

Maths:

This week we are going to use everything we have looked at the last few weeks to help us with some reasoning and problems solving. The problems are based on a story about a shipwreck on a desert island so it fits in with what you have been doing in English too.

All answers are included after the activities – to check **afterwards** of course!

Black Rock Island



Dazed and confused, Paulo opened his eyes wide and shook his head. The storm had been intense and his ship was wrecked.

He had walked for miles into the thick forest, hoping to find help, before falling into an exhausted and deep sleep. He awoke now and sensed immediate danger. Quickly, he got up and looked around the dense forest.

How would he know which way to go?

He remembered the scroll of paper his Uncle Deadeye had given him before he left home. He told him it might save his life. He quickly unfolded the paper.

*Look around and be aware
for clues and riddles are
everywhere!*

He searched all around and realised there was a plan of the forest pinned to a tree. It had a riddle on it. But danger was close by – he must work quickly.

1. If you want to escape from Black Rock, you must solve all our puzzles. The X shows your position. But time is ticking; we are coming!

Puzzle 1

Only circle the prime numbers which end in a 3, 7 or 9.

Follow the correct path and you survive. You may only move horizontally or vertically.

			83	39	57	17	67	53	47	
			33			73				
					69	43	61	29	27	
				97	13	29			79	11
			33	59		63				
	51	45	X	37	81					
			21		9	83				
			49			99	91	35		

Paulo reached the edge of the forest and ran. He knew danger was closing in. Suddenly, an arrow flew past his head and he dived into a cave for safety. Pressing his back against the wall, he held his breath – his heart thudding, but before he knew it, the huge rock at the doorway rolled across and his exit was blocked. Trapped... or was he? He remembered Uncle Deadeye's note. He looked all around and by the cave door spotted some rocks with numbers carved in them. A code!



Puzzle 2

The code is made up of two 3-digit numbers.
 When I multiply the numbers by 100, the ten-thousands in the first number and the thousands digits in the second number are the same.
 The sum of the digits is 5.
 Which two numbers could they be? Numbers can be re-used.
 Press the correct number rocks and the door will open.

2. Which cave number rocks should he press?

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Got it! The rock rolled away and Paulo was free. Tentatively, he stepped from the cave. Silence. His steps turned from walking, to jogging, to sprinting. Still he knew danger was just around the corner.

Up ahead, he saw a pyramid. The searing heat was intense, so he stepped inside for shade. The walls were enormous and Paulo, mesmerized, wandered deeper into the cave, but before he knew it he was lost!

3. A maze - and now he couldn't find the way back out. He searched around for the puzzle. The walls appeared to have numbers carved into them but which numbers should he follow?

Puzzle 3

Find the missing factor pairs. Follow those numbers through the maze to escape through the dashed, green exit on the bottom row.

You are positioned at X.

1	48
2	
6	

15	X	18	20
9	48	1	16
35	4	3	12
45	1	16	8
7	42	24	6

The heat hit him again as he exited the maze, but he was surrounded. The tribe had found him! What next? Was it the end for Paulo? The tribe marched him to their chief.

4. The chief had one last riddle for him.



Find the ages of my family members and I will let you go.
Here are my clues.
Write their ages in the sand.

Puzzle 4

Brother - has an age that is a squared number.
It is an odd number below 30 but above 10.

Mother - has an age that is a cubed number.
It is an even number over 60 but below 90.

Two daughters – one has an age that is a cubed number. She is half her sister's age, which is a squared number. They are both between 5 and 20.

Brother's age:

Mother's age:

Daughter 1's age:

Daughter 2's age:

The chief was impressed by Paulo's mathematical skills. He could tell Paulo was no threat to the tribe. The chief handed him some wood and told Paulo to head to the shore and there he would find forty-one metre square planks and rope. He could build himself a raft. He gave Paulo some great survival tips, but one stayed in his mind: *The raft must be a square to float and be the biggest you can make.* However, Paulo was tired and exhausted and was about to make a mistake which could cost him his life.



Paulo

6m^2 is equal to 12m.
I only need 12 planks
to make my square
raft.

5. Explain his mistake to him before it's too late. Work out how many planks he really needs.

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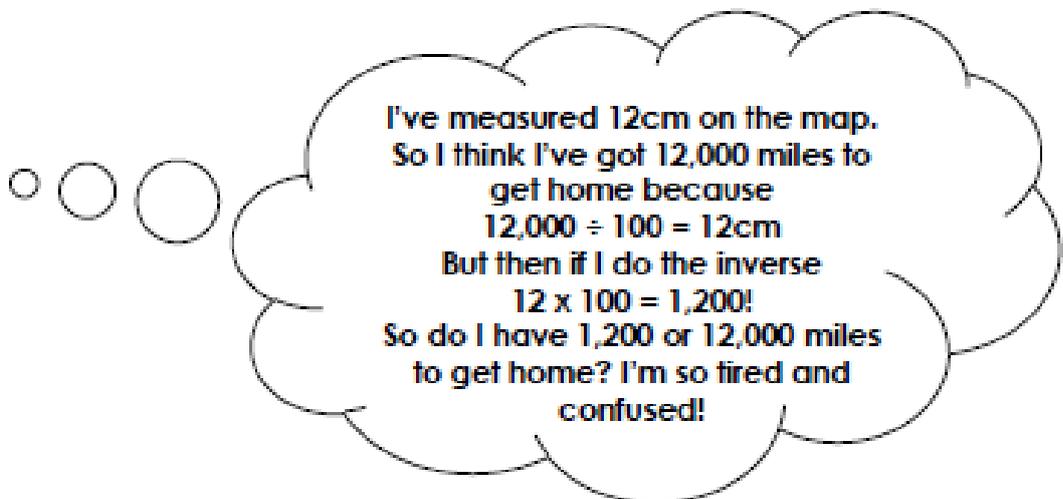
Paulo set sail. He wondered how far it would be until he reached home. Suddenly, he remembered Uncle Deadeye had also given him a map. He took the map from his pocket.



He measured the map and thought carefully about how to calculate the distance home. But he was still exhausted.



Paulo



6. Explain to Paulo how far it is to reach home and where he went wrong.

After a long journey, he reached home and ran into Uncle Deadeye's arms. But Paulo was intrigued!

"How did you know all about the island?" he asked his uncle.

"Well, maybe one day you will find out Paulo. But for now at least you're home safe and well." replied Uncle Deadeye, as he pulled down his eyepatch.

ANSWERS *for checking*****

1. The numbers to follow are 37, 59, 97, 13, 29, 43, 73, 17, 67, 53 and 47.

If you want to escape from Black Rock, you must solve all our puzzles.
The X shows your position. But time is ticking; we are coming!

Puzzle 1
Only circle the prime numbers which end in a 3, 7 or 9.
Follow the correct path and you survive. One wrong move and you may not be alive!

Tree	Tree	Tree	83	39	57	17	67	53	47	Tree
Tree	Tree	Tree	33	Tree	Tree	73	Tree	Tree	Tree	Tree
Tree	Tree	Tree	Tree	Tree	69	43	61	29	27	Tree
Tree	Tree	Tree	Tree	97	13	29	Tree	Tree	79	11
Tree	Tree	Tree	33	59	Tree	63	Tree	Tree	Tree	Tree
Tree	51	45	X	37	81	Tree	Tree	Tree	Tree	Tree
Tree	Tree	Tree	21	Tree	9	83	Tree	Tree	Tree	Tree
Tree	Tree	Tree	49	Tree	Tree	99	91	35	Tree	Tree

2. Various answers. Two numbers Paulo could press are:



A = 13,100 and B = 21,200

The sum of both three-digit numbers is 5 ($1 + 3 + 1 = 5$; $2 + 1 + 2 = 5$).

3.

1	48
2	24
3	16
4	12
6	8

15	X	18	20
9	48	1	16
35	4	3	12
45	1	16	8
7	42	24	6

4. Various answers. Brother = 25 (5^2); Mother = 64 (4^3); Daughter 1 = 8 (2^3) and Daughter 2 = 16 (4^2). 8 is half of 16.

5. Paulo has multiplied 6 by 2 instead of calculating 6^2 which equals 36. He needs 36 planks which is also the biggest raft he can make as $7 \times 7 = 49$ and he only has 40 planks.

6. Paulo has 1,200 miles to reach home. He calculated 12×100 incorrectly as 12,000 to begin with. This then made his division incorrect. $1,200 \div 100 = 12$ cm so he has 1,200 miles to reach home.

SCIENCE:

BRIGHT AS A NEW PENNY

SCIENCE CHALLENGE 09

Designed by Roy,
Design engineer at Dyson

The brief

Clean a penny using cola.

The method

1. Place the penny in the container.
2. Add enough cola so the penny is covered.
3. Leave overnight.
4. In the morning, you should find that your penny is clean.

Materials

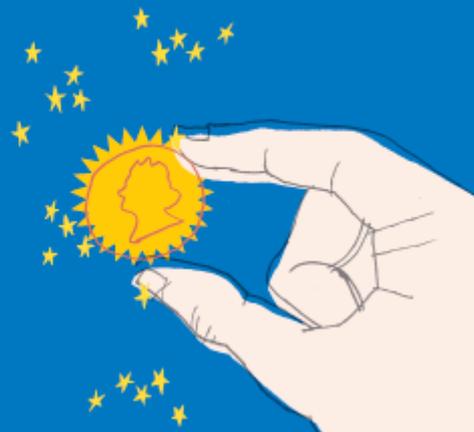
Shallow container
Cola
A penny – the older and dirtier the better



How does it work?

Pennies have a copper coating. As the copper gets older, it reacts with the oxygen in the air and begins to form a copper-oxygen compound. This compound is what makes the penny look dull.

Meanwhile, cola contains phosphoric acid. This acid breaks down the copper-oxygen compound chemical bonds allowing a fresh, unoxidized layer of copper to be exposed.



English:

All answers to questions will be on the class page in Week 9.
Kensuke's Kingdom by Michael Morpurgo
Please download the video in Week 9.

Day 1: Read Chapter 7, 'All That Silence Said.'

- Read along with Mrs Lee, then read it independently.
- Make a list of unknown words and look them up in the dictionary or online. (If you don't have access send me a Blog.)

Day 2: Questions

1. Who used to bring home fish and chips on Fridays?
2. How did Kensuke teach Michael to paint?
3. Who was Kensuke's favourite orangutan?
4. What did Kensuke want to learn?

Challenge: Draw a labelled sketch of Kensuke's cave.

Day 3: Questions

1. Why do you think Michael no longer misses his parents?
2. Why does Michael want to ask Kensuke lots of questions?
3. How do Michael and Kensuke learn to trust each other?

Challenge: Make a fact-file for Kensuke. What do we know about him?

Day 4: Questions

1. Why does the chapter start with a memory?
2. Why is the word 'silence' repeated?
3. Michael feels 'honoured' when Kensuke shows him a 'Japan' tree. What does this mean?

Challenge: Collect words to describe Kensuke. Write down the meanings.

Day 5: Questions

1. What is the main purpose of this chapter?
2. What have Michael and Kensuke given each other?
3. Do you think Kensuke is a very clever fellow? Explain why.

Challenge: Predict how this story will end, using 5 bullet points to explain.

Grammar, Spelling and Punctuation:

Please see SPAG mat Activity 3 and complete the appropriate work from 1 to 3 stars. The answers are included after each worksheet. Remember you don't have to print off the sheet just record your answers on paper or whatever you have available and check them when you have finished.

Writing: Look at the **Geography 'Dam Case Study' sheet.**

- Do you think the project should go ahead?

In your argument include:

- The main facts about the dam you studied.
- The main benefits of building the dam?
- The main disadvantages?
- Whether you think building the dam was the correct decision in this case?

Oracy: Game of the Month – **June**

Sound Tennis

Agree on an initial letter, e.g. 'P' and take turns in saying a word that begins with that letter. The game will finish when one player cannot think of a new word. The winner selects the next letter.

Challenge – Try to use new and interesting vocabulary. You could use a dictionary or a thesaurus before playing the game to add to your vocabulary bank.

Geography: Holding back the Flood

LO: I can explain the impact of damming rivers.

Key/New Words: Dam, reservoir, hydroelectric power, renewable energy

Read through the **power point** named, “**Holding Back the Flood**”

Questions

- What is a dam?
- What do you think has happened to the river at the points shown?
- Why do we build dams?
- Why might people want to block the flow of a river?
- Where have we built dams?

Video

Hydroelectric power animation: <https://vimeo.com/35758160>

Activity Sheet ‘Dam Case Studies’

- Read the case study notes about the dam building project.
- Identify the benefits and the risks for each category.
- Do you think the project should go ahead? (See English- writing)

(Easiest) The Aswan Dam Case Study: Study and complete the Debating Dams Activity Sheet to identify key points for and against.

(Middle) The Hoover Dam Case Study: Study and complete the Debating Dams Activity Sheet to identify key points for and against.

(Hardest) The Three Gorges Dam Case Study: Study and complete the Debating Dams Activity Sheet to identify key points for and against.

Write your points on a piece of paper if you can't download the '**Debating Dams**' PDF.

YLA: Session 6 Community Action

LO: To 'be the change they want to see' in our local area through our community action project.

Watch Archie's Story

<https://abyt.schoolology.com/page/2074845621>

Big Question: Does it matter if people say thank you?

Put your answers on the blog so I can fill out Year 5's response on the YLA system.

Music

Hope you are enjoying exploring the famous play 'Macbeth' by William Shakespeare. BBC have put together a fantastic resource with an animation of the story and tutorial of a song to learn each week. Week 5 is linked below, it might be worth starting with the third clip on the page 'The Story' before beginning the tutorials of the song.

<https://www.bbc.co.uk/teach/school-radio/music-ks2-macbeth-5-witches-brew/zrjqwty>

Art

Hope you all enjoyed having a go at the Doodles Academy curriculum last week! Rather than insisting on a specific plan for this week there are some suggestions below. I would recommend you sign up with your own account (totally free) so you can get access to the emails after completing each module. Don't forgot other art resources such as #DrawWithRob!

Art & Advocacy

Students learn about water problems around the world and how graphic designers use design to enact change. They design a poster advocating for a cause they care strongly about.

<https://doodles-academy.org/course/art-advocacy-doodles-at-home/>

Me & My Monster

Students learn about visual poetry, create a poem about a monster helper, draw a self-portrait, and rearrange their poems in a visual way with the self-portrait. They work with basic collage supplies and colored pencils.

<https://doodles-academy.org/course/me-my-monster-doodles-at-home/>

RE

The Parable of the Lost Coin

<https://youtu.be/yvHxUxjaboE>

Watch the story about the lost coin. Jesus told this story to try and explain to people that God thinks it is amazing news when someone chooses to follow him, as good news as finding something very precious that has been lost! Jesus taught that we are precious to God and are of great value to him, just like a silver coin. It is important to try and understand the things in our lives that are of great value to us as well! Maybe for you it is friendship, your family or some of your favourite belongings. Think about what you would do if any of those things were lost, I bet you would search with all your might! It is great to know that you are precious to the people in your life.

- Who do you think you are precious to? It may be your friends, family or the people who look after you.
- What do you think is precious in your life? How can you tell that those things matter to you?
- If there is someone in your life who is precious to you, how could you show them that this week? What one thing could you do to make them feel extra special?

Latin

Classics for All have released The Olympus Challenge. Pupils from school years 5-8 can sign up to complete the challenge and receive an official certificate! Pupils need to complete three challenges before Friday 17th July 2020. All the information can be found in the attached document. This week's home task is to complete an activity of your choice from badge B: Language Detective.