



# Keep The Colour

Name: Eloise Fieldwick

Division: Upper Primary (Year 6)

School: Forth Primary School



In 1998, Australian scientists discovered that 21% of offshore reefs were colourless (image 1). The reason for this is because of zooxanthellae; a microscopic organism living on coral, giving it oxygen and carbohydrates, as the coral gives it protection and nutrients (image 2). Too much sunlight, pollution and warm waters are 3 reasons why zooxanthellae decides it's unhappy with its environment, and leaves (image 3). The zooxanthellae is now in a race against time. It must find a new host, and fast. On the other hand, the coral left behind no longer gets the carbohydrates and oxygen it needs to survive (image 4). The zooxanthellae will most likely not find a new host in time, for without the coral's nutrients, it'll die (image 5). Without zooxanthellae, the coral bleaches; its colour being drained until it's white, dirty grey or even black (image 6). Now it IS possible for coral to survive bleaching, but at the rate we're going, it's EXTREMELY unlikely (image 7). It's not too late! There's still time to save our precious coral! You can help by not polluting, and supporting Reef Restoration Foundations. Who knows; maybe YOU hold the answer to stop our coral vanishing.

1



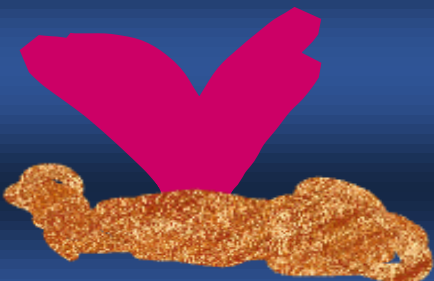
In January 1998, scientists found 21% of offshore reefs colourless.



2



The microscopic zooxanthellae, (zo-uh-Zan-Thel-Lah) lives on coral, giving it oxygen and carbohydrates in return for protection and nutrients.



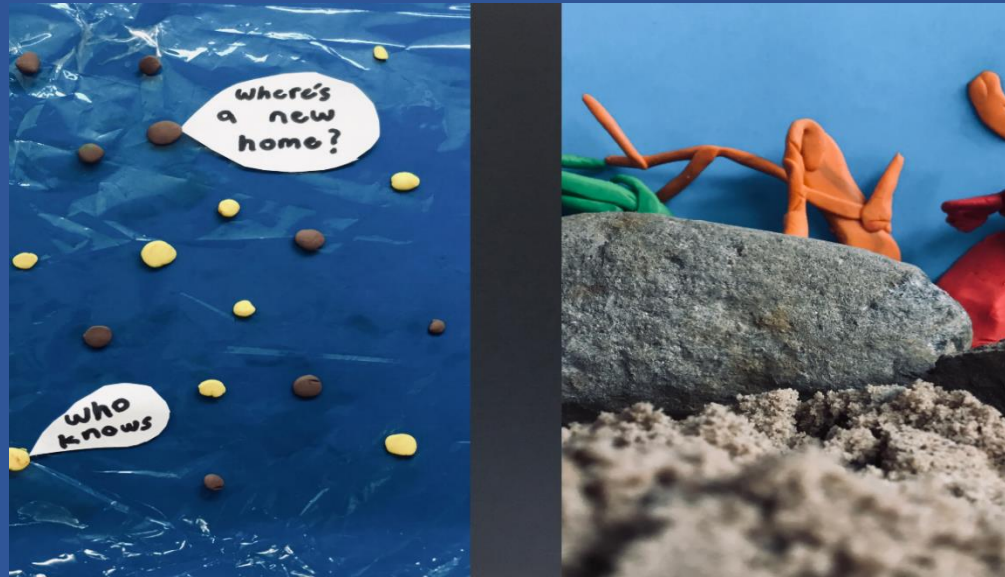
3



When specific conditions occur such as warm waters, too much sunlight and pollution, the zooxanthellae leaves, unhappy with its environment.



4



While the zooxanthellae looks for a new host, the coral doesn't get the carbohydrates and oxygen it needs to survive.



5



The zooxanthellae may never find a new host. Without the coral's nutrients and protection, it will die.



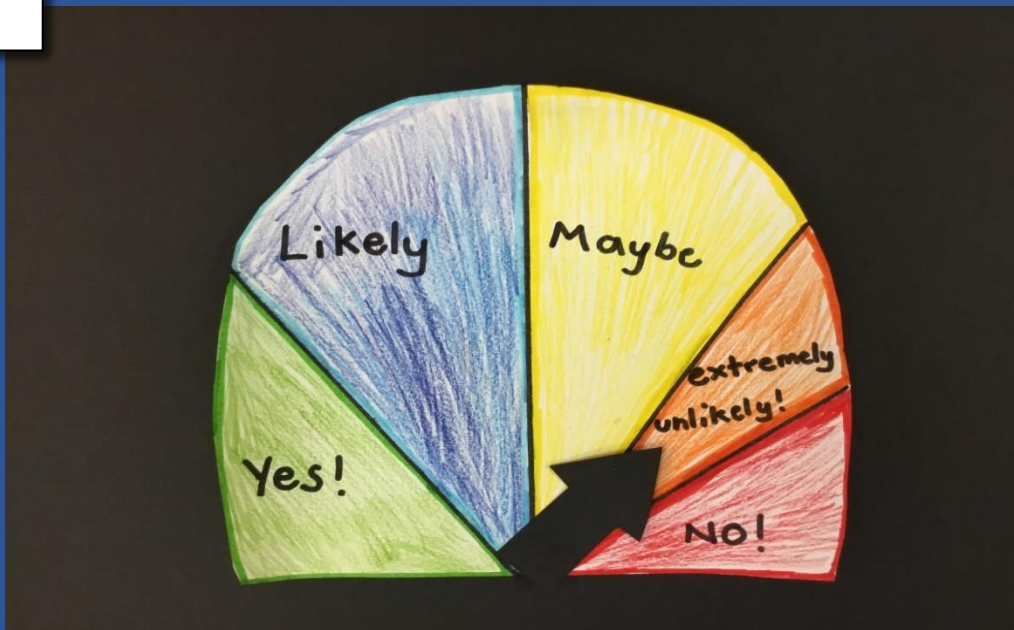
6



Without any zooxanthellae, the coral starts to bleach, losing its colour.



7



Coral can survive bleaching, but at the rate we're going, it's EXTREMELY unlikely.



8



To help our coral, reduce pollution and support Reef Restoration Foundations. What can we do to stop our coral vanishing?

## PHOTOS

Photo 1-coral: taken on June 5<sup>th</sup> 2020. Adjusted highlights, adjusted contrast, adjusted brightness, adjusted saturation.

Photo 2-magnifying glass: taken on 5<sup>th</sup> June 2020. Cropped, adjusted highlights, adjusted saturation.

Photo 3- coral and sky: taken on 10 June 2020. Adjusted saturation.

Photo 4- split coral and zooxanthellae: taken on 15 June 2020. 2 photos blended together. Brightness adjusted.

Photo 5-zooxanthellae dying: taken on 15 June 2020. Cropped, blurred, brightness adjusted.

Photo 6- black coral: taken on 16 June 2020. No edit.

Photo 7- likelihood arrow: taken on 18 June 2020. No edit.

Photo 8- scientist thinking: taken on 19 June 2020. Saturation adjusted, cropped.

## Acknowledgements

Joy (student): holding props.

Remy (student): acted for photo

Mr French (teacher): providing supplies

## Bibliography

eAtlas.org.au. (N/A).

Zooxanthellae. eatlas.org.au.

National Ocean Service. ( N/A).

Zooxanthellae...what is it?. Oceanservice.noaa.gov.

