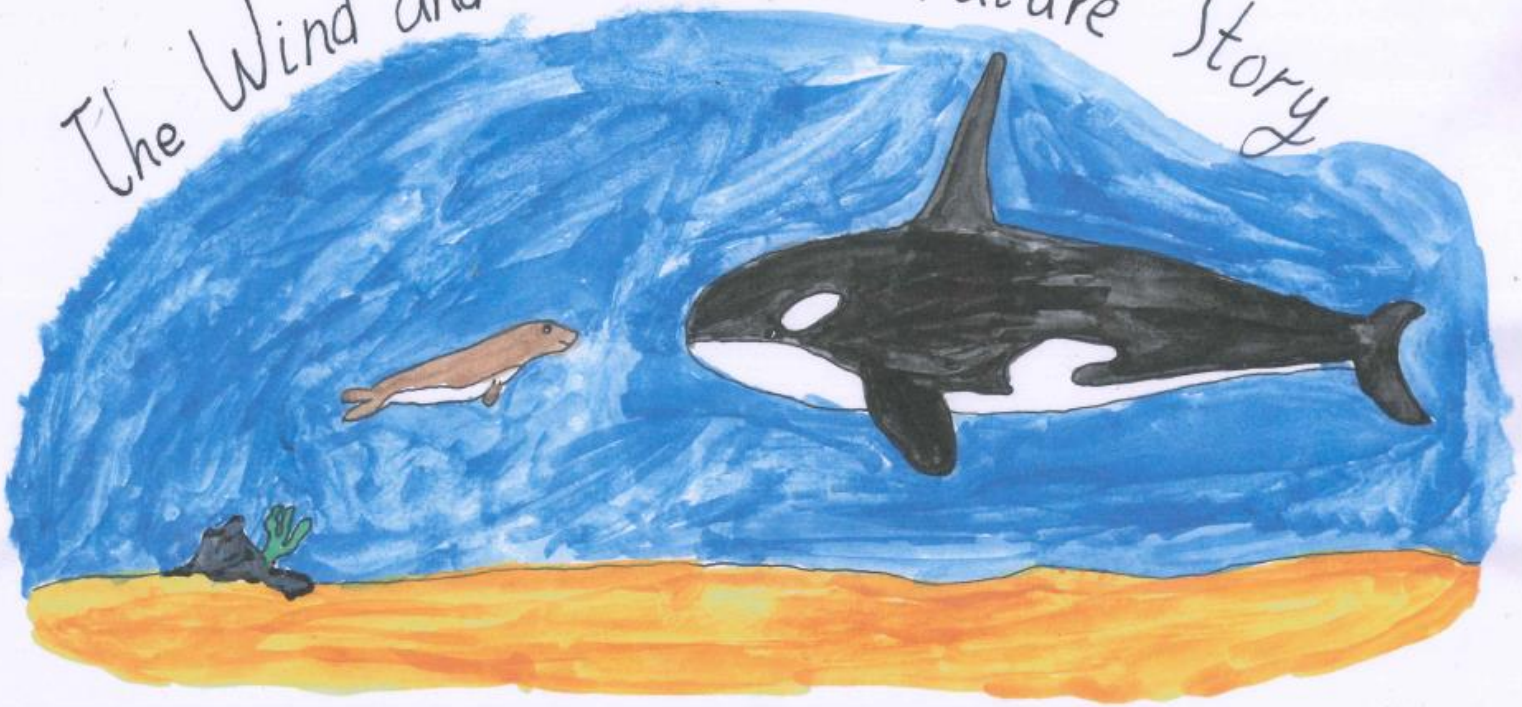
The Wind and the Sea, a Future Story



by Noah Goddard

The Wind and the Sea, a Future Story

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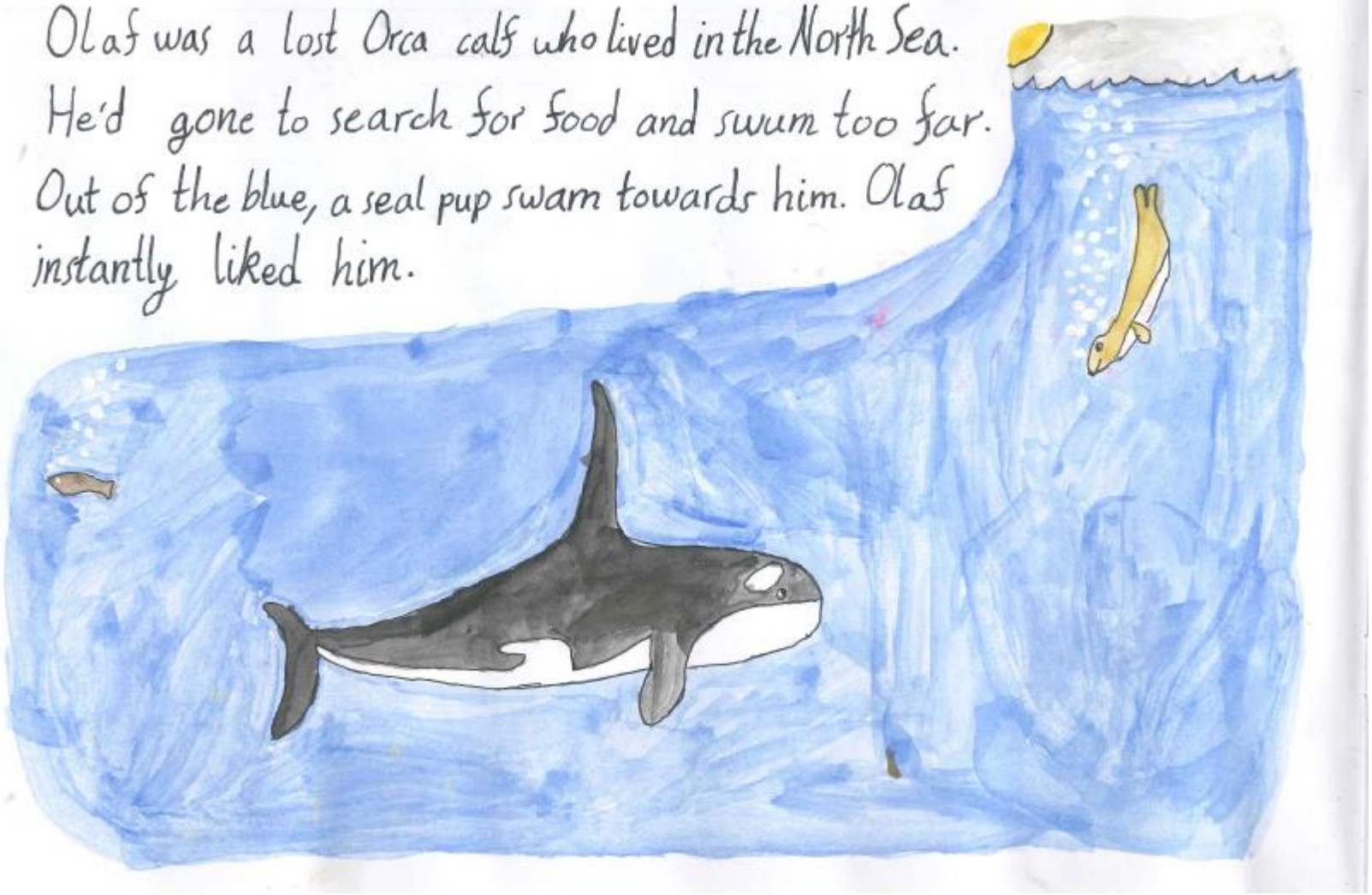
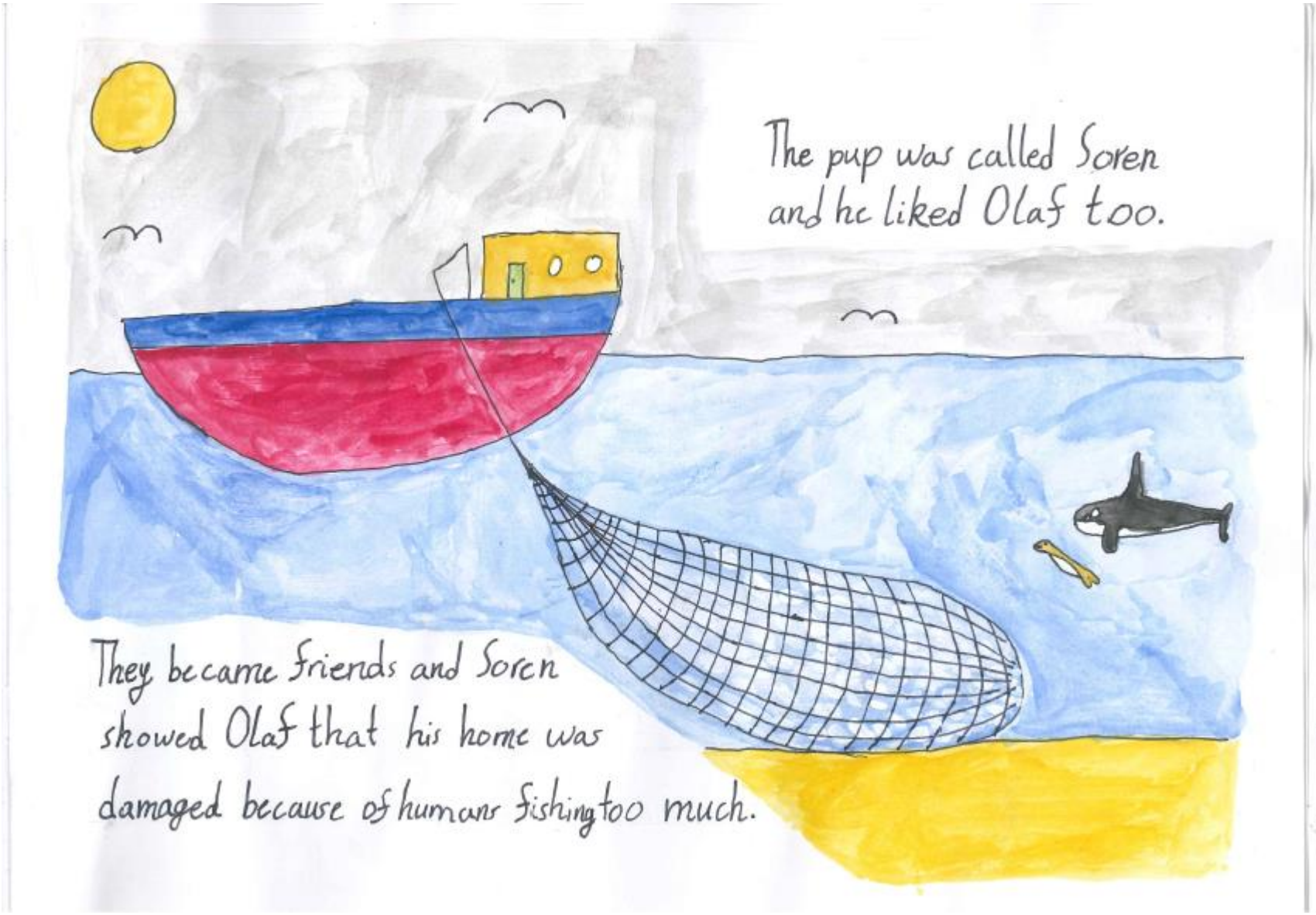
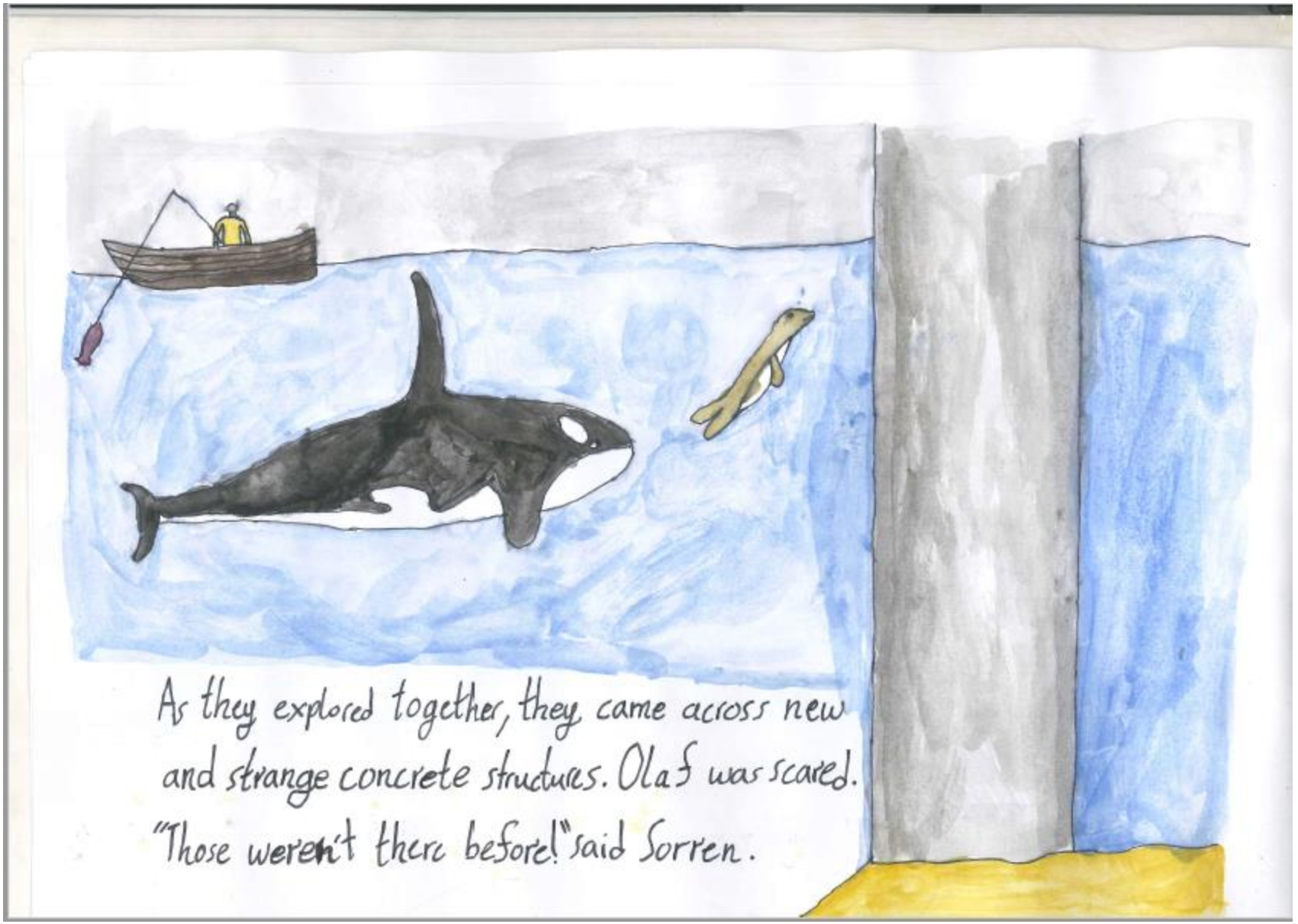
Olaf was a lost Orca calf who lived in the North Sea.
He'd gone to search for food and swum too far.
Out of the blue, a seal pup swam towards him. Olaf
instantly liked him.

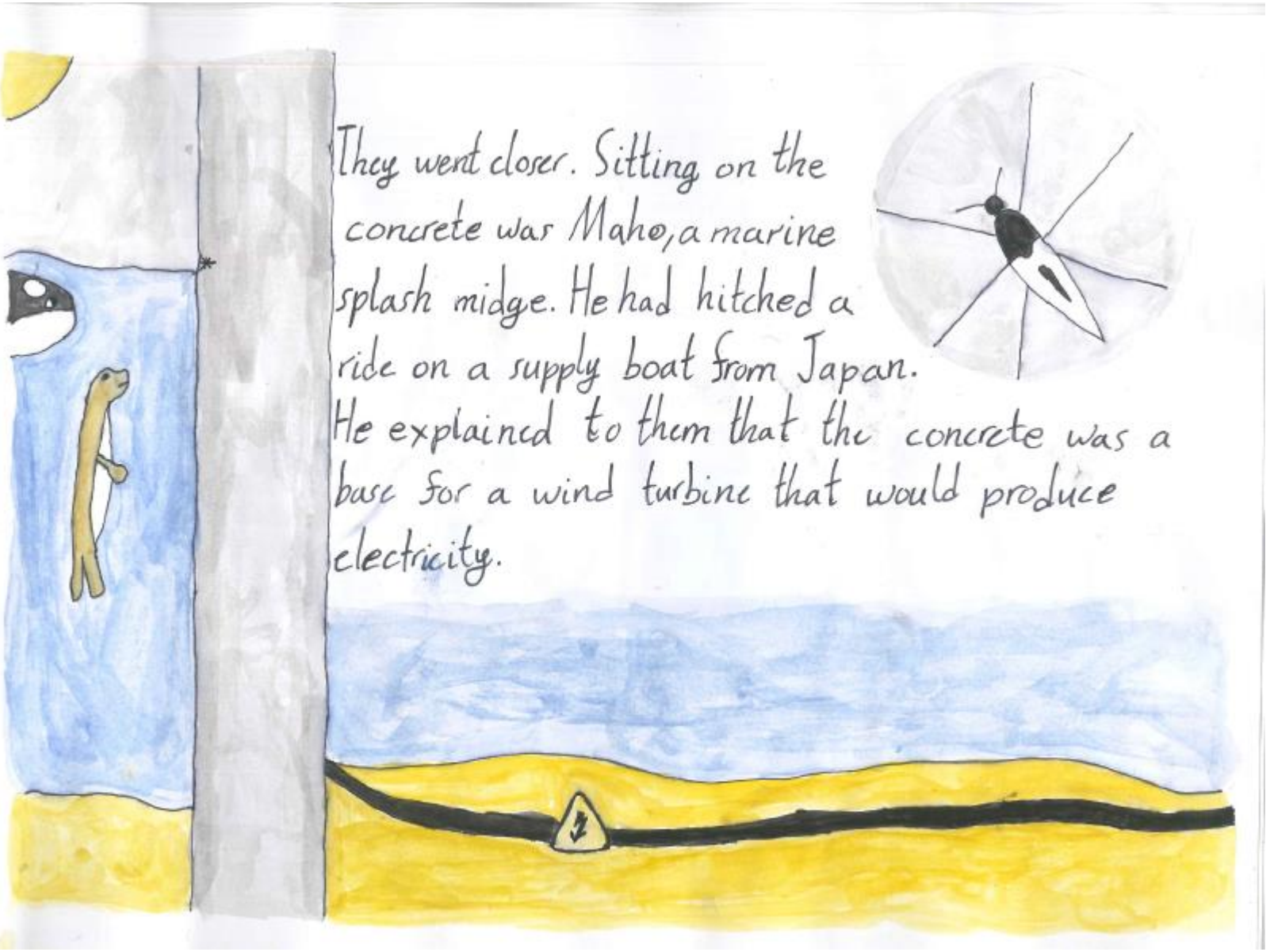



The pup was called Soren and he liked Olaf too.
They became friends and Soren showed Olaf that his home was damaged because of humans fishing too much.



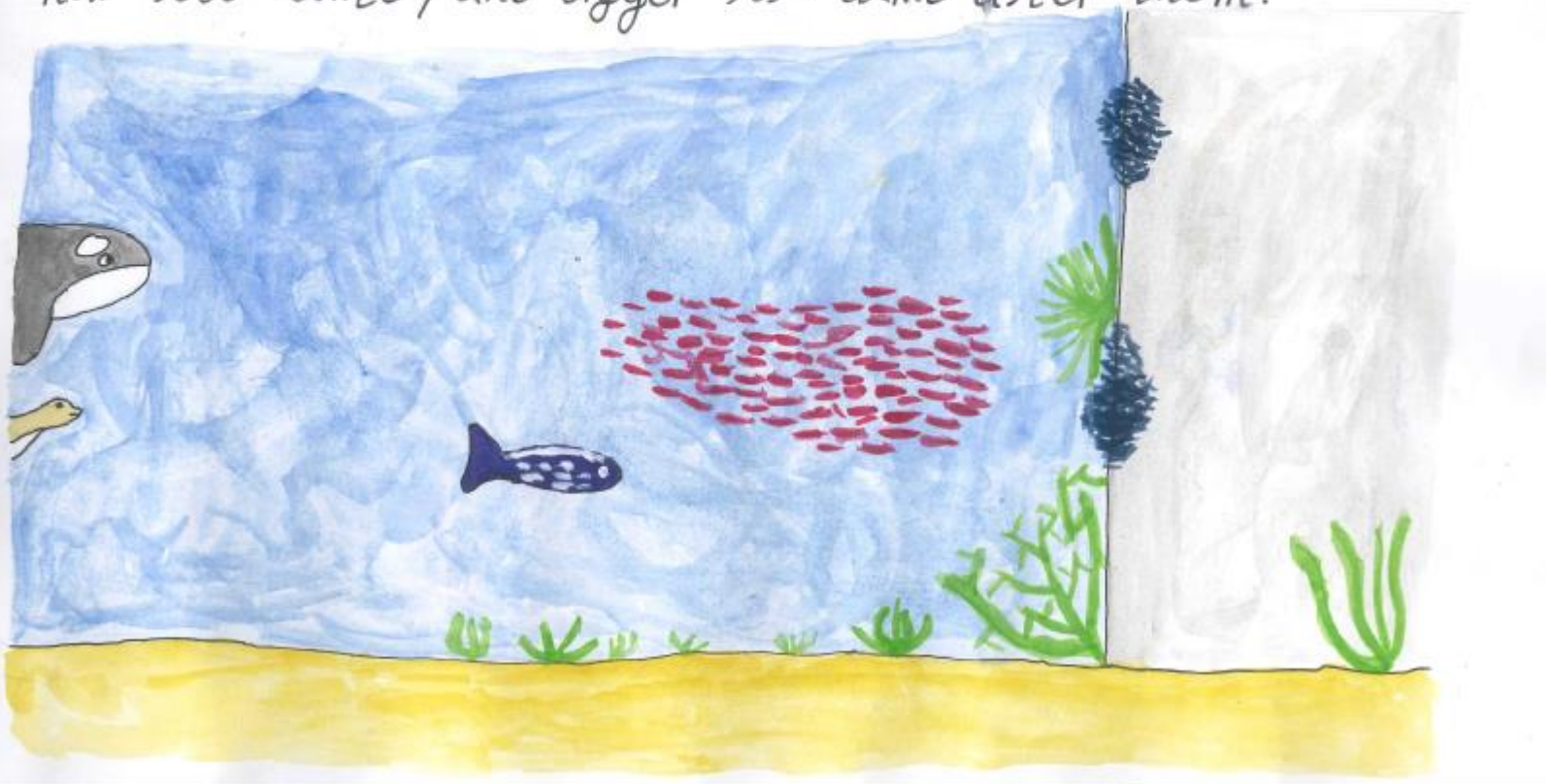
As they explored together, they came across new and strange concrete structures. Olaf was scared.

"Those weren't there before!" said Sorren.

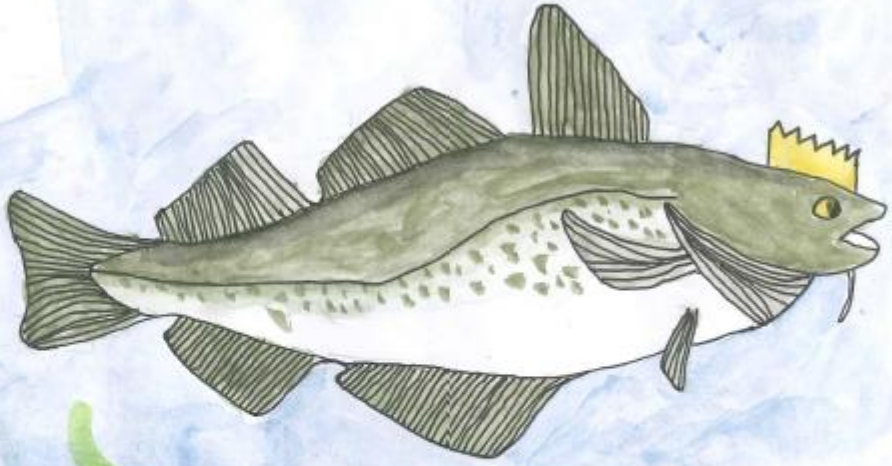

They went closer. Sitting on the concrete was Maho, a marine splash midge. He had hitched a ride on a supply boat from Japan. He explained to them that the concrete was a base for a wind turbine that would produce electricity.


A few months later, the turbines were finished.

Olaf and Soren were surprised when mussels and seaweed started to grow on the concrete bases. Small fish flocked to this new food source, and bigger fish came after them.



Gradually, the Atlantic cod started to come back.

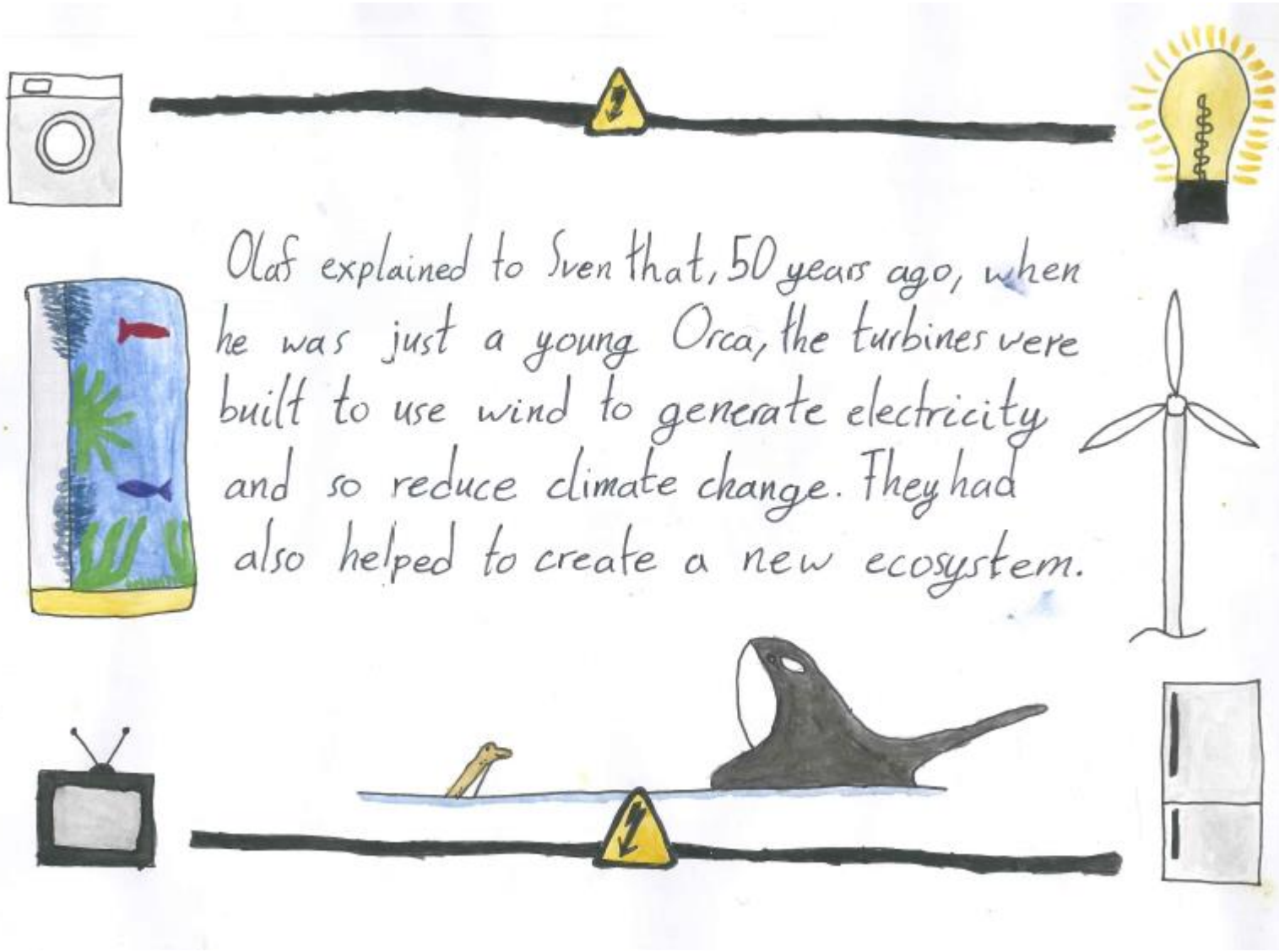


They were led by Knut, the King of the Cod.

As time passed, an ecosystem grew around the Turbines. Olaf, seeing the fish with their families, felt lonely and missed his pod. So, he set out to find them.

Every few years, Olaf returned to find that more seaweed was growing and there were many shoals of fish.

Olaf returned after a long absence and found Soren wasn't there.
In his place was his son, Sven.


Olaf explained to Sven that, 50 years ago, when he was just a young Orca, the turbines were built to use wind to generate electricity and so reduce climate change. They had also helped to create a new ecosystem.

APPENDIX

Science Concepts

Renewable Energy	Because wind turbines produce renewable energy, and my story is set around them.	An article in M.I.T technology review reads: "Offshore wind farms are becoming increasingly common in our oceans." It also says "the amount of energy produced is expected to increase 40-fold by 2030.
Introduced Species	Marine splash midges are A species that has been introduced in Danish waters. They are originally from Japan. Monty is a marine splash midge.	In 2003, the marine splash midge was found on Danish wind farms in the North Sea (DONG energy, 2006).
Technology	Wind turbines are a technology that is helping reduce climate change and are a major part of my story.	M.I.T T.R. says that wind turbines can be" Over 200 metres tall" and "generate up to 9 megawatts of power" but" most of their mass is in the concrete and steel bases that sit underwater". This technology creates new habitat.

Ecosystems	The wind turbines, as well as creating renewable energy, created an ecosystem around their bases, which is a new home for animals	Kaela Slavik and co say: "our simulations reveal non-negligible potential changes in regional annual primary productivity of up to 8% within the wind farm area". In simple English, they think more fish will come.
Habitat	Before the wind turbines were built, the ocean was desolate. This is because overfishing. When new habitat formed around the turbine bases, their region was saved.	"Once all planned wind farms are in operation, they will provide habitat for mussels that are equal to 20% of the current stock from mussel beds along the coast" say Slavik and co.

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Thank you all.

~ Noah Goddard (2020) ~

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