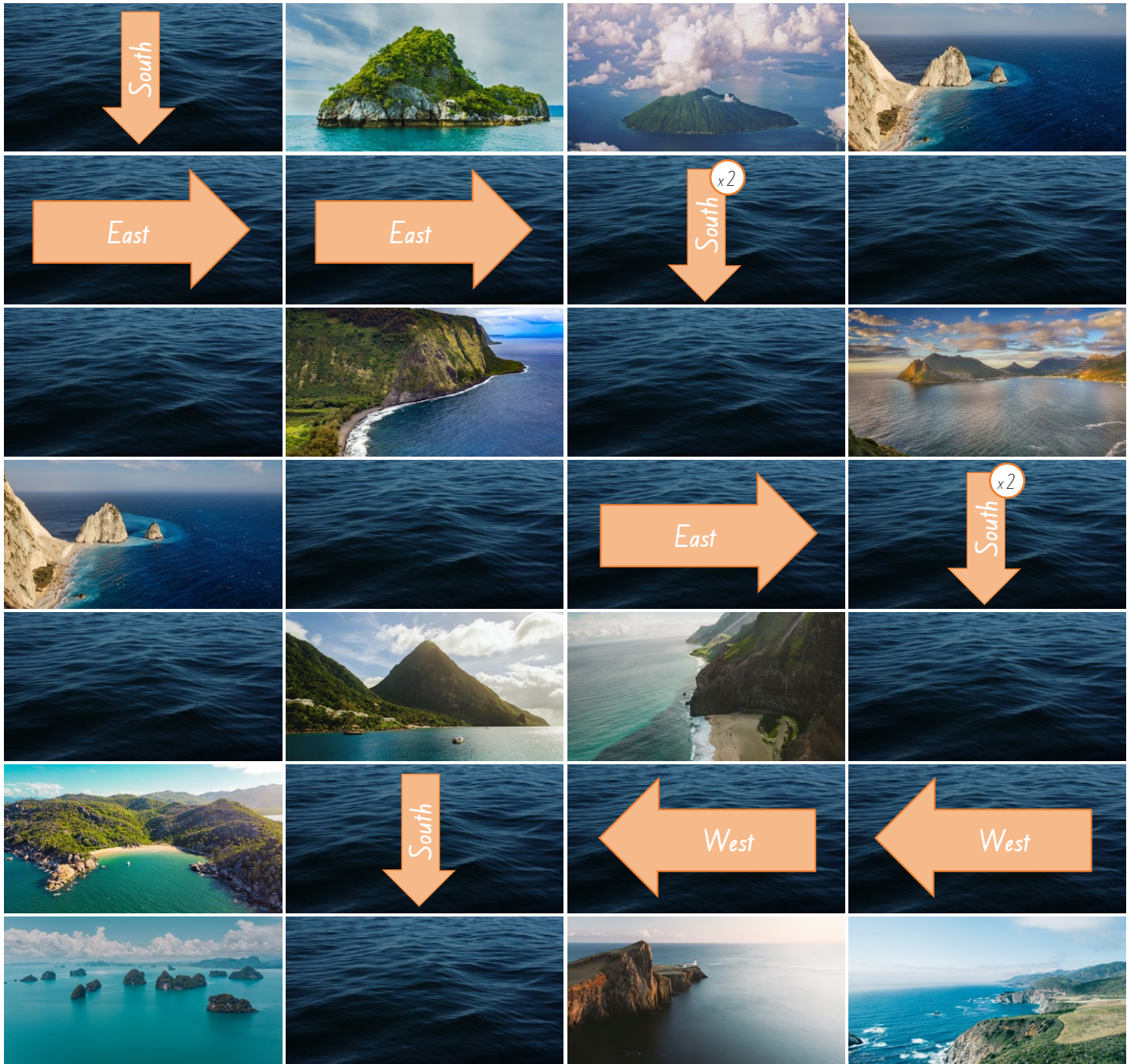


Clue 1

Start here



Answer to Clue 1: South

**Clue 2**

Use the combinations and the grid below to find the missing words. Once you have your words, unscramble them to make a sentence and discover which season it was.

	North	East	South	West
1	latitude	winter	pacific	whale
2	<b>whales</b>	predator	north	cold
3	north east	compass	dolphins	a
4	warm	<b>during</b>	longitude	<b>south</b>
5	marine	calf	they	mammal
6	south-west	ocean	<b>humpback</b>	hot
7	autumn	east	<b>springtime</b>	sea
8	go	coordinates	prey	south-east
9	when	<b>migrate</b>	direction	summer
10	west	down	where	mother

East, 4 **during**      North, 2 **whales**      West, 4 **south**  
 South, 6 **humpback**      East, 9 **migrate**      South, 7 **springtime**

Answer to Clue 2: **Humpback whales migrate south during springtime.**

## Clue 3

 $(10, 7) = \text{New Zealand}$  $(9, 7) = \text{New Zealand}$  $(4, 12) = \text{Australia}$  $(7, 1) = \text{Antarctica}$  $(10, 12) = \text{New Caledonia}$  $(12, 8) = \text{New Zealand}$  $(16, 12) = \text{Tahiti}$  $(4, 17) = \text{Philippines}$  $(11, 9) = \text{New Zealand}$  $(12, 12) = \text{Fiji}$ 

Answer to Clue 3: The most common landmark is **New Zealand**.

## Clue 4

	Answer	Letter
$\frac{1}{2}$ of 130	65	a
$3 \times 10$	30	p
$100 - 70$	30	p
$72 \div 9$	8	r
$100 - 80$	20	o
8, 16, 24, 32, __, 48	40	x
$9 \times 6$	54	i
$9 \times 11$	99	m
$30 \times 2 + 5$	65	a
$30 - 15$	15	t
$6 \times 4$	24	e
$\_\_ \div 9 = 4$	36	l
$12 \times 7$	84	y

	Answer	Letter
33, 43, 53, 63, __, 83	73	s
$162 - 108$	54	i
$\frac{1}{2}$ of 80	40	x

	Answer	Letter
$\frac{1}{4}$ of 60	15	t
$5 \times 19$	95	h
$60 \div 3$	20	o
$31 \times 2$	62	u
$121 - 48$	73	s
45, 55, __, 75, 85	65	a
$\_\_ \div 12 = 4$	48	n
$72 \div 6$	12	d

	Answer	Letter
$\frac{1}{2}$ of 70	35	k
$100 - 46$	54	i
$3 \times 12$	36	l
$80 \div 4$	20	o
$3 \times 33$	99	m
$6 \times 4$	24	e
$132 - 117$	15	t
$\frac{1}{3}$ of 24	8	r
$12 \times 2$	24	e
$10 \times 8 - 7$	73	s

Answer to Clue 4:

Approximately six thousand kilometres.

## Clue 5

So far, we know that the humpback whales are travelling south during spring, that they navigated past New Zealand and that the approximate total distance travelled was 6000 kilometres. Use the map below to find out which landmark is 6000 kilometres south of Tonga. This will tell you where the humpback whales are now.



Answer to Clue 5: Where did all the humpback whales go? **Antarctica**

### Bonus question

Why did all the humpback whales disappear to Antarctica? Using a device, library books or other sources, find out why humpbacks migrate south to Antarctica during spring to complete the mystery!

Answers will vary but should include whales migrating to colder feeding grounds during spring and summer, where they can find vast amounts of krill to feed on.