

# YEAR 6



Hello, Year 6! It is beginning to feel like a long time ago that you were in school and we were all together but hopefully we will see some of you soon! We hope you all enjoyed last week's learning and enjoyed the book read by Stephen Fry. Listening to audio books is a great way to take in stories – you could try drawing or colouring at the same time! Your proud postcards are something that you can now display or look at every now and then to feel a sense of accomplishment. This is something that will remind you of all the hard work you have been doing during this odd time. We're also trying to keep ourselves busy with exercise and reading like you. Miss Hill is re-reading the Harry Potter books and Miss Moule has been listening to audio books to try something new!

This week includes World Oceans Day! We hope you enjoy some of the ocean-themed activities and we can't wait to hear all about it! Don't forget to post your work or anything else you've been doing on Twitter and tag @OldburyPark so that we can see. Take care!

Miss Moule

Miss Hill

Julie

## EVERY DAY

Daily Maths lessons – <https://whiterosemaths.com/homelearning/year-6/> (Summer term Week 7 w/c 8<sup>th</sup> June) If you have already completed this week please go back to a week you haven't done.

Watch the video and then complete the written task (some of these need printing). This is 30-40 minutes work. **This week is Algebra**

There is no video for Friday but there will be a Maths Challenge which will be on the website later in the week.

You also have some arithmetic daily practice – complete a box a day!

Mathletics – 15-20 minutes (more if you wish).

Read for at least 30 minutes.

## CGP BOOKS

(across the whole week)

**Maths** – Pages 82-86 (after completing White Rose Tasks). This is for all 3 math's groups.

**English** – Pages 58-62

## SURVIVAL OF THE FITTEST!

Additional tasks for this week (1/6/20)

### English

#### Monday

It's World Oceans Day!

Have a go at this reading comprehension to learn some facts about the oceans. <https://www.twinkl.co.uk/resource/uks2-layers-of-the-ocean-differentiated-differentiated-reading-comprehension-activity-t2-e-41807>

#### Tuesday

SPAG – page 58

SPAG – Semi colons

<https://www.bbc.co.uk/bitesize/articles/zdtny9q>

#### Wednesday

Think of as many adjectives as you can that could describe the oceans. You could include the vibrant colours that you might see or think about the 5 senses. Create your own Wordle using all of the adjectives or phrases. If you can, use a thesaurus to up level your words. You might want to look at an image of the ocean to help you.

#### Thursday

Using your adjectives and descriptive phrases from yesterday, write a setting description of the ocean. We would like you to write at least 1 large paragraph and would like you to include impressive vocabulary, punctuation and other features to make it more exciting such as metaphors and similes. Have a look at the checklist below to help you.

#### Friday

Handwriting – focus on your handwriting and presentation. Neatly, write up your setting description on the boarded page below.

SPAG – page 59-62

### TOPIC

**Geography** – Use the World Oceans Day website to explore new things about the oceans. Choose some activities to have a go at. You can tune in to live lessons, do some blue yoga or learn about some conservation efforts that are taking place. <https://worldoceanday.school/>

We'd like you to find out more about the 5 oceans of the world. You can conduct some research online using these websites:

<https://www.bbcearth.com/oceans/>

<https://www.bbc.co.uk/bitesize/topics/z849q6f/articles/zmqwscw>

<https://www.natgeokids.com/uk/discover/geography/general-geography/ocean-facts/>

Once you have collected your research, we'd like you to put your computing skills to the test! Create a PowerPoint to show all of your information. You may want to use some pictures too! If you don't have access to PowerPoint, a booklet or a big poster would look great too!

**Science** – How has the Coral Reef changed over time?

Like any animal, the coral reef has had to adapt to survive. It's current environment has had a large impact on how it is now surviving. **How has it changed over recent years? Why is this?**

Create an action plan of how the Coral Reef can return to full health. **What will need to change? How will we do it?**

You can display your information and your action plan in any way you wish. You may want to get creative and mimic the colours of the coral reef.

**Daily Practice – 1**

- 1)  $2335 + 3882 =$
- 2)  $125.2 - 28.5 =$
- 3)  $25 \times 11 =$
- 4)  $557 / 8 =$
- 5)  $2/3 + 2/5 =$
- 6) 12% as a decimal =
- 7)  $78.2 \times 100 =$
- 8)  $12 \times 5 - 8 =$

**Daily Practice – 2**

- 1)  $64.2 + 976.5 =$
- 2)  $10685 - 8542 =$
- 3)  $588 \times 11 =$
- 4)  $76945 / 17 =$
- 5)  $4/9 + 2/5 =$
- 6) 0.76 as a fraction =
- 7)  $15.6 / 10 =$
- 8)  $14 \times 2 \times 8 =$

**Daily Practice – 3**

- 1)  $835 + 1858 =$
- 2)  $98.9 - 46.8 =$
- 3)  $82 \times 5 =$
- 4)  $642 / 7 =$
- 5)  $8/9 - 2/5 =$
- 6) 98/100 as a percentage =
- 7)  $1.28 \times 1000 =$
- 8) 4 squared +  $12 \times 6 =$

**Daily Practice – 4**

- 1)  $436.2 + 13.3 =$
- 2)  $555 - 120.9 =$
- 3)  $74 \times 9 =$
- 4)  $52220 / 6 =$
- 5)  $9/11 - 1/3 =$
- 6) 22/100 as a decimal =
- 7)  $0.45 / 100 =$
- 8)  $10 \times 11 / 2 =$

**Daily Practice – 5**

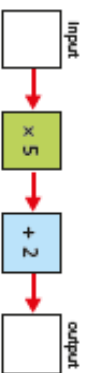
- 1)  $39.36 + 71.5 =$
- 2)  $255 - 2.55 =$
- 3)  $22 \times 9 =$
- 4)  $389 / 16 =$
- 5)  $7/8 \times 2/3 =$
- 6) 5% as a fraction =
- 7)  $0.38 \times 100 =$
- 8)  $9 \times 12 \times 10 =$

**Daily Practice – 6**

- 1)  $9752 + 12.68 =$
- 2)  $978.3 - 43.4 =$
- 3)  $75 \times 75 =$
- 4)  $10658 / 6 =$
- 5)  $9/10 \times 5/6 =$
- 6) 0.58 as a percentage =
- 7)  $0.68 / 100 =$
- 8) 10 squared +  $9 \times 9 =$

## Find a rule – two step

- 1 Use the function machine to complete the table.



Input	1	2	3	5	10	50
Output						

- 2 Here is the same function machine with the steps in the reverse order.



The outputs will be the same.

Taddy



The outputs will be different.

Jack

Explain to a partner who you think is correct.

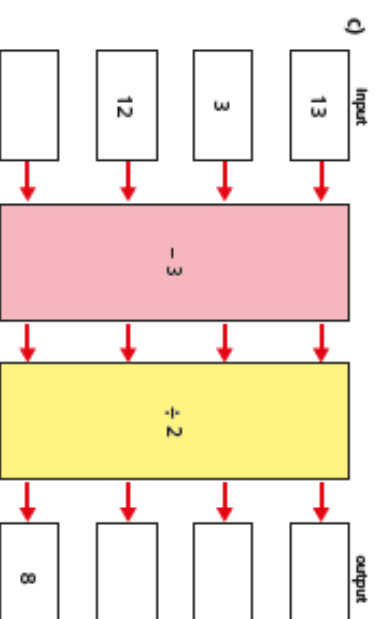
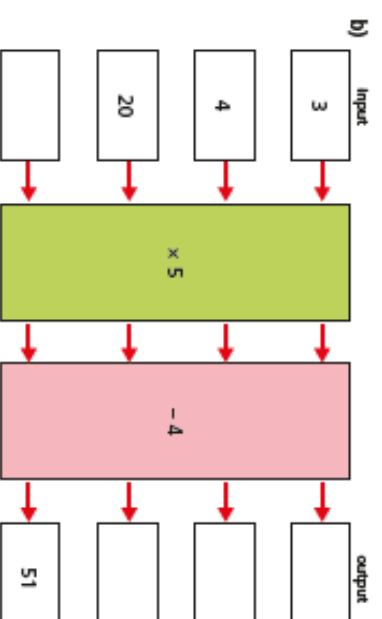
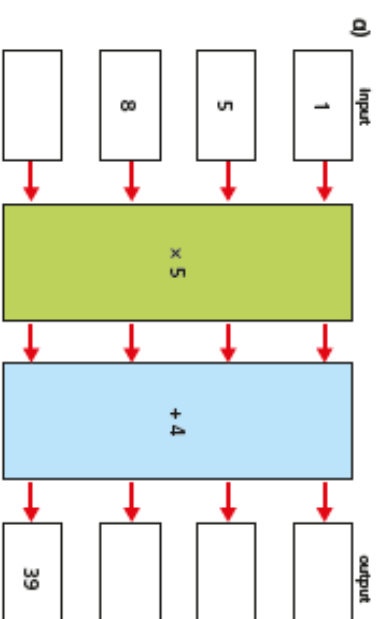
Use the function machine to complete the table.

Input	1	2	3	5	10	50
Output						

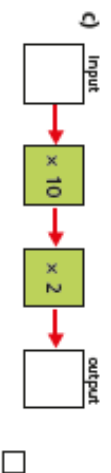
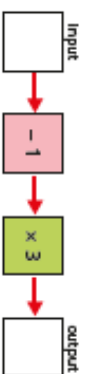
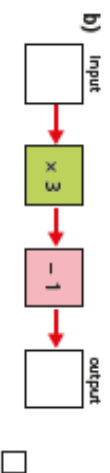
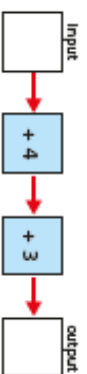
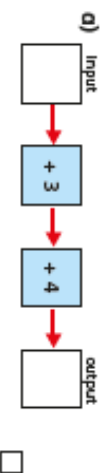
Who is correct? \_\_\_\_\_

3

Work out the missing outputs and inputs.



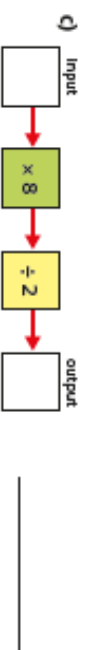
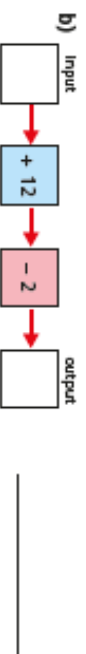
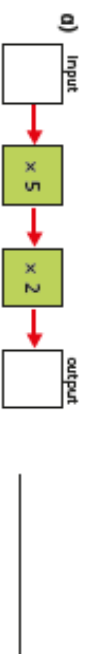
- 4 Tick the pairs of function machines that will give the same outputs for a given input.



Explain your reasoning to a partner.

- 5 Here are some 2-step function machines. For each machine, write a single step that would give the same output.

Check your answers by inputting values.



Can all 2-step function machines be written as a 1-step function machine?

Talk about it with a partner.

- 6 Here is a function machine.



a) Complete the table.

Input	10	3		
Output		40	280	

b) Rosie puts a number into the machine and she gets out the same number.

Work out Rosie's number.

- 7 Mr Hall and Mrs Rose order some photos online.

a) Mr Hall orders 16 photos. How much does he pay?

b) Mrs Rose pays £6.05. How many photos did she order?



# Forming expressions

- 1 Tommy uses multilink cubes to represent an unknown number and base ten ones to represent 1



Write algebraic expressions to describe the sets of cubes.  
The first one has been done for you.



$2x + 3$



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



- 2 Use Tommy's method to represent these expressions.

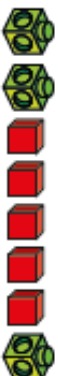
a)  $x + 2$       d)  $3x + 1$

b)  $2x$       d)  $x + 6$

Compare answers with a partner.

- 3 Use cubes to help you simplify the following expressions.  
The first one has been done for you.

a)  $2y + 5 + y$



$3y + 5$

b)  $3a + 2 + a + a$



\_\_\_\_\_

c)  $6p + 2 - 2p$

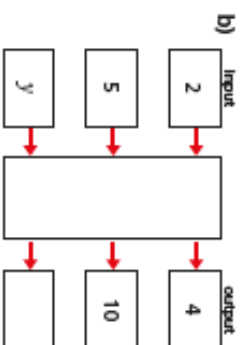
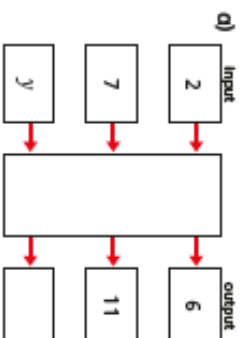


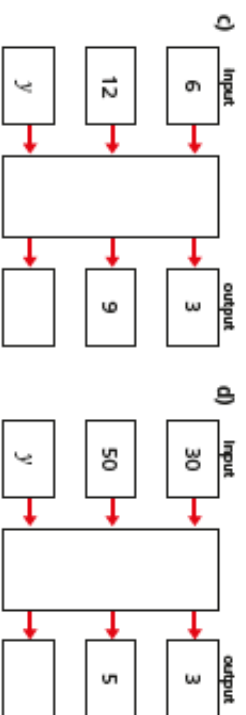
\_\_\_\_\_

d)  $m + 4 + 3m - 3$

\_\_\_\_\_

- 4 Complete the function machines.

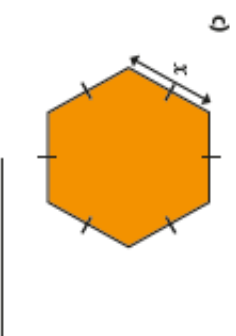
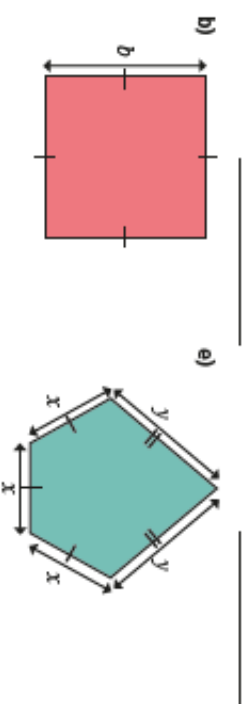
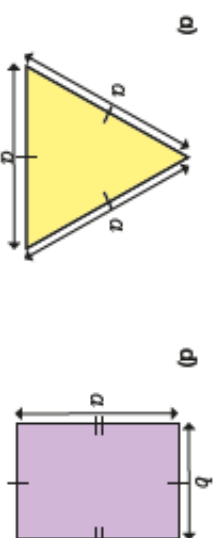




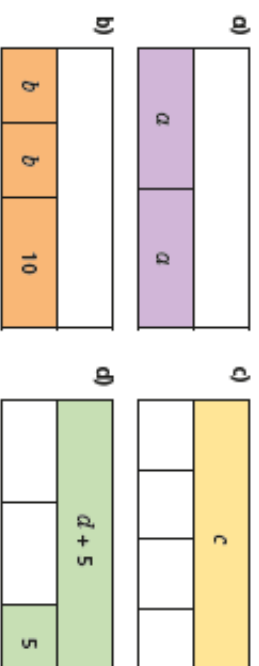
5 Match each statement to the equivalent algebraic expression. Write the missing statements.

5 more than $y$	$2y$
$y$ less than 5	$y - 5$
$y$ multiplied by 5	$5 - y$
$y$ divided by 5	$y + 5$
double $y$	$5y$
	$y^2$
	$\frac{y}{5}$

6 Write an algebraic expression to represent the perimeter of each shape.





7 Complete the bar models.



# Substitution

1

 = 4	 = 5
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Use the given facts to work out the calculations.

a)  +  + 

b)  +  - 

c)  +  +  +  + 

2

 = 12	 = 5
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Use the given facts to work out the calculations.

a)  - 

b)  × 

c) Create your own calculation that will be equal to 22

3

If  $x = 5$ , write the values of the expressions in the corresponding grid. The first one has been done for you.

$3x$	$x^2$	$2x - 5$
$4x + 2$	$\frac{x}{2}$	$2(x + 1)$
$7x$	$x + 9$	$x - 7$

15		

4

If  $a = 10$  and  $b = 6$ , work out the values of the expressions.

a)  $a + b =$

d)  $2a + b =$

b)  $a - b =$

e)  $3a - 17 =$

c)  $2a =$

f)  $2(a - b) =$

5

If  $m = \frac{4}{5}$  and  $k = 0.1$ , work out the value of  $m + 2k$



6



Mo

It does not matter what  $p$  and  $q$  are,  $p + q$  and  $q + p$  will always give the same answer.

Do you agree with Mo? \_\_\_\_\_

Explain your answer.

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7

$$m = 7 \quad n = 5$$

Write  $>$ ,  $<$  or  $=$  to compare the expressions.

a)  $2m$   10

b)  $n - 1$   5

c)  $2n + m$    $2m + n$

d)  $7n$    $5m$

8

$$a = 10$$

Write the expressions in order, starting with the smallest value.

$5a$

$a + 5$

$\frac{a}{5}$

$a^2$





9

$$a = 15$$

Write three different algebraic expressions that give a value of 40

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10

Complete the table.

$x$	$5x$	$5x - 1$
2		
10		
12	25	
		34
		99



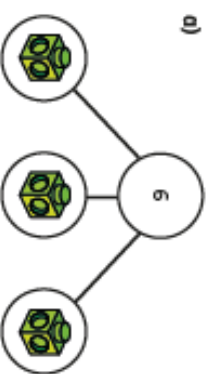
# Solve simple one-step equations



- 1 Write an equation for each part-whole model.

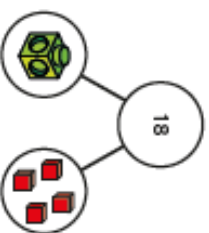
Work out the value of the multilink cube in each equation.

a)



$$\text{multilink cube} = \square$$

b)



$$\text{multilink cube} = \square$$

- 2 There are some counters under the cup.



There are 10 counters in total.

a) if  $c$  is the number of counters under the cup, explain why  $c + 6 = 10$

b) Work out the value of  $c$ .

$$c = \square$$

c) How many counters are under the cup?

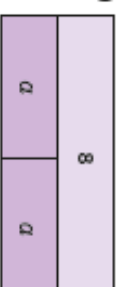
$$\square$$



- 3 Write algebraic equations to represent the bar models.

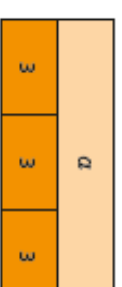
Find the value of  $a$  in each one.

a)



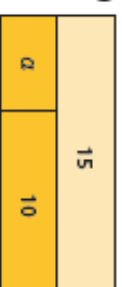
$$a = \square$$

c)



$$a = \square$$

b)



$$a = \square$$

d)



$$a = \square$$

- 4 Nijah is solving the equation  $x - 8 = 20$

$$\begin{aligned} x - 8 &= 20 \\ x &= 20 - 8 \\ x &= 12 \end{aligned}$$

What mistake has Nijah made?

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5 Solve the equations.

a)  $x + 7 = 20$

d)  $g - 3 = 15$

$x = \square$

$g = \square$

b)  $10y = 80$

e)  $32 = t - 5$

$y = \square$

$t = \square$

c)  $4m = 22$

f)  $\frac{u}{6} = 3$

$m = \square$

$u = \square$

6 Filip thinks of a number.

He subtracts 5 from his number.

He ends up with 10

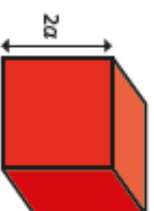
Write an algebraic equation to represent Filip's problem.

Solve the equation to work out his number.

7 Dexter builds a tower.

Each block is  $2a$  high.

He uses 7 blocks.



The total height of his tower is 42 cm.

Write an equation to represent the height of Dexter's tower and find the value of  $a$ .

$a = \square$  cm

8 Work out the value of each shape.

Write the equations that you solved to find the value of each shape.

★	★	★	★	★	$= 20$
★	★	★	★	★	$= 40$
★	★	★	★	★	$= 32$

♥ =

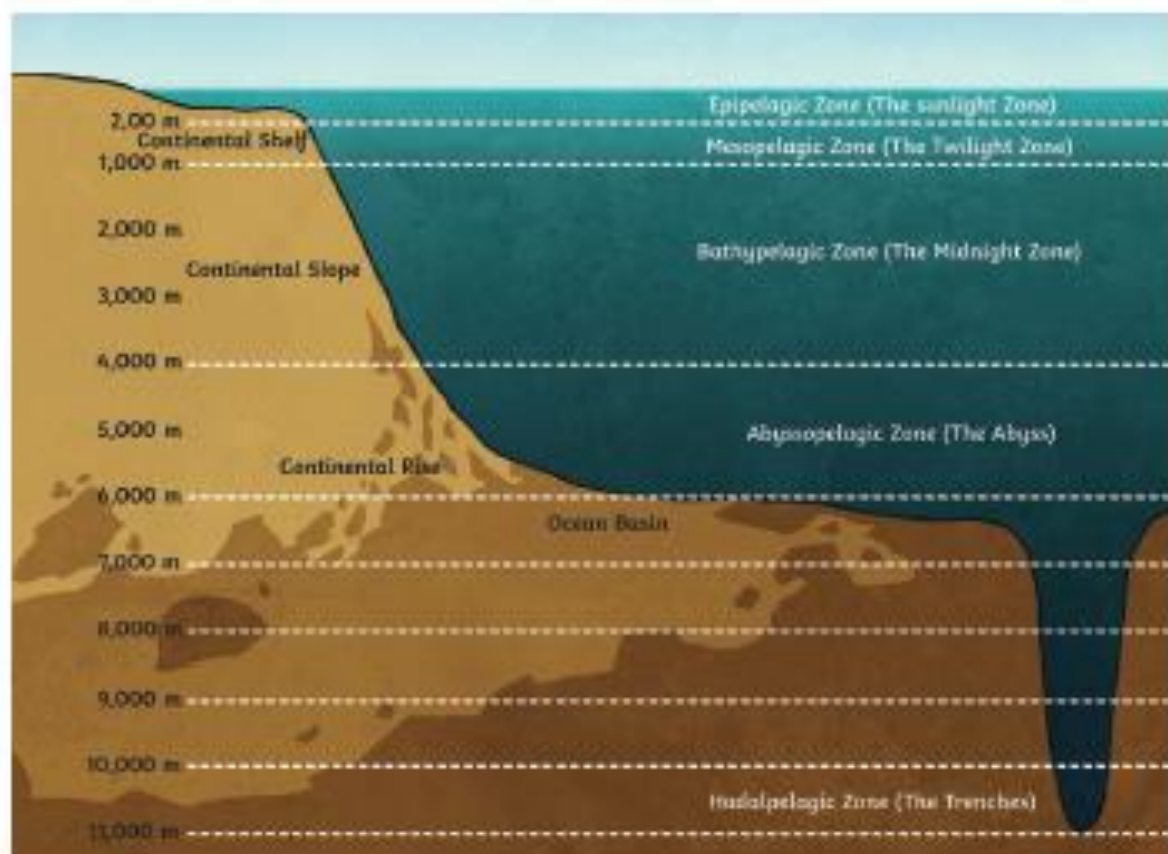
★ =

▲ =

Work out the missing total of each row and column.

Compare answers with a partner.

# Layers of the Ocean



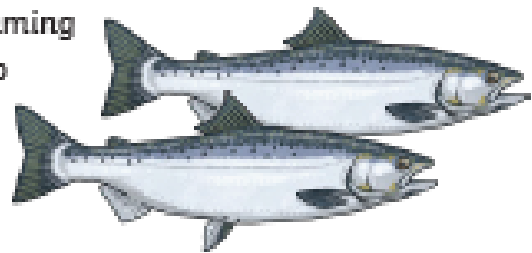
Making up 362 million km<sup>2</sup> of the Earth's surface, oceans cover two thirds of our Earth. There are five oceans (the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Antarctic or Southern Ocean and the Arctic Ocean) which are not separated and all flow into each other. The Pacific Ocean is the largest and deepest of all the oceans. It is so deep in places that the world's tallest mountain, Everest, would sink without a trace! Oceans should not be confused with seas, which are smaller than oceans and are usually located where the land and ocean meet, for example, around the coast of the UK, there is the North Sea, the English Channel and the Irish Sea.

Oceans are made of five distinct layers which all have their own characteristics, including temperature, light and the creatures living within them.



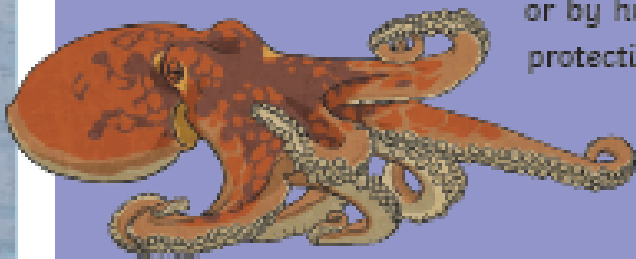
### Epipelagic Zone

This layer, which is also known as the Sunlight Zone, extends from the surface to around 200m below the surface of the ocean. There is plenty of light and heat in this zone although they both decrease with depth. Due to the conditions within this zone, there is a wide variety of life found, including: coral reefs, seaweed (which plant feeders eat) and fast swimming hunters, such as dolphins and salmon. Due to its accessibility and favourable state, humans regularly utilise this layer for activities such as swimming, fishing and sea transport.



### Mesopelagic Zone

This layer is also known as the Twilight Zone due to being up to 1000m below the surface of the ocean. With only faint sun rays reaching it, this layer is home to some of the strangest sea animals, including the sea cucumber, swordfish, wolf eel and octopus, which often have large eyes to help them see. Due to the absence of plants growing within this layer creatures either feed by filtering the water or by hunting other creatures at speed. Wearing protective suits due to the extreme pressure and lack of warmth, humans are able to dive to this layer. Some people do this for fun whereas others do so in order to research the oceans.



### Bathypelagic Zone

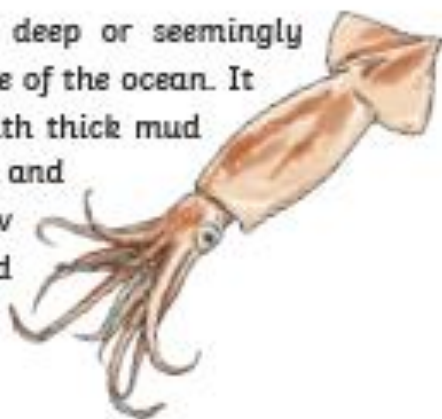
The Midnight Zone, which makes up 90% of the ocean, is up to 4000m below the surface of the ocean. No sunlight can reach this layer although some light can be seen from the bioluminescent creatures that produce their own light (such as anglerfish, viperfish and jellyfish) which they use to hunt their prey. Surprisingly, although the pressure in this layer is high, there are a large numbers of creatures living within it. Many of the animals are red or black due to the low light levels. Some creatures, such as the sperm whale, dive to these depths to hunt for food.





### **Abyssopelagic Zone**

This layer, known as the Abyss (which means a deep or seemingly bottomless chasm), is up to 6000m below the surface of the ocean. It contains 75% of the ocean bed, which is covered with thick mud made from the remains of dead animals. Pitch-black and near freezing due to a total lack of sunlight, very few creatures live here apart from a group of (often) blind invertebrates, which are mainly transparent, such as sea stars, amphipods (shrimps) and squid.



### **Hadalpelagic Zone**

Up to 11,000m below the surface of the ocean the Hadalpelagic Zone, which is also known as the Trench or the ocean floor, is actually a series of underwater canyons (or narrow valleys). This can be explored by humans only when using specialist scientific equipment due to the high pressure and near freezing temperatures. The deepest part of the ocean ever to be explored by man is in the Japanese Mariana Trench, which is almost 11,000m deep! Natural light is unable to penetrate to the trenches but unique creatures can be found, including certain sea stars.

The ocean is an incredible part of our world that oceanographers (sea scientists) hope will be more thoroughly explored as technology advances to increase our knowledge and enable us to protect the oceans for future generations.



# Questions

1. Which of these are true facts about oceans? Tick two.

- Oceans cover two thirds of the Earth's surface.
- The five oceans are all separate.
- The Atlantic Ocean is the deepest ocean.
- Oceans are made of five distinct layers.

2. Which of these is another name for the Mesopelagic Zone? Tick one.

- Sunlight Zone
- Twilight Zone
- Midnight Zone
- Abyss

3. Due to the absence of plants growing within this layer...

What does **absence** mean?

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4. What is the depth of the Abyss?

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5. Find and copy a word from the text which shows that creatures found in the Trenches are one of a kind.

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6. In your own words, explain why the Midnight Zone was given that name.

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7. Summarise what you have read about the Epipelagic Zone in 40 words or less.

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8. Why do you think that the creatures in the Abyss are usually blind?

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9. Why do plants not grow in the Twilight Zone?

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10. Why is it important to protect the oceans for future generations? Give evidence to support your answer.

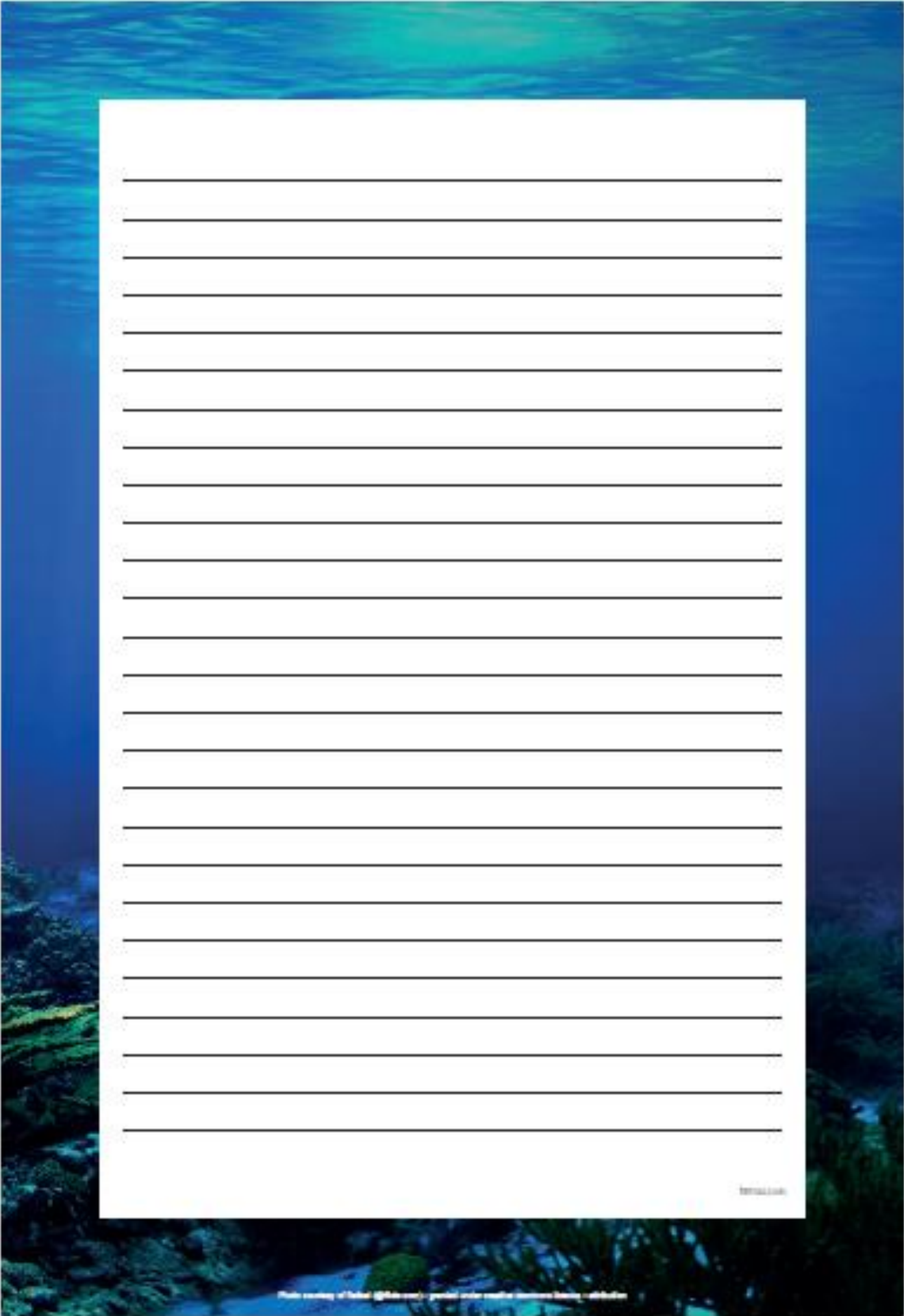
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A white rectangular area with horizontal lines, resembling a piece of lined paper, set against a background of a vibrant blue and green underwater scene with coral and fish.