CHRONICLES of

# CLEANWATER

# Zoe the Zebrafish



## A Lab Adventure

Tarryn Lee Botha

For those still on a journey
of discovery...



One day a little bubble fell from the surface. “Weeeeeh” it thought as it slowly dropped down. “What am I??”, it wondered.



PLOP, PLOP, PLOP.
Colourful cells exploded inside the bubble, becoming more and more, but just staying the same size.




Suddenly it thought - “Hey! I can think and breathe and move”. The little colourful cells started holding hands tight, forming little organs as they went.



“I feel happy” - a little bright
THUMP-THUMP-THUMP -
started to pump in her chest.



Spinning around in a safety bubble she felt little fins pop from her body. She spun, and spun, feeling her little heart beat with each thump.



“My safety bubble has little holes!!!” she thought rather excitedly. She closed her mouth and little nose. “I can still breathe!! This is a miracle.”



Suddenly she started to see little stripes forming all over her outsides. Her insides now all safely tucked away. A little zebrafish was growing.



As she stretched she heard *CRACK* and started to see her little safety bubble, which she now called chorion, had little lines forming in it.



Eyes pressed against the
soft glass she saw the words
Z-O-E.
“I am a Zoe” she thought.
I am a squashed Zoe.

When Zoe did her morning stretch she fell right out of her safe space. “Oh no, what do I do??” she felt scared. “I am alone, and my chorion is gone”. She lay on her yellow yolk bubble for comfort.



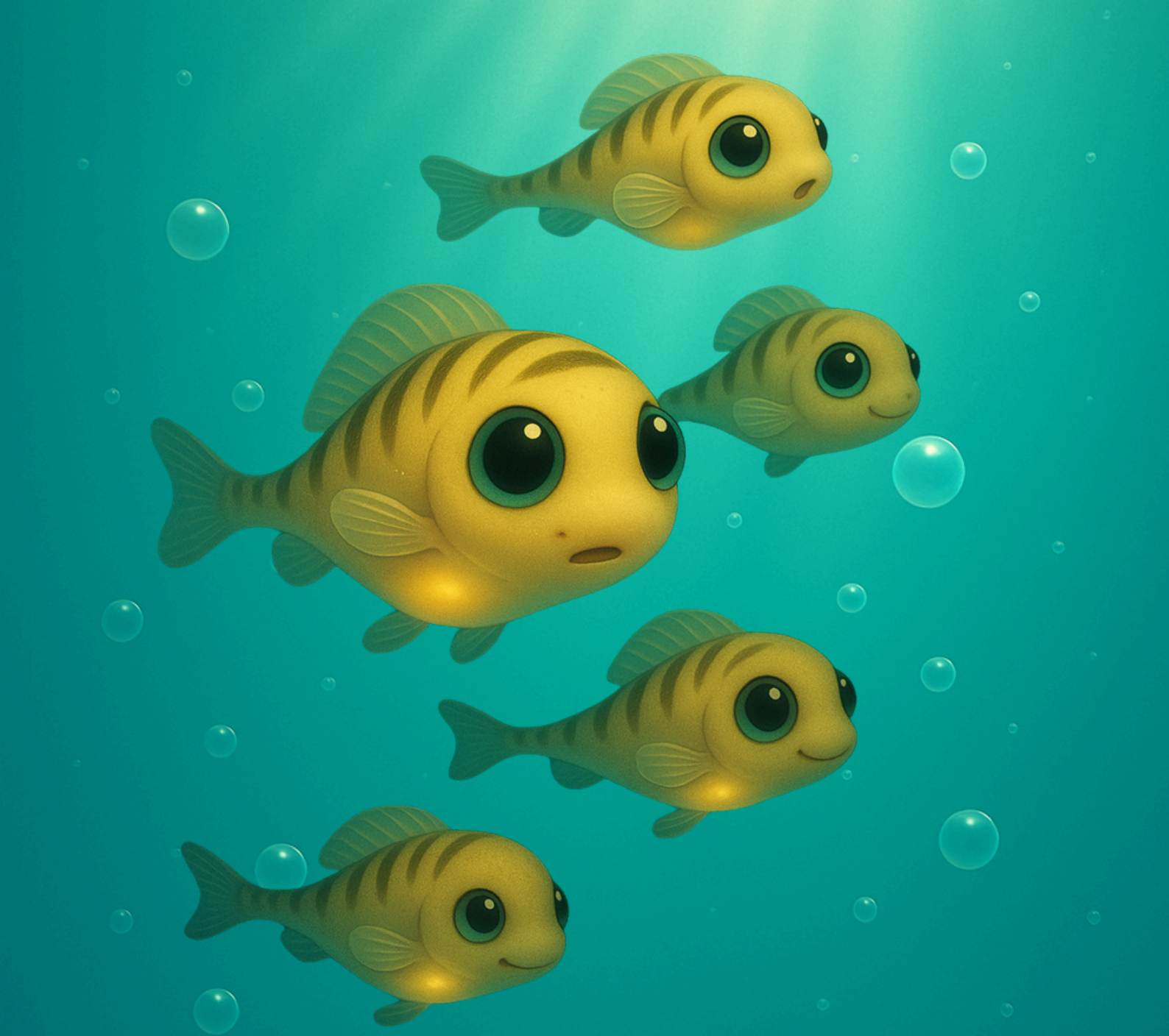
Zoe heard yawning and looked around. There she was- surrounded by others- that looked just like her. Some scared, just waking up, others smiling at her.
“I am Zuri” the smallest one said.



Zoe saw everyone going up to take a gigantic gulp of air.



So up she went...



“Hey!!! I can float!” she said in shock. With Zoe’s swim bladder now gulped full of air, like a tiny balloon, she was able to swim through the water.

Zoe felt hungry and Zoe was FAST. She started chasing little green filled rotifers floating in the water.
”Yummy!!!”



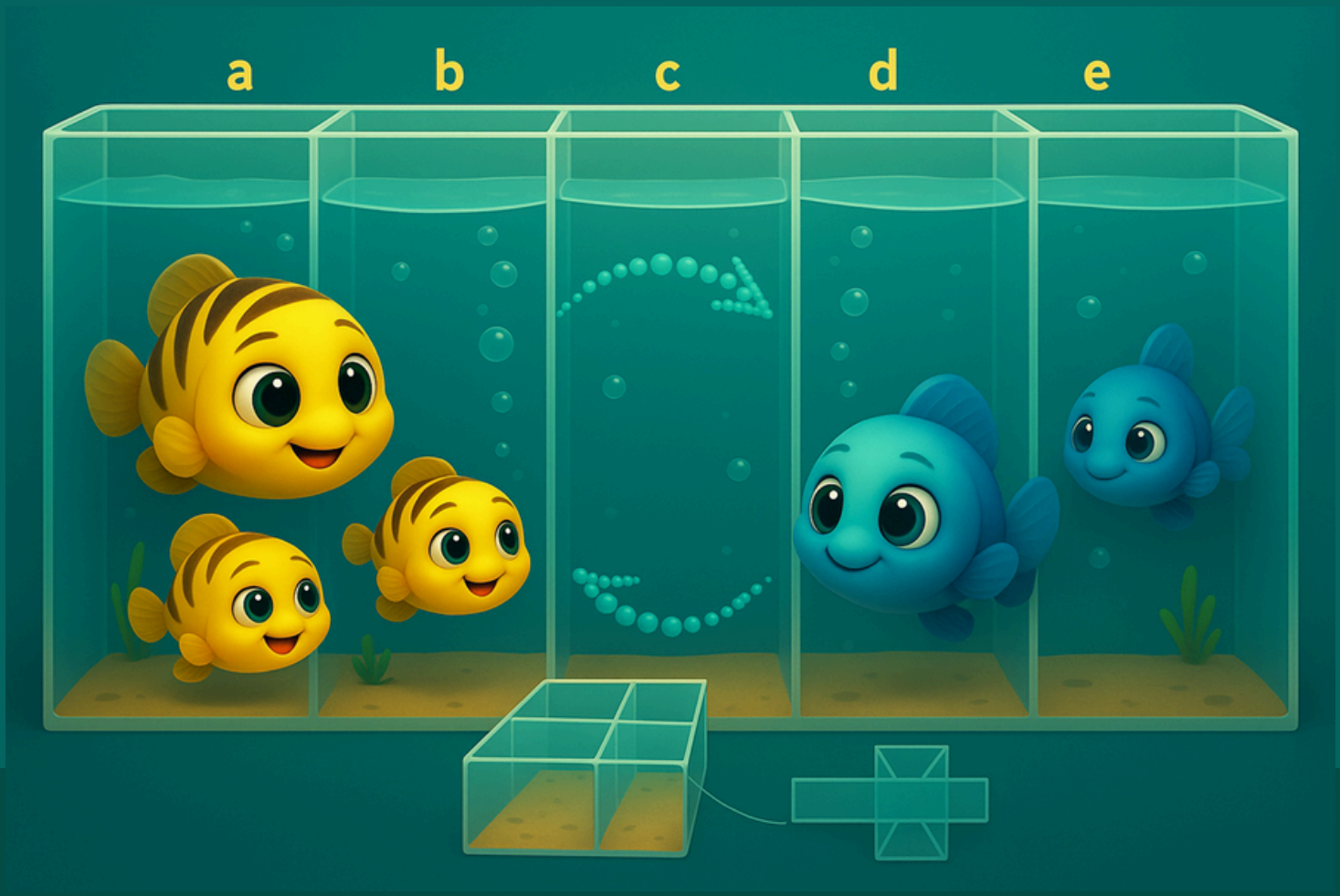



Months went by, of growing and eating, and it was time for Zoe and friends to go to school. They were all in the ZA-type class.

In class Zoe learnt all about things that made her happy. She learnt that when she explored she felt confident. Her teacher watched.



She soon realised that she didn't like to be alone.




And whenever she had a choice she wanted to be with her friends, of all kinds.



In school Zoe became a Maze Master. She always knew where to go.
Be it left or be it right.




A few months later Zoe and her friends graduated from school. “I still remember the day we hatched” she said.



There Zoe was, exploring, questioning and learning, and out of nowhere - these tiny little bubbles fell from the surface.




Zoe called all her swimming scientist friends - “LOOK!! LOOK!!” she said. This time as she got closer she saw the little holes in the bubble she once called chorion.


One Health
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HEALTH
Drug Discovery
Chemistry

Inside, new tiny lives were beginning their journey. She smiled, knowing the cycle of life was starting again.

Together, she and her friends realised that just as the little ones would learn from them, they too would always keep learning from each other.

And so, the adventure of discovery never truly ends.



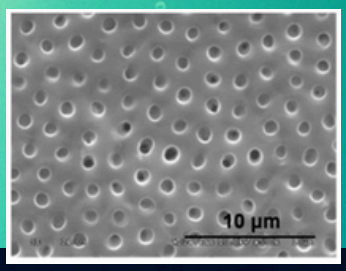
# GLOSSARY

- **Cells-** in biology, the smallest unit that can live on its own and that makes up all living organisms and the tissues of the body
- **Chorion**- the outermost membrane surrounding an embryo
- **Gills**- the paired respiratory organ of fish which removes oxygen from water
- **Organ**- a collection of tissues that structurally form a functional unit specialised to perform a particular function

# FUN FACTS

- "School" is a collective noun for a group of fish
- The word "fish" itself serves as the plural for individuals of the same species
- "Fishes" is used as a plural only when referring to multiple species of fish

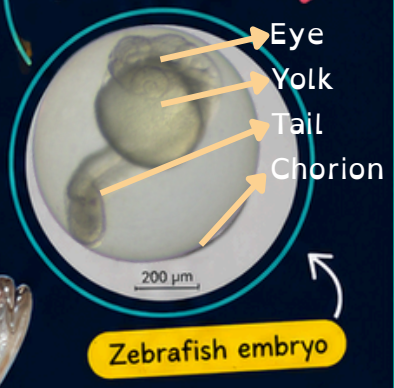
# Scientific Information




# 10 FUN FACTS ABOUT ZEBRAFISH

tiny fish, huge science!

From tiny beginnings to big breakthroughs.




Zebrafish embryo

1. Zebrafish are one of the most important animals in medical research.
2. They can regenerate damaged heart tissue.
3. Their embryos are nearly transparent, so scientists can watch development in real time.
4. Zebrafish grow fast—an embryo can become a swimming larva in about 5 days.
5. Many human disease-related genes are also found in zebrafish.
6. They are used to study the brain, behavior, and nervous system.
7. Zebrafish can help scientists test medicines and pollutants.
8. They come in different varieties and patterns, including striped, long-finned, and albino forms.
9. Some zebrafish are genetically modified to glow for research.
10. Even though they are tiny, they help answer big scientific questions.

Small fish, big discoveries.

Written by Tarryn Lee Botha
Images created and manipulated using ChatGPT and Canva


START
One Health!

# Time to Tidy Up, Little Scientists!

Zoe has been busy in the laboratory, and now it's time to clean! Can you help Zoe put the right things in the right places?





Zoe’s story is a coming-of-age tale, from the moment of fertilisation to attending school and graduating to becoming a scientist herself.



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