Dr. Dave
ASTRONAUT

Go for Liftoff!

How to Train Like an Astronaut

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art by Theo Krynauw

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Step 4: Basic Training

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Welcome from Dr. Dave

Passion, commitment, persistence, and optimism are all part of the astronaut attitude. It's about learning to be your best and enjoying the journey of pursuing your dreams.

Dr. Dave Williams

Exploring scuba diving

Skydiving

Exploration has always been my passion. When I was seven years old, I watched the first NASA astronauts fly in space and I knew I wanted to be an astronaut. My journey began at age twelve when I learned to scuba dive, which showed me how the body works in unique environments. That led me to a career in science and medicine, and eventually to becoming an astronaut. It is never too early to believe in yourself, push your limits, and reach for your dreams.

Astronaut survival training

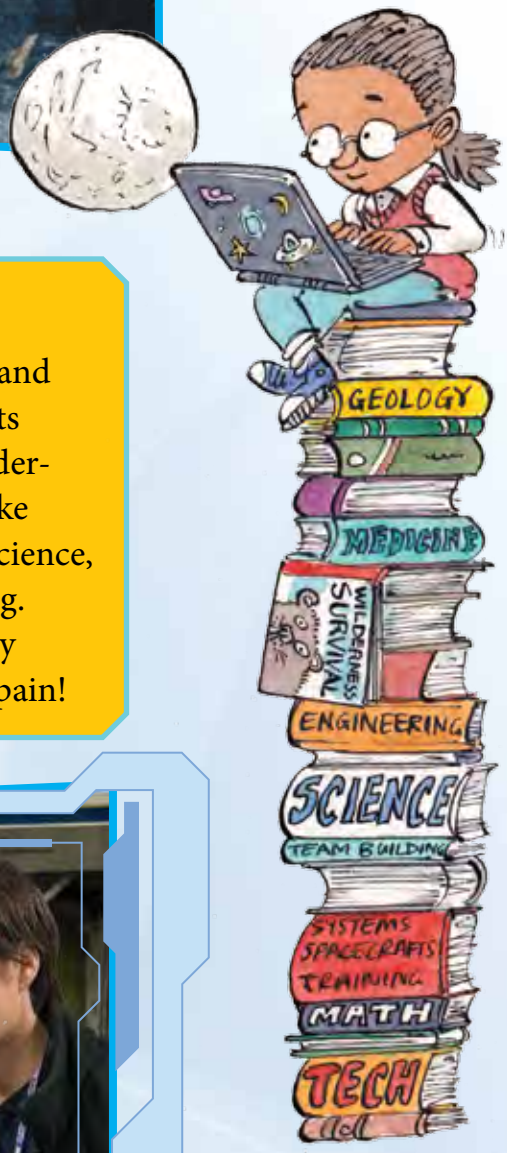
So You Want to Be an Astronaut

Do you wish you had a space suit in your closet? Do you dream of traveling in a rocket ship? Can you picture yourself floating high above Earth? News flash: YOU WANT TO BE AN ASTRONAUT.

And really, who wouldn't? Exploring space is one of the coolest jobs on—or off—the planet. If you like science, taking on challenges, and learning new and amazing things, keep reading!

Being an astronaut is awesome, but it doesn't come easy. You've got to work to make your dream a reality—and that's exactly where things get interesting. In this book, you'll learn just what it takes to have a truly out-of-this-world job. So, are you ready to train like an astronaut?

Dr. Dave goes through wilderness-survival training.



It's Not All Rocket Science

Learning to be an astronaut isn't just about science and space travel. Before they are sent to space, astronauts have to go through spacecraft systems training, wilderness training, underwater training, roller-coaster-like flight training, teamwork training, and, of course, science, technology, medical, engineering, and math training. That's a lot of training (and a lot of tests!). But as any astronaut will tell you, the gain is totally worth the pain!

Astronaut Samantha Cristoforetti learns how to operate an IMAX camera.

Rocks, Docs, and Space

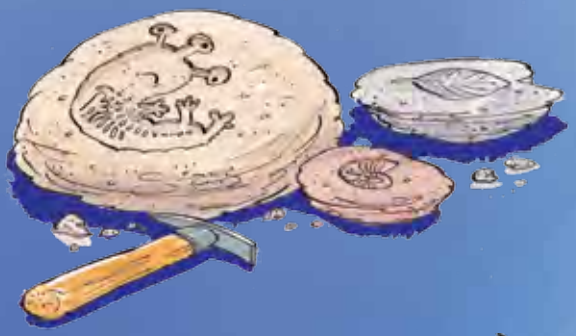
So, what if you dream of snorkeling instead of space? Rocks instead of rockets? Never fear: not all astronauts start out with an interest in space. A passion for something totally different can still lead up, up, and away!

Taking Stock of Rock

Geologists are scientists who study the materials that make up Earth, like rocks and minerals. This is especially important for answering questions about the origins of our solar system. Does a rock or soil sample from Mars show any signs of having supported life?

NASA's Curiosity Mars rover

Scoop marks in the sand on Mars

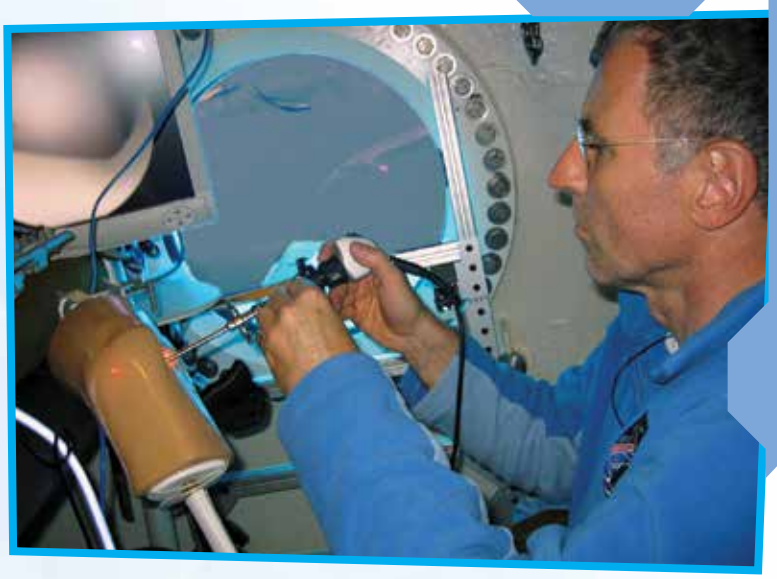


Swimmers for Space

What does scuba diving have to do with space? Because floating underwater is a lot like floating in space, astronauts do a lot of training in pools and the ocean. So, if you want to be an astronaut, scuba skills are required.

Call the Doctor!

Doctors know how the human body works when it's healthy, when it's sick or hurt, and when it's under "extreme" conditions. Whether high in the mountains, deep in the ocean, or way out in space, an expert in the medicine of extreme environments is always good to have around.



Dr. Dave performs a surgical simulation in the Aquarius underwater laboratory.

Planetary Pilots

Test pilots fly new aircraft (and spacecraft, too) to make sure the vehicles perform well and are safe. If things go wrong, be prepared to eject!

Captain Brad Matherne does a preflight check before a training mission.

Step 1

Develop Your Astronaut Attitude

Going Up?

Whatever gets you dreaming about space, the first step in your astronaut training is an attitude check.

Astronaut Wannabe Checklist

At space camp, kids get to feel what gravity is like on the moon.

Curiosity

It turns out curiosity is more important than rocket fuel. What's really out there? Does space go on forever? Astronauts want to know! Without curiosity, humans would never have walked on the moon. Will Mars be our next stop?

Confidence and Physical Fitness

Confidence means believing in your own abilities—even when you're doing things that are tough.

Passion

Passion is that feeling you get when you love something *so much* that you want to do it all the time. Your passion might be soccer or reading or video games. An astronaut's passion is exploring space.

Resilience

Resilience is dusting yourself off and getting back on when you fall off your bike. Trying new things is hard! Remember that you won't succeed at everything you try, and certainly not right away (and if you do, it probably means you're ready for the next step). You can learn a lot from failure.

Commitment means hard work and practice.

Commitment

Saying you love baseball and then skipping practices is the opposite of commitment. But scheduling enough rehearsal time to make sure you ace your piano exam? That's true commitment. Astronauts show commitment by constantly challenging themselves to be the best they can be.

No "I" in Team

Astronauts work and live together for months at a time. On the International Space Station (ISS), there could be five crewmates—from at least two different countries—sharing a mission with you. Do you have what it takes to get along?

Expeditionary Behavior Basics

Your classroom probably has a "code of conduct"—something you reviewed on your first day of school to make sure everyone is on their best behavior. Astronauts have a code, too—it's called "expeditionary behavior." A mission to Mars might last three years. Who wants to spend that much time with a person who complains all day or eats the last snack without sharing? You can get a head start on your expeditionary behavior training by

- putting mission goals and others first (maybe your "mission" is a class project)
- treating everyone the way you'd like to be treated
- helping others to succeed
- being humble

Working as a team

Helping others to succeed

- being kind and openhearted
- sharing and taking care of your stuff
- being honest, responsible, and accountable
- admitting to mistakes and apologizing
- welcoming differences
- being positive

Debrief on Differences

Are all of your classmates from the same place? No way! Some were born in other countries, some are part of a different culture, and some speak another language. But you all have to communicate and get along. That's good practice for astronaut training!

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This book was inspired by my daughter Olivia's high school kinesiology project on training like an astronaut. It is dedicated to Olivia, Evan & Theo and to all young readers as they look forward to the future with excitement. Go for it! —D.W.

To Felix, Vienna and Frederick for always lifting me up and to my parents, Carlo and Maria, for showing me how to train for life. —L.C.