

LISTENING – HOW WHALES CHANGE CLIMATE

INSTRUCTIONS:

- a) Read the first part of the transcript and match the words in bold in the text with their meaning:

findings		illogical
widespread		full, whole
tumble down		discoveries
for instance		for example
argued		actually, really
as		support, preserve
counterintuitive		reasoned, claimed
major		main, most important
in fact		fall or roll down a slope
sustain		while, at the same time as
entire		general, common, frequent

One of the most exciting scientific **findings** of the past half century has been the discovery of **widespread** trophic cascades. A trophic cascade is an ecological process which starts at the top of the food chain and **tumbles** all the way down to the bottom.

We all know that whales eat fish and krill and some people, certain politicians in Japan, for **instance**, have **argued** that killing whales is good for human beings, as it **boosts** the food available for us to eat - and so you would think. But **as** the great whales declined so did the numbers of fish

and krill. It seems **counterintuitive** – surely their numbers would rise as their **major** predators disappeared – but it now turns out that whales not only eat these animals: they also keep them alive. **In fact**, they help to **sustain** the **entire** living system of the ocean.

b) Watch the first part of the videoclip.

<https://www.youtube.com/watch?v=M18HxXve3CM&t=0s>

c) Watch the second part of the videoclip and complete the rest of the transcript.

Tip: you can listen to the videoclip once or twice, until you have filled all the easiest gaps, then pause the video to listen to the most difficult words several times.

Whales ____ at depth in waters that are often pitch dark, and then they return to the ____ to the photic zone, where there's enough ____ for photosynthesis to happen. There they release what ____ call "fecal plumes" – vast outpourings of poo – poonamis. These plumes are rich in iron and ____ —nutrients which are often very scarce in the surface _____. And these nutrients fertilize plant plankton that lives in the ____ place where plants can ____ – the photic zone.

Fertilizing the surface waters isn't the only thing the whales do. By plunging up and down ____ the water column, they also keep kicking the plankton back up into the photic zone, giving it more ____ to reproduce before it ____ into the abyss. Even today, the whale populations have been greatly reduced; the vertical mixing of water ____ by movements of animals up and down through the column of the oceans is astonishingly roughly the same as the ____ of mixing caused by all the world's wind and waves and tides.

More plant plankton means more animal plankton on which the ____ creatures then feed. In other ____, more whales means more fish and krill.

But the ____ doesn't end here, because plant plankton not only feeds the animals of the sea, it also ____ carbon dioxide from the atmosphere. When eventually it sinks to the ocean floor, it takes this carbon out of ____ down to a place where it remains for ____ of years.

The more whales there are, the more plankton there is. The more plankton there, is the more carbon is drawn out of the air. When whales were at their historical populations, _ _ great numbers of them were killed, it seems that they _ _ have been responsible for removing tens of millions of tons of carbon from the atmosphere every year. Whales change the climate. The return of the great whales, if they're _ _ to recover, could be seen as a benign form of geoengineering. It could undo some of the _ _ we've done both to the living systems of the sea and to the atmosphere.

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3.- Drag these words from the videoclip next to the correct phonemes:

absorb	chain							/eɪ/
alive	climate							/aɪ/
allow	damage							/iː/
amount	down							/ɪ/
before	eat							/aʊ/
boost	floor							/əʊ/
both	food							/uː/
caused	great							/ɔː/
iron	krill	most	place	rise	so	through	water	whale
keep	millions	now	release	seem	system	tide	wave	wide
know	more	out	remove	sink	these	undo	way	wind