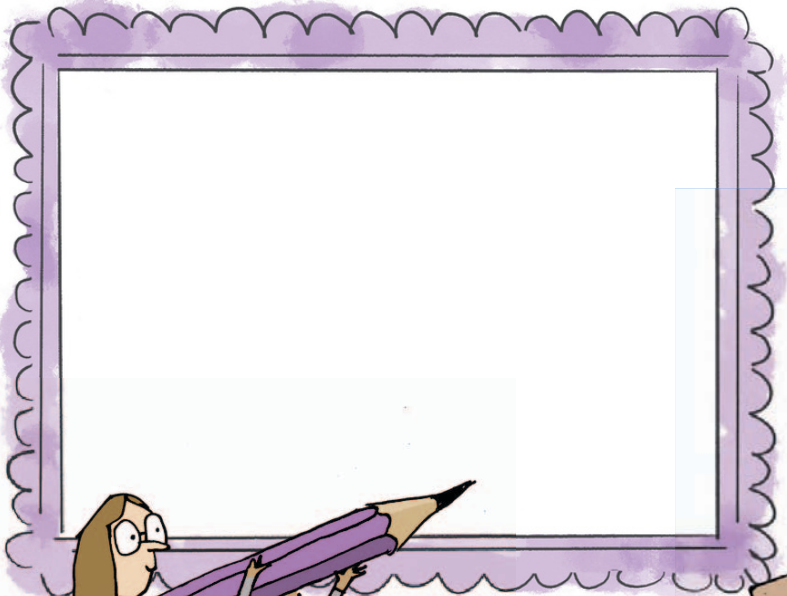


Name: \_\_\_\_\_ Date: \_\_\_\_\_

You’ve worked really hard to help Benny – and Cherry Tree **will** get her Community Garden! Now **she** wants your help, too – to spread the word among the villagers!

Can you think of a good name for the garden – to remind people how good it will make everyone feel?

Use the first frame to **draw a picture of the garden**. Use the space below to **write the name you have chosen** and **two things** that people will be able to do in the garden.



Follow-up literacy activities

# The Benefactor – Working With a Windfall



Name: \_\_\_\_\_ Date: \_\_\_\_\_

Imagine that a rich person (or a group of wealthy people or a rich organisation) had given you a large sum of money to put to a good cause. Write a letter to the **donor** to tell them how you are planning to use the **windfall** – and the good it will do..

A spiral-bound notebook with several blank lines for writing a letter.



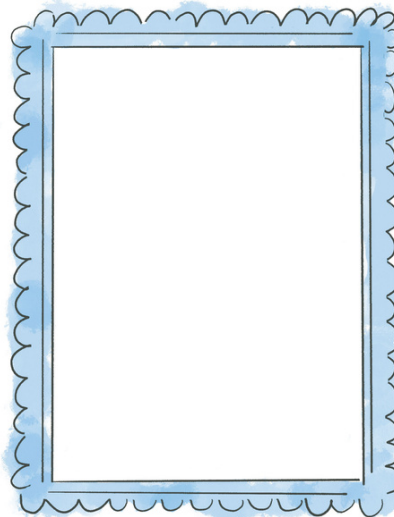
# The Benefactor – Helping Hands



Name: \_\_\_\_\_ Date: \_\_\_\_\_

You’ve worked really hard to help Benny – and Tabitha Grylls **will** get her Adventure Playground! Now **she** wants your help, too – to spread the word among the villagers!

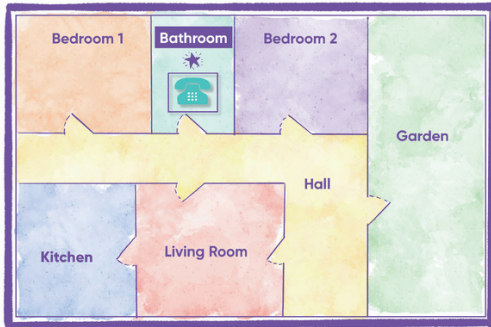
Think of **three reasons** why the Adventure Playground will be good for the village. Write them in the three picture frames. If you have time, add some illustrations!



# Family Maths



## Family MATHS



### Year Group Challenges

4 and 5 year olds



6 and 7 year olds



8 and 9 year olds



10 and 11 year olds



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## Family MATHS

As Creatives Connect

Hello – and welcome to this Family Maths digital package from As Creatives Connect. Building on several years' experience of delivering Family Maths workshops in schools and other settings, and exploring 'Everyday Maths at Home', this has been put together to provide families with opportunities to work together on a series of engaging contextualised and age-appropriate maths challenges – not just a series of worksheets for children to complete independently.

You can share the resource with parents/carers in **two ways**:

1. by sending them all the files electronically ...
2. by providing them with printed copies of the documents (although these are supplied in colour, they all work in black and white). Please note the challenges are set to be printed in landscape mode.

Please **do not send them the link that we have sent you** – because they will not have access to this. Please remember, too, that your link will expire in three months – so make sure you download and save everything before then!

The package comprises ...

- a short introductory film (families without IT facilities will not be disadvantaged, as all the information is also available in other formats) ...
- a Welcome Pack for parents/carers, containing full instructions. We recommend that you strongly stress the importance of looking through this before starting on the challenges themselves.
- a set of challenges for **EYF5/P1** children – coded with an image of a **phone** ...
- a set of challenges for **Year 1 and 2/P2 and 3** children – coded with an image of a **lamp** ...
- a set of challenges for **Year 3 and 4/P4 and 5** children – coded with an image of a **wardrobe** ...
- a set of challenges for **Year 5 and 6/P6 and 7** children – coded with an image of a **sofa** ...
- answers are included at the end of each challenge.

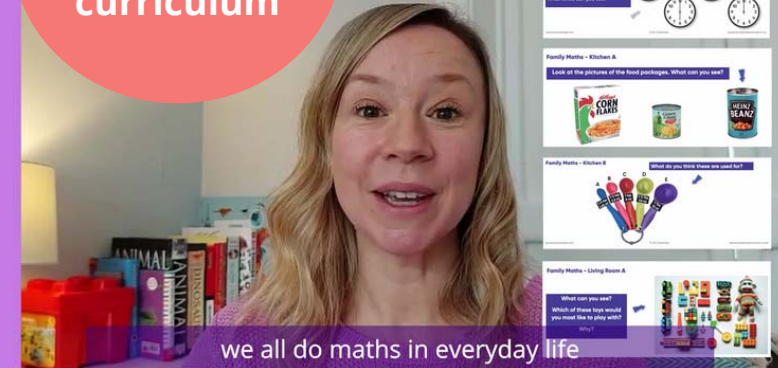
As Creatives Connect has also developed digital packages allowing teachers to deliver some of our most popular activities themselves, without us ever needing to set foot in school. These cover maths, science and literacy – including some really exciting resources celebrating **World Book Day**. Discover more at [www.ascreatives.com](http://www.ascreatives.com). And on top of that, our **Extraordinary Worlds** packages provide you with more than enough material to run your own whole-school themed WOW day! The **Extraordinary Worlds of Pirates, Space, Food and Football** are already available – with the **Extraordinary Worlds of Vikings, Oceans** and many more coming soon! Find out more at [www.ascreativesconnect.com](http://www.ascreativesconnect.com).

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aligned to the  
Maths  
curriculum



### Family Maths - Bedroom A

What can you see? Do you keep any cuddly toys in your bedroom?



### Family Maths - Bedroom B

What can you see? What bedtime stories do you like?



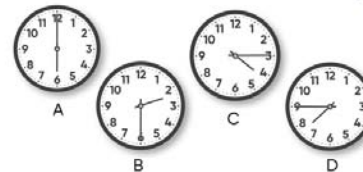
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### Family Maths - Kitchen A

What times are on the clocks?



### Family Maths - Kitchen B

What do you think these are used for?



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### Family Maths - Living Room A

What can you see?  
What toys do you most like to play with?  
Why?



### Family Maths - Living Room B

What can you see?  
What is your favourite television programme?



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Maths in  
Everyday Life!