

TEACHERS RESOURCES



Teachers Resources by Robyn Sheahan-Bright

Introduction	3
Themes & Curriculum Topics	3
Science	
Humanities and Social Sciences (HASS)	
English Language & Literacy	
Visual Literacy	
Creative Arts	
Learning Technologies	
Mathematics	
Further Topics for Discussion and Research	7
Conclusion	7
About the Author/Illustrator	7
About the Author of the Notes	7
Worksheets	8
Bibliography	14

INTRODUCTION

Come with us on a deep dive through the ocean zones. Meet some of the most unusual creatures from the sea and hear their stories about how they have changed over millions of years to survive in the inky ocean depths.

Discover why the deepsea flounder is as flat as a pancake, learn all about the 500-million-year-old comb jelly and find out why yeti crabs are so hairy. From the barreleye fish to the tripod spiderfish, prepare to be amazed by the incredible creatures that inhabit our seas.

The first book in a new picture book series about unusual animal evolution stories, from award-winning and best-selling author and illustrator, Sami Bayly.

The perfect companion to *The Illustrated Encyclopaedia of Ugly Animals*, *The Illustrated Encyclopaedia of Dangerous Animals* and *The Illustrated Encyclopaedia of Peculiar Pairs in Nature*.

THEMES & CURRICULUM TOPICS

Several themes and curriculum topics (for primary school students) are covered in this book which might be related to areas covered under: 'Australian Curriculum' https://www.australiancurriculum.edu.au

SCIENCE

'Australian Curriculum: Science' https://www.australiancurriculum.edu.au/f-10-curriculum/science/

Each page in this book contains a surprising sea creature together with three forms of text: a 'fact' in third person and then in first person the creature 'speaks' to the reader, as does the narrator, Sami Bayly.

SEA CREATURES

<u>Activity</u>: After you have finished studying this book research another surprising sea creature.

<u>Discussion Point</u>: In her introduction, Sami Bayly explains her reasons for creating *Surprising Sea Creatures* in further detail:

'Evolution is the process of a living thing changing over millions of years to survive better in their environment and ensure their species continues. As a creature evolves, how they look usually changes and often so does the way they act. They then may be able to more easily find food, hide from predators, or attract a mate.

Now, did you know that more than half of Earth's surface is covered by ocean? And we still haven't explored it all. It's thought that we know more about Mars than we do about our very own deep sea!'

Activity: Study any other websites or books which focus on surprising sea creatures. [See **Bibliography**.]

Activity: Quiz students regarding the alternative names of some of these creatures, for example, 'What is an anglerfish also known as?' Answer: prickly footballfish.

Activity: Research which creatures in this book are endangered or at risk?

THE LIFE CYCLES, EVOLUTION AND HABITATS OF SEA CREATURES

Activity: Study the life cycles and evolution of any of the creatures in this book, for example the spotted deepsea flounder and how over time the creature became as flat as a pancake!

<u>Activity</u>: Study how each of these sea creatures employ unique survival skills in order to avoid predators, or be predators themselves.

<u>Activity</u>: Camouflage is used by many of the creatures in this book. For example, the cockatoo squid's 'skin is invisible, which means we can see all its insides.' But when threatened 'they can flood their bodies with black ink which makes them dark and helps them camouflage'.

Research the four main types of camouflage: Concealing Coloration, Disruptive Coloration, Disguise and Mimicry. [See 'Animal Camouflage: Pictures and Information for Kids' *K5 Computer Lab 5* https://oakdome.com/k5/lesson-plans/multi-media/look-again-camouflage/index.php) Apply what you have learned to your observation of other sea creatures.

<u>Activity</u>: Research any other special skills or features which the animals in this book have developed for finding food, protecting their territories, and surviving harsh conditions. For example, the barreleye fish has glowing green balls for eyes to help it to see approaching animals.

<u>Activity</u>: Research forms of adaptation revealed in any of the sea creatures included in this book. For example, the Venus flytrap sea anemone has a mouth full of stinging nettles with which to capture its prey. And the grandpa Greenland shark has chemicals which stop it from freezing in the sea's extreme temperatures.

HUMANITIES AND SOCIAL SCIENCES (HASS)

'Australian Curriculum: HASS' https://www.australiancurriculum.edu.au/f-10-curriculum/humanities-and-social-sciences

THREATS TO WILDLIFE AND CONSERVATION, CLIMATE CHANGE

<u>Discussion point</u>: Read about some of the threats to sea creatures and then discuss the decline or endangered status of any creature mentioned in this book.

<u>Activity</u>: Research climate change in relation to any of the creatures included and write an essay outlining your findings.

<u>Activity</u>: How should our government be responding to climate change in order to combat it? Examine such initiatives as the *Intergovernmental Panel on Climate Change (IPCC)* < https://www.ipcc.ch in order to respond to this question. [See **Bibliography**.]

VALUES

<u>Discussion Point</u>: Discuss the key values conveyed in this text.

ENGLISH LANGUAGE AND LITERACY

'Australian Curriculum: English'https://www.australiancurriculum.edu.au/f-10-curriculum/english/

The text of this book might be studied in relation to the following aspects:

<u>Activity</u>: The facts on each surprising sea creature are written in **third person**, as an **expository text**. There are also two texts in **first person narrative 'speech bubbles'** – one by the sea creature itself, and one by the narrator, Sami Bayly, who is seen to be exploring the deep in her compression suit.

Invite students to write an **expository text** about any other sea creature which doesn't feature in this book. There are different types of expository writing, e.g. descriptive, sequential, cause/effect etc.

Then write a **first-person narrative 'speech bubble'** by the sea creature explaining more about its life cycle.

[See **Bibliography**.] [See also **Visual Literacy** exercise below.] [See also **Worksheet 2.** below.]

<u>Discussion Point</u>: Humour is another device used in this text – some of the comments made by the sea creatures are very funny. Which was the funniest, in your opinion? Try to incorporate humour in the text you write (above) for this unit.

<u>Activity</u>: Test your students' comprehension by asking them questions about the written text. [See also **Worksheet 4.**]

Activity: Invite students to write an acrostic poem using the letters in tripod spiderfish.

<u>Activity</u>: Write a lyrical poem about any creature included in this book using models written by published poets. [See **Bibliography**.]

Activity: Discover collective nouns for a range of sea creatures. [See **Worksheet 6**.]

<u>Activity</u>: Invite students to write a simple cumulative text as the basis for a picture book about a surprising sea creature of their choosing.

VISUAL LITERACY

Australian Curriculum: Visual Arts

https://www.australiancurriculum.edu.au/f-10-curriculum/the-arts/visual-arts/>

<u>Discussion Point</u>: The images in this book have been created by a highly skilled natural history illustrator and she has combined them with her written text to highlight features of the various creatures described. However, it is the designer who created the speech bubbles, and selected the fonts, and the overall design of the text. How does this design complement the illustration?

<u>Activity</u>: The **cover** of the book depicts a number of very surprising sea creatures. Invite students to identify them. What does this cover suggest to you about the book's content? Create another cover depicting other surprising sea creatures.

Activity: The **title page** contains a giant oarfish. Draw another appropriate image to adorn this page.

<u>Discussion point</u>: The **format** of the book is loosely standardised with a mixture of expository and narrative texts. The **images** are hand-drawn and scanned to achieve a very different image to those included in Bayly's previous works. They are executed in deeper and richer colours, and depict the creatures in full scenes rather than as drawings of individual creatures, as in her three encyclopaedias. Have your students study Bayly's images here, and then create their own hand-drawn image of the surprising sea creature they wrote about in the expository text under **English Language and Literacy** above. Make a display of the texts and images created by all the students. Copy them and make them into a class book.

<u>Activity</u>: The **end of the book** features some extra images of creatures, and each one has a written explanation in a circle next to it. Create another endpaper featuring five creatures you have discovered in your research.

Activity: Create a collage image of a dumbo octopus. [See Worksheet 1 below.]

<u>Activity</u>: Encourage students to use **critical literacy skills** to unearth further meaning in this text, by looking closely at the images, explaining what they see, and then what the text says, and how the two texts add meaning to each other. [See also **Worksheet 3**.]

<u>Activity</u>: Invite students to create a **storyboard** for the picture book text they wrote under **English Language and Literacy** above. [Discuss the conventions of the picture book format before embarking on this exercise.]

CREATIVE ARTS

There are many creative activities suggested by this text:

- 1. **CRAFT**: Make a **model** of any of the creatures included in this text. [See 'Fimo Clay Instructions', *eHow*, https://www.ehow.com/way-5418195 fimo-clay-instructions.html>]
- **2. CRAFT**: Create a **Surprising Sea Creatures mobile**. [See **Worksheet 5**.] [See **Bibliography**.]
- **3. CRAFT**: Make an **octopus using a paper plate** as the template. Paint or collage craft paper glued to the plate for the body of the octopus. Paint the area around the octopus blue for the ocean. Glue strands of wool to the body to represent the octopus's tentacles.
- **4. CRAFT**: Create a **diorama** depicting a giant oarfish in their habitat. [See **Bibliography** for relevant resources.]
- **5. SCRIPT**: Create a **book trailer** to promote this book. [See **Bibliography** for relevant resources.]

LEARNING TECHNOLOGIES

Activity: Research topics suggested in these notes online.

MATHEMATICS

<u>Activity</u>: Have fun investigating mathematical facts about these animals, such as their population numbers, their longevity, how big or long they are, how deep under the ocean they live etc.

FURTHER TOPICS FOR DISCUSSION AND RESEARCH

- Visit Sami Bayly's website and view some of the other illustration projects she has engaged in.
- Students might research this book in comparison to picture books and non-fiction books such as those listed in the **Bibliography**.
- Investigate any other topic suggested by this text.

CONCLUSION

This book is a fabulous addition to Sami Bayly's earlier books *The Illustrated Encyclopaedia* of *Ugly Animals*, *The Illustrated Encyclopaedia of Dangerous Animals* and *The Illustrated Encyclopaedia of Peculiar Pairs in Nature*. This new series is similarly carefully researched and illustrated to introduce a younger audience to surprising sea creatures which are so very unique, given that we don't generally see many of them.

ABOUT THE AUTHOR/ILLUSTRATOR

Sami Bayly is a natural history illustrator based in Armidale, NSW, who loves all things weird and wonderful. She finds the beauty and importance of all animals regardless of their appearance, and hopes to share her appreciation with others.

Sami's first book, *The Illustrated Encyclopaedia of Ugly Animals*, won the Children's Indie Book of the Year Award and the Australian Book Design Award for Younger Readers. It was a CBCA Honour Book and was shortlisted for an ABIA Book of the Year for Younger Children and longlisted for the ABA Booksellers' Choice 2020 Book of the Year Awards. Her second book, *The Illustrated Encyclopaedia of Dangerous Animals*, was a CBCA Honour Book, an ABIA Book of the Year for Younger Children, won an Australian Book Design Award for Younger Readers and was shortlisted for the Children's Indie Book of the Year 2020. Sami's most recent book, *The Illustrated Encyclopaedia of Peculiar Pairs in Nature*, has been shortlisted for the CBCA Eve Pownall Award and longlisted for the Children's Indie Book of the Year Award. To keep up to date you can follow Sami on Instagram: https://www.instagram.com/samibayly/ and her website: http://www.samibayly.com/

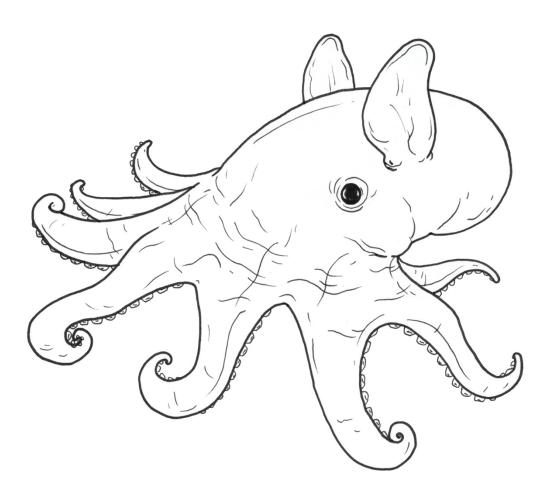
ABOUT THE AUTHOR OF THE NOTES

Dr Robyn Sheahan-Bright AM operates justified text writing and publishing consultancy services, and is widely published on children's literature, publishing history and Australian fiction. In 2011 she was the recipient of the CBCA (Qld Branch) Dame Annabelle Rankin Award for Distinguished Services to Children's Literature in Queensland, and in 2012 the CBCA (National) Nan Chauncy Award for Distinguished Services to Children's Literature in Australia, and in 2014, the QWC's Johnno Award. In 2021 she was appointed a Member of the Order of Australia.

WORKSHEETS

WORKSHEET 1. CREATE A COLLAGE OF A DUMBO OCTOPUS

Enlarge this image to A3 on a photocopier and then encourage students to use a range of detailed materials, colour and texture to make a collage of the dumbo octopus in its underwater environment.



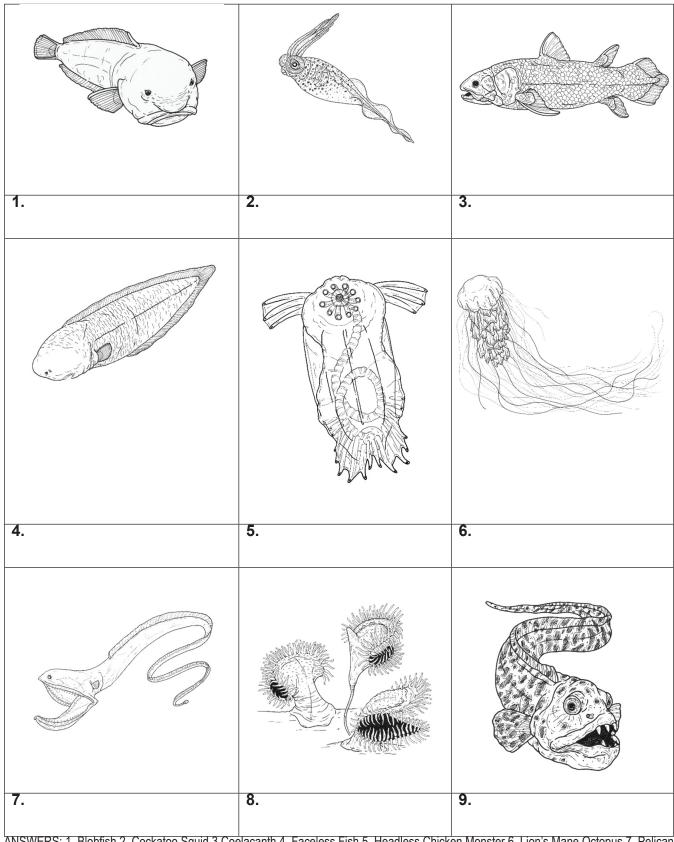
WORKSHEET 2. CREATE AN ALPHABET OF OTHER SURPRISING SEA CREATURES

Find surprising sea creatures which don't appear in this book and then write one 'interesting fact' beside it. (Enlarge this sheet to A3 on a copier to give you more space.)

PAIR	FACT
A	
В	
Christmas Tree Worm	
D	
E	
F	
Giant Isopod	
Н	
I	
J	
К	
Leafy Sea Dragon	
М	
N	
0	
P	
Q	
R	
S	
Т	
U	
V	
Wobbegong	
X	
Υ	
Z	

WORKSHEET 3. IDENTIFY THESE SURPRISING SEA CREATURES

Name these animals, each of which is included in *How We Came to Be: Surprising Sea Creatures*.



ANSWERS: 1. Blobfish 2. Cockatoo Squid 3.Coelacanth 4. Faceless Fish 5. Headless Chicken Monster 6. Lion's Mane Octopus 7. Pelican Eel 8.Venus Flytrap Sea Anemone 9. Wolf Eel

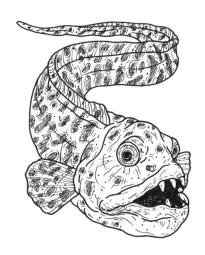
WORKSHEET 4. SURPRISING SEA CREATURES QUIZ

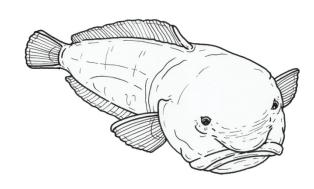
- 1. Can you name the five different zones of the ocean listed in this book?
- 2. How does the spotted deepsea flounder hide from its predators?
- 3. What is unusual about how the giant oarfish floats in the water?
- 4. What unusual features does a prickly footballfish have?
- 5. What does the barreleye fish have on its head?
- 6. Why do yeti crabs have such woolly legs?
- 7. How have grandpa Greenland sharks adapted to the cold and dark?
- 8. Why do tripod spiderfish have the name they do?
- 9. What did the comb jelly develop before any other animal?
- 10. The chiton lives on exposed rocks; what protects it from predators?
- 11. What is the deepest part of the ocean called?
- 12. How does the hadal snailfish survive in the water pressure of the Trenches?
- 13. The cusk eel holds the record for what?
- 14. Where does the dumbo octopus derive its name from?
- 15. The blobfish has an unfortunate reputation of being what?
- 16. What unique thing can the coelacanth do when feeding?
- 17. As its name suggests, the faceless fish has an unfortunate lack of facial features. What are they?
- 18. What type of creature is a headless chicken monster?

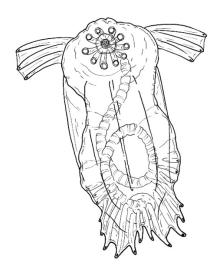
ANSWERS: 1. Sunlight Zone, Twilight Zone, Midnight Zone, the Abyss and the Trenches 2. It hides in the sand. 3. It floats upright so hunters below can't see it as easily. 4. A glowing fishing rod on its head! 5. A jelly head, which being transparent allows it to see what is above it. 6. They act like eyes in the dark; the tiny hairs allow them to feel their way around! 7. They have chemicals which stop them from freezing in the extreme temperatures. 8. Over millions of years their legs have grown to allow them to stand tall as they wait for food to pass; they pump fluid into their legs to make them rigid; just like a tripod! 9. Their ancestors were the first animals to develop muscles to allow them to swim. 10. Its shell has eight plates. 11. The Challenger Deep 12. It has a layer of jelly-like goo which allows it to swim and float there. 13. It is the deepest known fish. 14. It has big elephant-like 'ears' (which are actually fins) at the top of its head. 15. The world's ugliest animal 16. It is the only living vertebrate that can open its top jaw when feeding. 17. It is actually a cusk eel and has no eyes, a large nose that looks like a head and two pairs of nostrils and a small mouth. 18. A sea cucumber

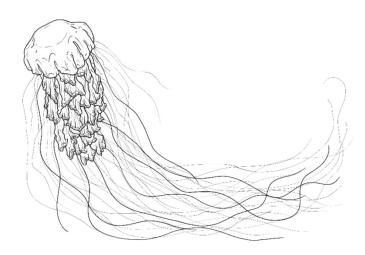
WORKSHEET 5. SURPRISING SEA CREATURES MOBILE

Enlarge this sheet to A3 and stick it to craft paper. Invite students to cut out the creatures, and then attach to fishing line and hang from a straw, a metal hanger, or an embroidery hoop to create a *Surprising Sea Creatures* mobile. [See 'How to make a mobile' *Wikihow* http://www.wikihow.com/Make-a-Mobile]





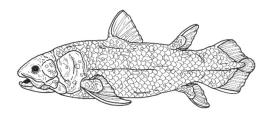




WORKSHEET 6. SEA CREATURES COLLECTIVE NOUNS

Try to discover the collective nouns for the following sea creatures:

- 1. Stingrays
- 2. Jellyfish
- 3. Sharks
- 4. Crabs
- 5. Barracudas
- 6. Sea Urchins
- 7. Squid
- 8. Dogfish
- 9. Whale
- 10. Seahorses
- 11. Rainbow Fish
- 12. Angel Fish
- 13. Dragonet Fish
- 14. Swordfish
- 15. Seals



ANSWERS: 1. Fever 2. Smack 3. Shiver 4. Consortium 5. Battery 6. Herd 7. Squad 8. Troop 9. Pod 10. Herd 11. Party. 12 Company 13. Swarm 14. Flotilla 15. Spring/Rockery/Rookery

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