

**GCSE Biology B (Twenty First Century Science)**  
**J257/01 Breadth in Biology (Foundation)**

**Question Set 31**

1. In the past, humpback whales have been hunted for meat, oil and blubber (fat).

This hunting (known as whaling) caused their numbers to decrease and humpback whales to be classed as an endangered species.

Whaling was banned in 1986.

The data in the table shows how the estimated number of humpback whales has changed overtime.

	Estimated humpback whale population
Before whaling	125 000
Before the ban on whaling in 1986	Less than 5000
2015	24 500

(a) Explain why scientists can only estimate how many humpback whales there are.  
*only have data & knowledge upon them and not other types* [1]

(b) In 2015, humpback whales were removed from the endangered species list.

Do you agree with this decision?

Justify your answer using data from the table.

*NO - estimated number still very low compared to before whaling* [1]

(c) Current estimates of population size suggest that the number of humpback whales may not be increasing.

Suggest two possible reasons for this.

*- global warming brings unfavourable climate change for them to live  
- not enough (healthy) female humpback whales present to breed* [2]

(d) In 2018, Japan announced that it will start to hunt whales again.

Use the data in the table to explain why scientists are concerned.

*- already relatively little number presently compared to before ban so could leave with even smaller number after whaling than 500 (24500 < 125000)  
- they are close to extinction* [1]

(e) Whales migrate each year to breeding grounds.

On average, the distance travelled is 5000km and they travel at an average speed of 1.6 km per hour.

Calculate how many **days** it will take the whales to reach the breeding grounds.

Use the equation: time = distance ÷ speed

Give your answer to 2 significant figures.

$$t = 5000 \div 1.6 = 3125 \text{ hours} \\ \rightarrow 130 \text{ days}$$

**Total Marks for Question Set 31: 8**

Time in days = ..... *130* ..... [3]

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