



Astronaut-Aquanaut: How Space Science and Sea Science Interact

Jennifer Swanson , Fabien Cousteau (Foreword) , Kathryn D. Sullivan (Foreword)

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Journey from the deepest trenches in the oceans to the farthest humans have ventured into space and learn what it takes to explore the extremes. You might just be surprised by how similar the domains of ASTRONAUTS and AQUANAUTS really are.

Space and the ocean. If you don't think they go together, think again! Both deep-sea and space explorers have to worry about pressure, temperature, climate, and most importantly, how to survive in a remote and hostile environment. Join us on an amazing journey as we go up in space with astronauts and dive deep down in the ocean with aquanauts to explore the far-off places of our planet and the solar system.

With a strong tie into STEM topics--such as making connections, making comparisons, and recognizing patterns across content areas--readers will discover the amazing science and incredible innovations that allow humans (and sometimes only machines) to survive in these harsh environments.

Astronaut-Aquanaut: How Space Science and Sea Science Interact Details

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From Reader Review Astronaut-Aquanaut: How Space Science and Sea Science Interact for online ebook

Kathy (Bermudaonion) says

4.5 stars

Kristi Bernard says

When we think of outer space and our deep oceans we may not be able to imagine that either has anything in common with the other. But there are many similarities to exploration in these two vast areas. Both are cold, dark and lack any air pressure. Both require human explorers to wear a protective suit. Both have various unknown aspects which is why our human curiosity drives us to discover what is there that we can learn and study. A perk of being an aquanaut is that you get to see sea life in its true form and habitat. A perk of being an astronaut is that you get to fly everywhere.

Author Jennifer Swanson has provided readers with an opportunity to know more about how outer space and deep oceans are alike but different. Readers will learn about how an astronaut and an aquanaut prepare to fly to the moon or dive deep under water. Readers will also learn about the spaces explorers live in while in space or underwater. Parents and teachers will love the experiments that can be found under the Activity section within this guide to help kids get a better understanding of what it takes to become an astronaut or aquanaut. One activity provides a better understanding of how difficult it might be to dock a spacecraft. Readers will also become informed as to why we explore and some of the many things we've learned over the course of time. The back pages have notes from different astronauts and aquanauts. There is a glossary and plenty more resources for even more learning. If you want to become an explorer in space or in the deep sea this fascinating guide will help you make up your mind.

Vera Godley says

Two vast areas waiting for exploration that are vastly different yet somewhat similar are Earth's ocean depths and the Universe's vast expanses. In Astronaut Aquanaut: How Space Science and Sea Science Interact the young reader and student is introduced to these areas of science with information and pictures of discoveries and anticipated ways to pioneer scientific discoveries these two vast areas contain.

The contrasts of living under the water or in outer space in a habitat created for that area and the requirements to do so are very interesting and well presented. The need for special equipment and how it was discovered and created plus how it is also incorporated into other uses is explained.

An interesting and educational book for young readers that will excite and challenge them about the possibilities of man's exploration of these two vast areas. A superb addition to libraries at home, school, or public.

I received a complimentary copy to facilitate this review. Opinions are my own and are freely given.

Mary Carson says

Reading about how astronauts explore space is awesome. Reading about undersea exploration is fascinating. This terrific book lets you do both! It compares two very different but similarly extreme environments—outer space and the deep ocean. The accessible text is packed with facts, interviews with experts, and even hands-on activities. Terrifically illustrated and full of great photos, Astronaut-Aquanaut challenges young people to think how the human body and technology strives to overcome the obstacles that working in tough environments. It's a great read for space geeks, underwater fans, science kids, and curious grown-ups, too.

Kellee says

I love the idea of this book! First, from a personal point of view: my son loves animals and space, so this is a perfect book for him. We didn't read word for word together, but we spent hours over the last couple of weeks flipping through the book, looking at different spreads, reading parts of the book, and answering any questions that Trent had. Also, from an educator point of view: this text is so full of information told in such an interesting way with fun facts, activities, and so much fascinating information! Swanson did a beautiful job making connections between the two professions and scientists and giving equal looks into both. And since the book is for middle grade students, it is essential for it to be written in a way that will be intriguing to readers, and this book is definitely that!

Full review with teaching tools: <http://www.unleashingreaders.com/?p=1...>

Heather Montgomery says

Do you know a kid who wants to be an explorer? A kid who geeks out over gear? A kid who has engineer, scientist, or inventor in their future? This is the book for them. It is also a book for anyone like me who needs an interesting hook to help them "get" physical science fundamentals. Gravity, pressure, buoyancy? They all make sense when Jennifer Swanson explains them in the context of space and sea exploration.

Teachers, this book offers a great compare/contrast on STEM topics for middle school readers!

Cherei says

Astronaut-Aquanaut: How Space Science and Sea Science Interact is a must have book for EVERY child's library!! Chockful of colorful pictures showing astronauts and aquanauts at work!!! I was absolutely delighted that the book goes into great detail of what it takes to become an astronaut or an aquanaut. Most children will be familiar with the International Space Station. The introduction to Aquarius which is the only undersea laboratory in the world will open up a whole new world of exploration for children and adults

alike!

I absolutely loved how the author depicted both jobs side by side. It's truly amazing how working in space is so similar to working in the ocean. Children of all ages will thoroughly enjoy reading and rereading about what it takes to work in an environment that may look "fun" while in reality.. in a split second.. life can go from "casual and carefree" to "life and death"! The book encourages the reader on what subjects they may want to explore educationally and personally.

Astronaut-Aquanaut: How Space Science and Sea Science Interact is the closest one can get to "going to work for a day" on the International Space Station or Aquarius! The day to day stories from the actual astronauts and aquanauts perspective are insightful and unique!

Amy says

This takes me back to 4th grade when our school got to participate in the Jason Project. We focused on the International Space Station and a sea floor laboratory in Florida. I can attribute most of my science obsessions back to that project in 4th grade, and this book spoke to my inner 4th grader. It is also a fantastic book, full of cool graphics and lots of good info.

Maria Marshall says

What an excellent format to present and examine the mysteries, challenges, adventures, dangers, and remarkable scientists involved in space and sea explorations. Everything from training and living habitats, to the isolation and dangers involved.

Using photos, illustrations, and explorer's notebook images to accompany a mixture of both detailed and summarized entries, this book has wide appeal to all ages, even younger elementary kids. This is one of those books that will grow with a child, providing new discoveries and treasures each year. For example, the illustrations of the space station and sea habitat will appeal to young children - who focus on how these scientists sleep, eat, and use the restroom when in space (and in the ocean). While the text provides increasing levels of information, including personal comments from the numerous astronauts and aquanauts, for older readers.

This book also evaluates why we explore these two environments, the history of these explorations, and what we have learned and how many discoveries have changed our lives. It also looks at how studying each environment teaches something about the other. Overall this is an amazing book.

Two BookWorms Blog says

How do space science and sea science interact? They are more alike than many people realize.

For the full review: <https://twobookwormsblog.wordpress.co...>

Mrs Mommy Booknerd <http://mrsmommybooknerd.blogspot.com> says

This book is FANTASTIC. I could not stop reading it. Both my boys thought it was super cool too! Did you know that there are lots of ways that space and sea science interact? For example there are lots of similarities from how the explorers sleep, travel and use technology to help them learn and advance technology. So cool right! In this book you will read about all the ways that they are the same and what it takes to explore the vast reaches of both space and sea. This book has all the things that I love about National Geographic...the amazing photos, great tidbits and facts, as well as the well written glossary and index located in the back of the book. This book will make you want to explore your world from one extreme to the other.

John Clark says

This is packed with interesting stuff, for eager and curious youngsters as well as their parents and teachers. Readers are taken through the excitement and challenges of exploration in space and under the oceans. Similarities in training, risks and what can be learned in both environments are discussed. In addition the author has many quotes from aquanauts and astronauts about why they explore and what their individual experiences have been in the process. Historic information, particularly about diving equipment, with photos and illustrations are included as well as detailed descriptions of the five oceanographic and atmospheric layers. All in all, this is a great book for libraries as well as for young readers who are budding scientists or explorers.

Note: I received a copy of the book from the author in return for an honest review.

Sunday Cummins says

EUREKA GOLD WINNER 2018. Swanson nailed this! Writes as though she is having a conversation with you, a middle to early high school aged student. Swanson compares and contrasts exploration in the sea and in space, making the case that both are equally important. I had not realized how similar exploration in these two areas actually is. Astronauts-in-training actually do a lot of training deep in the sea in preparation for the environment they will be working in when they go to space.

Her explanations of concepts like buoyancy and pressure are clear and tight. The first chapter--on pressure, buoyancy, gravity, temperature, etc--is a little dense conceptually but really important to the rest of the book. Each of these concepts becomes a thread that helps the reader make sense of concepts in the rest of the book. Examples include considering how these concepts influence travel deep into the sea or up into space, the types of gear and suits needed, how research is done and so forth. Each chapter ends with a simple hands-on activity that supports understanding of some of these harder concepts. AND once the reader gets into Chapter 2, Swanson eases up a bit as she takes the reader through a training program to become an astronaut or aquanaut, how you will travel, where you will live and so forth.

This book is aesthetically appealing as well. The layout and design are sharp and make following the ideas in the text easier. The diagrams (of living spaces, of the layers of space and the ocean, etc.) and photographs are spot on.

This book is perfect for STEM classrooms as students can easily see how the concepts they are studying apply to the real world. Swanson makes pursuing a career path in these fields seem attractive including short

sidebars written from the perspectives of real-life astronaut-aquanauts. She makes a case for the appeal of careers in these fields, but also for how what we learn when we explore space and the sea can be critical in our everyday lives. She also argues that ocean exploration is just as vital as space exploration although funded at only a small percentage of what space exploration is funded.

Classroom suggestions:

- Book talk this and leave it in the classroom library to be grabbed up.
- Project pages from the book in some way, read aloud excerpts for discussion or just let students observe and discuss what they note in particular illustrations (like those of the habitats in space and in the sea on pages 44-45).
- Assign to a small group to read and discuss and GET EXCITED—let them pick parts they want to read and discuss; ask them to share with the larger group as part of an integrated unit of study in the content areas.
- Pose questions for students to discuss like, “Why is exploring the sea just as vital as exploring space?” and “How does the author make a compelling case that we should fund sea exploration better?”

storymamas says

Calling all future explorers! #nationalgeographickids along with talented nonfiction writer Jennifer Swanson brings us Astronaut Aquanaut -How Space Science and Sea Science Interact.

Jennifer sent us a copy for review and I can say that reading this to my 3.5 year old son, we’ve both learned a lot.

The format of the text is browsable nonfiction. It is broken up into chapters, but can be read in any order. The pages are filled with mostly text and has photographs to support the pages. It also has interactive pages to help readers understand some of the concepts in the book, including experiments you can try at home!

This book is great for all readers, but older readers will get a ton out of this! When reading with my son we looked mostly at the pictures and captions to learn about the chapters, since there is a lot of text on the page for his attention. This is a great addition to any classroom library or to buy for any budding explorer, scientist or swimmer.

Jennifer has done a great job of explaining the jobs of both astronaut and aquanauts, what life is like down deep and in outer space and the hard work it takes to do each job! The content is engaging and written in a friendly way. Toward the back of the book she encourages readers design their own space suit and the book also begins with forewords from Kathryn Sullivan, an astronaut & Fabian Cousteau, aquanaut.

I know any reader who grabs this book will learn something new. Thank you for sharing it with us.

Erin Buhr says

This is such a cool book. I had never considered how similar space travel and undersea travel were similar before but as soon as I read the introduction it seemed so obvious. Outer Space and the Ocean are the two favorite things in our house so realizing that they have so much in common and finding this incredible book that covers them both is amazing. I love the incredible photographs throughout the book, the creative activity ideas, the many comparisons between the two kinds of travel and so much more. Our favorite chapter starts with the pictures of living areas in a space habitat and sea habitat. The concepts of living and working in these two environments is fascinating and the facts Swanson chose to include are absorbing. The text is dense so I definitely recommend this one for 6 and up, but for a space fan or ocean fan it is a must read.
