



NASA's Commercial Crew Program

NASA's Commercial Crew Program is working with American companies to build new rockets and spacecraft that will launch astronauts into space, to places like the International Space Station. The spaceships will launch from Florida and take astronauts about 250 miles above the surface of Earth to perform experiments. Those experiments make our lives better here on the ground and prepare other astronauts for longer missions to places like asteroids and Mars.



ROBERT L. "BOB" BEHNKEN, NASA ASTRONAUT

Hometown: St. Ann, Missouri Education: Washington University, California Institute of Technology Flight Training: 1,500 hours in more than 25 aircraft Time in Space: 29 days Spacewalks: 6, totaling 37 hours Missions: Space Shuttle missions STS-123 & STS-130 delivering Dextre, Kibo, Cupola, and Node 3 to ISS Previous Assignments: Space Shuttle Cape Crusader, CAPCOM, Chief of the NASA Astronaut Corps Achievements: National Science Foundation Graduate Research Fellow, NASA Space Flight and Defense Superior Service Medals

Military Experience: USAF Research Laboratory Engineer, Test Pilot School, F-22 Flight Test, USAF Colonel Hobbies: Backpacking, skiing and learning

Preparing for Flight

Bob Behnken, Suni Williams, Eric Boe and Doug Hurley are training for Commercial Crew flight tests to the International Space Station on Boeing's CST-100 Starliner and SpaceX's Crew Dragon vehicles.

"Working for NASA and being an astronaut is really exciting and it's fun. I go to work every day and it is something new and exciting, and sometimes it means getting on a rocket and going to space.

There are a lot of cool things we do at NASA. It's not only astronauts who work for NASA, but it's doctors, scientists, engineers, veterinarians, and many others all working together to make a space mission that allows us to eventually get up on the rocket and go and do the experiments in space on the space station."

~Suni Williams

SUNITA L. "SUNI" WILLIAMS, NASA ASTRONAUT

Hometown: Needham, Massachusetts
Education: U.S. Naval Academy, Florida Institute of Technology
Flight Training: 3,000 hours in more than 30 fixed wing and helicopter aircraft
Time in Space: 322 days
Spacewalks: 7 totaling 50 hours, 40 minutes – World Record for Women
Missions: STS 116, Expeditions 14/15, STS 117, Russian Soyuz TMA-05M, Expeditions 32/33, Commander of Expedition 33
Previous Assignments: ISS Russian Crusader, Robotics Branch, NEEM02 Crew Member, Deputy Chief of the Astronaut Office, Director of Operations at the Gagarin Cosmonaut Training Center in Star City, Russia
Achievements: Defense Superior Service Medals, NASA Space Flight medals, Republic of India Padma Bhushan Award and Slovenian Medal for Service, first marathon and triathlon in space
Military Experience: US Navy Captain, CH-46D pilot, USN Test Pilot School graduate and instructor, Marine Air Warfare Training graduate, USN/USMC helicopter test pilot, V-22 chase pilot
Hobbies: Running, swimming, biking, triathlons, windsurfing, snowboarding, bow hunting and yoga

ERIC A. BOE, NASA ASTRONAUT

Hometown: Atlanta

Education: United States Air Force Academy, Georgia Institute of Technology Flight Training: 5,000 hours in more than 45 aircraft Time in Space: 28 Days Miles Traveled: 11.3 million Missions: STS-126, STS-133 Previous Assignments: Pilot, NASA Director of Operations at the Gagarin Cosmonaut Training Center in Star City, Russia, Deputy Chief of the Astronaut Office and United States Air Force Colonel Achievements: Delivered the Multi-Purpose Logistics Module Leonardo, the Permanent Multipurpose Module and 4th Express Logistics Carrier to ISS Military Experience: 55 combat missions over Iraq in support of Operation Southern Watch Hobbies: Outdoor sports, reading, scuba diving and skiing

DOUGLAS G. "DOUG" HURLEY, NASA ASTRONAUT

Hometown: Apalachin, New York Education: Tulane University Flight Training: 5,000 hours in more than 25 aircraft Time in Space: 28 days Miles Traveled: 11.8 million Missions: Space Shuttle missions STS-127 and STS-135 delivering the Japanese Exposed Facility and the Multi-Purpose Logistics Module Raffaello to ISS Previous Assignments: Pilot, Shuttle Cape Crusader, NASA Director of Operations at the Gagarin Cosmonaut Training Center in Star City, Russia, and Assistant Director for Flight Operations Achievements: 1st Marine pilot to fly the F/A-18 E/F Super Hornet, last pilot of the Space Shuttle, Legion of Merit Military Experience: F/A-18 pilot, Weapons and Tactics Instructor, Navy Test Pilot School, F-18 A-F Flight Test, retired USMC Colonel Hobbies: Family time in the Texas Hill Country and hunting



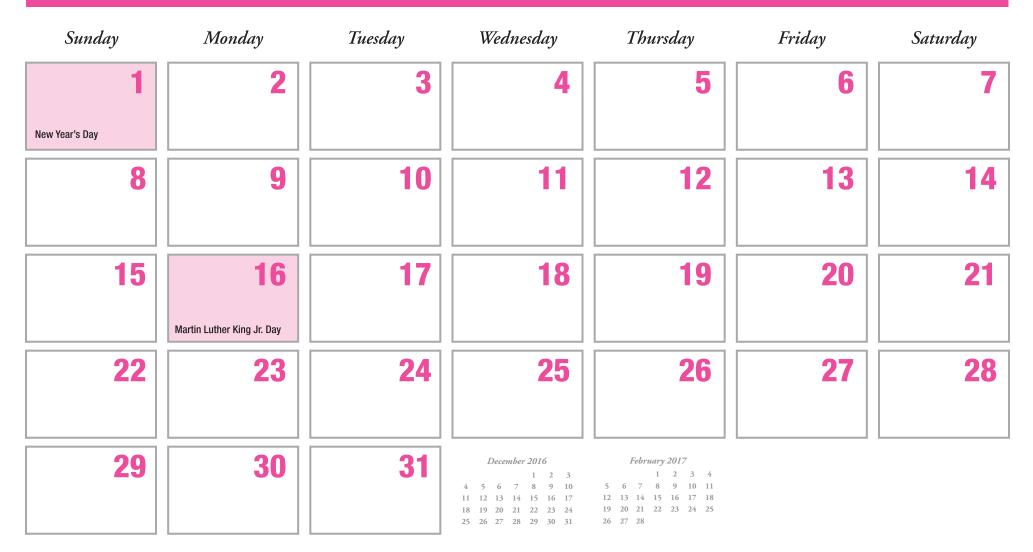
Astronauts

NASA's astronauts have many skills and experiences that make them perfect for the work they're required to do. They do a lot more than just fly to space! During their careers, astronauts could pilot a spacecraft, run experiments on the International Space Station, train new astronauts, work with astronauts from other countries and even help people that are in space from Earth. What job would you want to do if you were an astronaut?



Sylvie, 11 Katy, Texas

Fishing for Stars





Did You Know?

NASA's Train Like an Astronaut program includes physical activities that are modeled after the real-life training that astronauts do to prepare for exploring space. Kids will experience hands-on science that relates the needs of our bodies on Earth to the needs of an astronaut in space. Learn more: <u>http://go.nasa.gov/2htkqP0</u>



Friends Aleksander, 9 Valencia, Spain



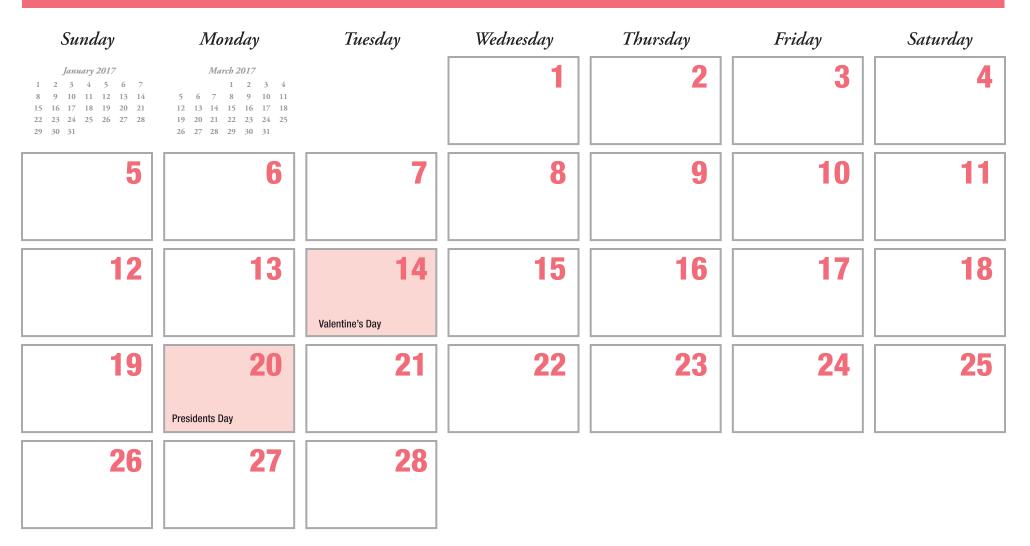
Rockets

The commercial crew rockets that will carry astronauts to the International Space Station will be smaller than NASA's Saturn V rocket and the Space Shuttle fleet. They don't have to go as far as the Saturn V and don't have to carry as much as the Space Shuttle, so they don't need to be as big. Think of it like going to visit your friends. You would take a bus to see someone in another state, but you could just take your bike to visit someone who lived down the street. Let's see your best rocket drawing!



Hannah, 12 Los Angeles, California

Into Space We Go!





It's Rocket Science 101!

You don't have to be a rocket scientist to launch a NASA spacecraft with NASA's Rocket Science 101! Select your favorite NASA mission and build a rocket to send the spacecraft into orbit. As you take the challenge, you can learn more about thrilling missions and the various components of the launch vehicles, how they are configured and how they work together to successfully launch a NASA spacecraft. <u>http://go.nasa.gov/2h4HiHU</u>

In Infinite Space Bolea, 11 Piatra Neamt, Romania

February



Spacecraft

Spacecraft carrying astronauts are stacked on top of rockets before launching them into space The Apollo spacecraft was very different from the space shuttle, and both are very different from the commercial crew spacecraft that astronauts will use to fly to the International Space Station. Today's commercial crew spacecraft will be lightweight, but tough enough to withstand the dangers of space. What would your spacecraft look like?



Ayushman, 11 Noida, UP India

Reaching for the Stars Above



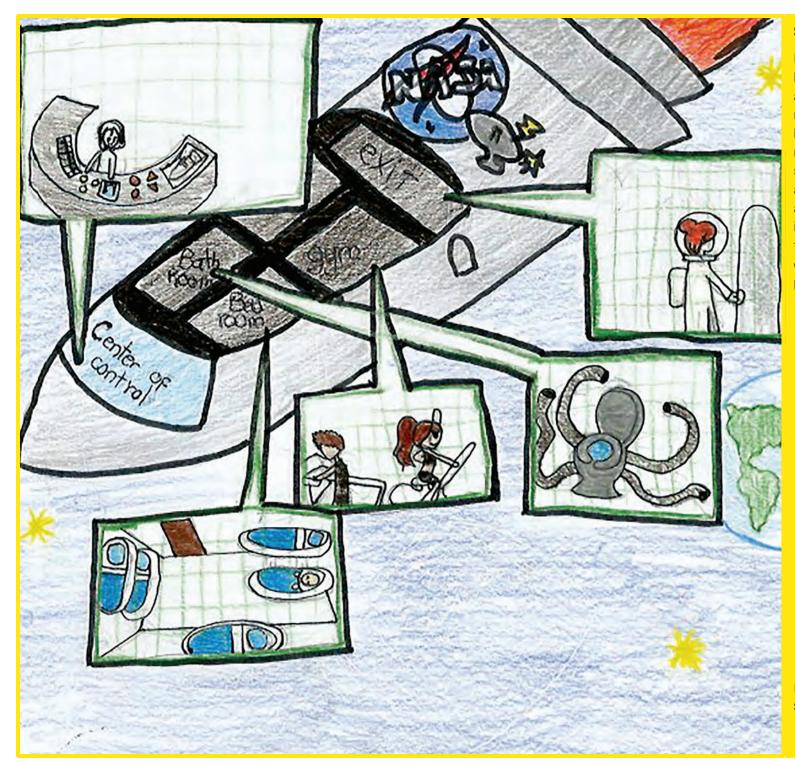


Launching American Innovation

NASA's Commercial Crew Program has two companies, Boeing and SpaceX, building new spacecraft to carry astronauts to space! Hope, from Fountain Valley, California, knows a thing or two about the Starliner, because her dad is helping building one of the two unique spacecraft that will fly astronauts to the International Space Station! Learn more about NASA's Commercial Crew Program, at www.nasa.gov/commercialcrew

My Dad's Starliner Hope, 10 Fountain Valley, California





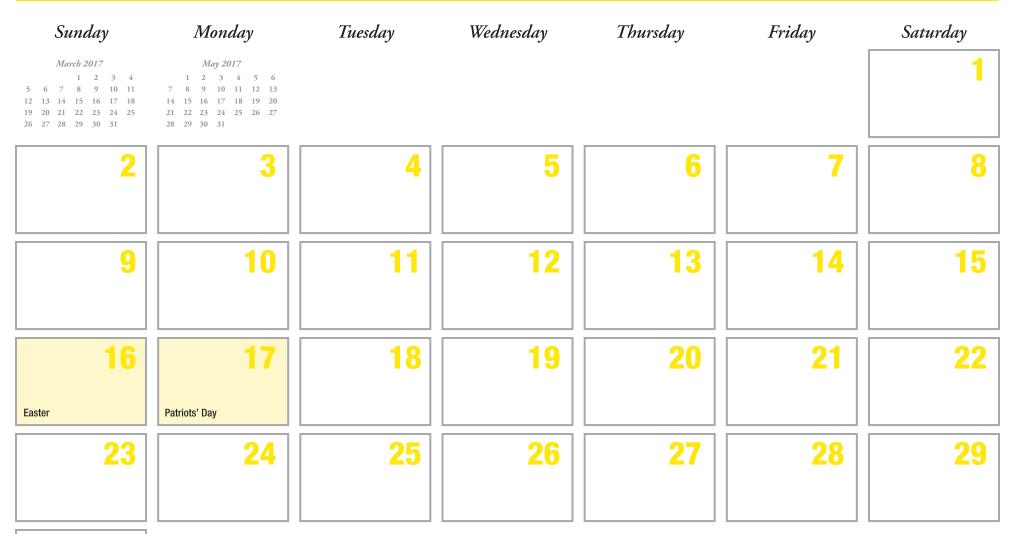
Spacecraft Interior

Every spacecraft's interior has been uniquely designed for the astronauts who fly it and their missions. Astronauts need to be able to steer the spacecraft, reach all of the controls from their seat, be able to work together, and know what to do in case of an emergency. A lot of time is put into testing designs to make sure the spacecraft is functional and comfortable. Where would you put things inside your spacecraft?



Mariana, 11 Socorro, New Mexico

Dreams in the Space



30



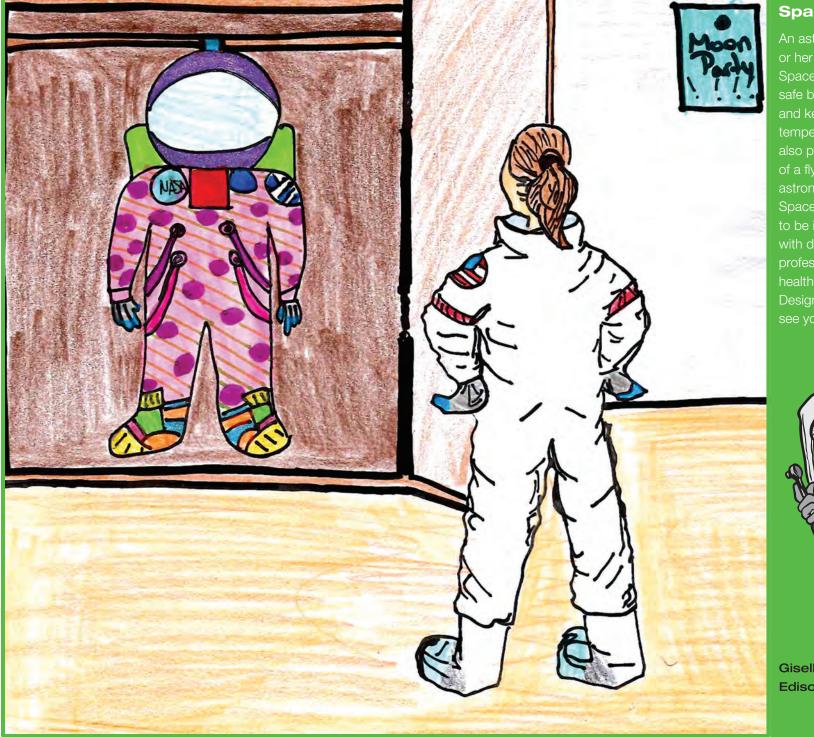
Did You Know?

Each spacecraft is unique. The space shuttle had thousands of knobs, dials and switches. Boeing's Starliner and SpaceX's Crew Dragon are the next generation of spacecraft being built in partnership with NASA. Both spacecraft include modern features, like using touch screens for their onboard computers.

An Amazing Spacecraft **Ricardo, 12**

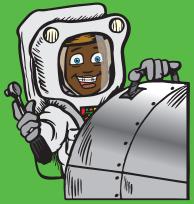
Santo Tirso, Portugal





Spacesuits

An astronaut's spacesuit is like his or her own personal spacecraft. Spacesuits keep astronauts safe by providing breathable air and keeping them just the right temperature. Spacesuits are also pressurized like the inside of a flying airplane so that the astronauts are safe in space. Spacesuits allow the astronauts to be in constant communication with doctors and medical professionals who track their health here on the ground. Design your own spacesuit... let's see your inner fashion designer!



Giselle, 12 Edison, New Jersey

My Space Wardrobe





Learn More:

Spacesuits are specially made for each astronaut and their destination. NASA's spacesuits have changed a lot throughout more than 50 years of human spaceflight. Check out NASA's interactive spacesuit website to learn more about past and future suits at https://www.nasa.gov/externalflash/nasa_spacesuit/.

Spacesuits Mellina, 10 Forrest Gate, London





Florida Space Coast Launches

The rumble... the glow... the excitement! Every time NASA has launched people into space, it has been from Florida's Space Coast. There are opportunities all the time to see commercial rocket engines glow orange and make huge plumes of smoke as they carry satellites to space, and soon they'll be taking astronauts and maybe even tourists into space too. In the 2030s, we will also see astronauts launching from Florida's Kennedy Space Center as they begin their journey to Mars. Draw who you plan to watch these amazing launches with... family, friends, and perhaps Florida's abundant wildlife.



Urian, 6 Singapore

Florida Space Coast Launchers

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
July 2017 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			1	2	3
5	6	7	8	9	10
12	13	14	15	16	17
19	20	21	22	23	24
		Summer Begins			
26	27	28	29	30	
	July 2017 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 5 12 12 12 19 19 19 19	July 2017 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 5 6 12 13 12 13	<i>July 2017</i> 1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 30 31 5 6 7 6 7 1 5 6 7 8 9 10 14 15 10 12 13 14 16 7 16 7 17 1 12 13 14 14 14 14 14 10 12 13 14 14 14 14 14 10 19 20 21 14 15 14 15 14	July 2017 1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 12 23 24 25 26 27 28 29 30 31 6 7 8 5 6 7 8 8 1 12 13 14 15 1 12 13 14 15 1 13 14 15 1 19 20 21 22 1 22 23 24 25 26 1 13 14 15 15 1 13 14 15 15 1 20 21 22 22 24 1 19 20 21 22 22 1 15 5 5 5 5 5 1 19 20 20	July 2017 1 1 1 1 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 <th1< th=""> 1 <th1< th=""> <th1< t<="" td=""></th1<></th1<></th1<>

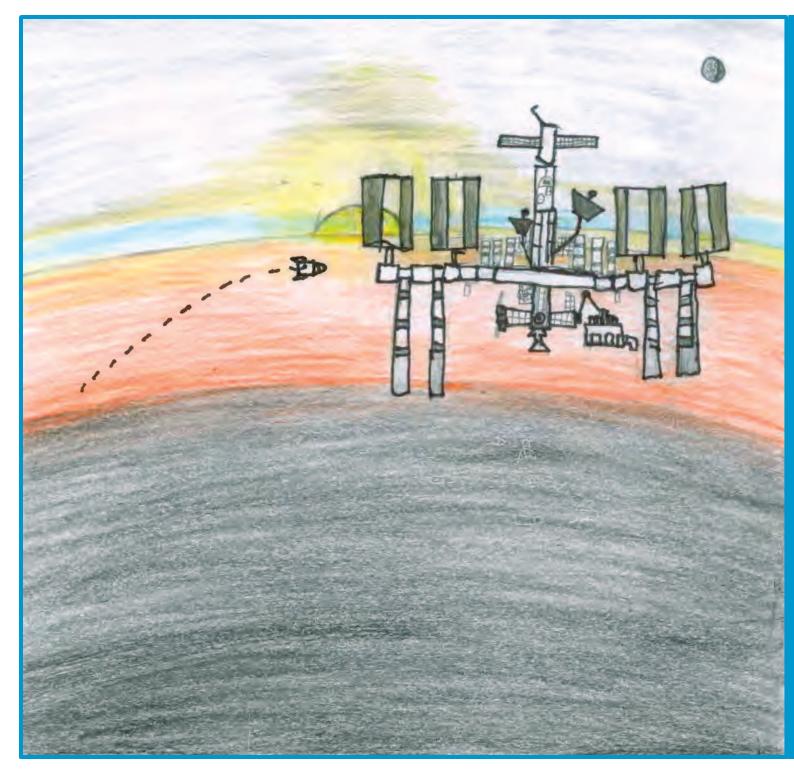


Did You Know?

Florida is known as the Space Coast, because this is the area of the United States where many of the nation's spacecraft launched into space. During the 1960s and 70s, NASA launched people to the moon. Florida is where all of the space shuttle missions launched to deliver payloads into orbit, like the Hubble Space Telescope, and many of the International Space Station sections. In the future, the Space Coast will see a host of commercial rocket launches and NASA's new heavy-lift rocket, the Space Launch System!

Florida Space Coast Launch Johnny, 9 Medical Lake, Washington





International Space Station

Look up! The International Space Station is orbiting about 250 miles above the surface of Earth, 24 hours a day, seven days a week, 365 days a year at about 17,500 miles every hour. On board, astronauts conduct very important experiments that help us here on Earth. They are also learning how to live for long periods of time in space, which will help future astronauts on their journey to Mars. Commercial crew spacecraft will carry four crew members to the station and increase the number of experiments being done! Show us your best drawing of the space station. Remember it's the size of a football field!



Haroon, 7 Raleigh, North Carolina

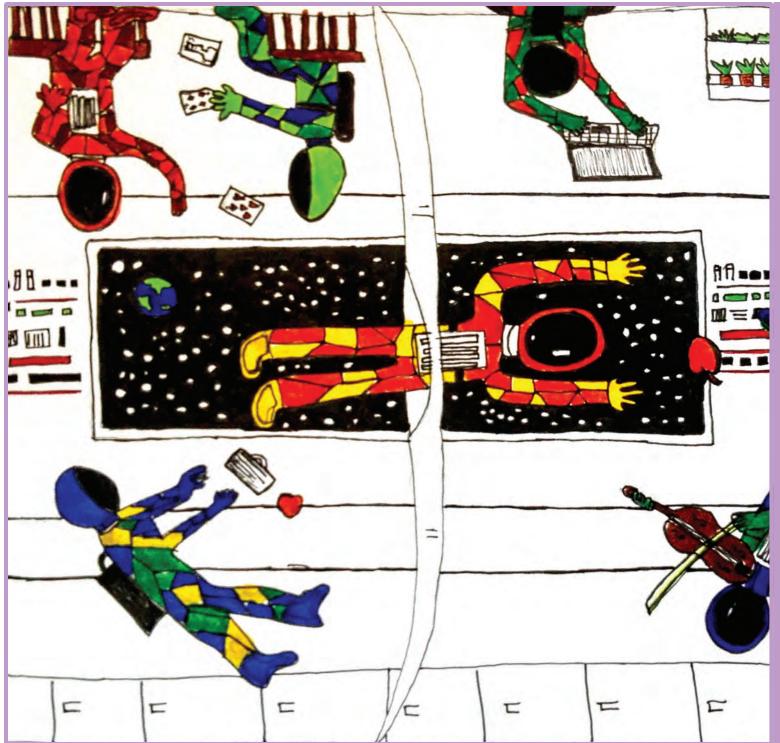
Astronauts Arrive to ISS at Sunrise

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
June 2017 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 16	August 2017 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31					1
2	3	4 Independence Day	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	*	Look Up Watch the In	! ternational Space Station pass overhead	d from several thousand worldwide lo	cations. It is the third

Watch the International Space Station pass overhead from several thousand worldwide locations. It is the third brightest object in the sky and easy to spot if you know when to look up. Visible to the naked eye, it looks like a fast-moving plane only much higher and traveling thousands of miles an hour faster! Read more: <u>https://spotthestation.nasa.gov/</u>

Peace in Space Alannah, 7 Merritt Island, Florida





Living in Space

For over 16 yeas astronauts have lived and worked in space on the International Space Station. They do all the same kinds of things you do here on Earth! They sleep and eat and take baths and work hard and exercise! A lot of their work is about studying how to survive in locations far from Earth, like Mars! Draw what you would do if you lived in space.



Aiyana, 12 Mumbai, India

Living in Space

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
July 2017 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	September 2017 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

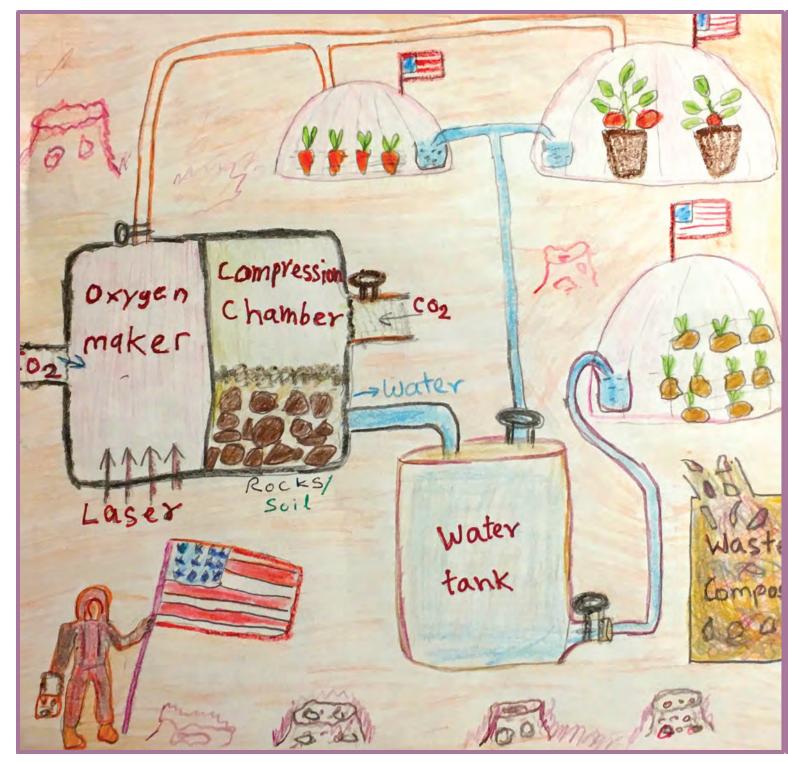


Have Some Fun!

Find your way through the International Space Station while thinking about what type of science experiments you would perform in space. Download the station maze at <u>http://go.nasa.gov/1IWJme6</u>

A Day in Space Aparna, 10 Germantown, Maryland





Growing Food in Space

There are no grocery stores in space. And just this year was the first time humans have ever grown and eaten food while in space. When new supplies are sent to the International Space Station, there's always some fresh food like fruits and vegetables, but most everything is prepackaged so it will last a long time. The goal is for astronauts to eventually grow all of their food in space. If you were an astronaut, what foods would you grow in space?



Ruhee, 9 Edison, New Jersey

Space Farming in Mars

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
August 2017 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	October 2017 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31				1	2
3	4 Labor Day	5	6	7	8	9
10	11 Patriot Day	12	13	14	15	16
17	18	19	20	21	22 Fall Begins	23
24	25	26	27	28	29	30



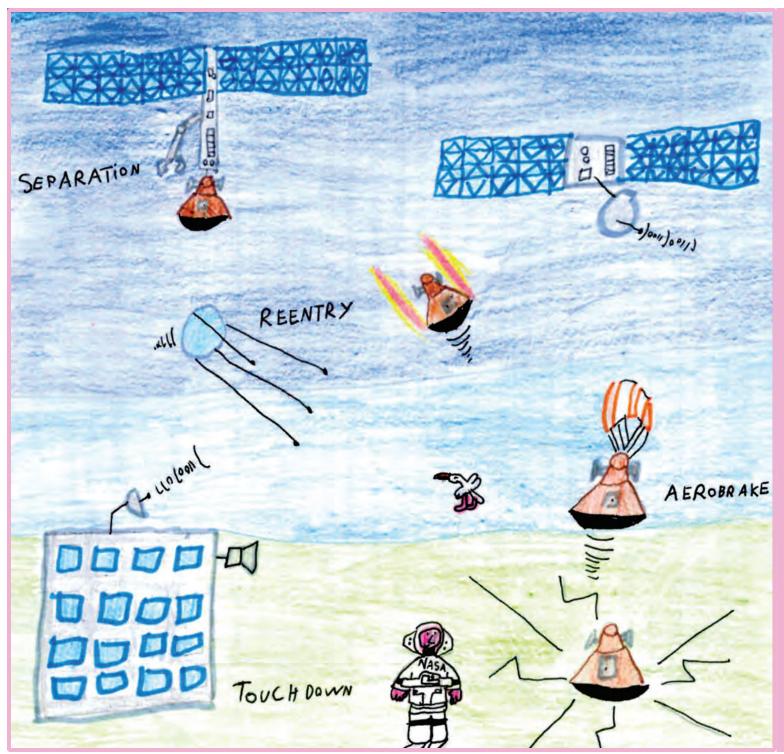
Did You Know?

Astronauts will one day launch on a rocket headed for Mars! It will be a long mission to the red planet and back home, so growing food while on the journey would be a huge help. NASA is using the International Space Station to learn about growing food in space. Learn more: http://go.nasa.gov/2htmkiw

Garden Paradise in Space Iha, 11

San Jose, California

September 2017



Landing

What goes up, must come down! After flying through space and re-entering the Earth's atmosphere at about 17,500 miles per hour, spacecraft have to land slowly and smoothly to protect the astronauts and science experiments they carry. Commercial Crew engineers are looking at different ways to land with parachutes, airbags, like airplanes, or using rocket engines. Show us what you think a spacecraft landing looks like.



Tristan, 8 Valbonne, France

Back to Earth!





One by Land, Two by Sea

For NASA's Commercial Crew Program, Boeing's Starliner and SpaceX's Crew Dragon will land back on Earth using different methods after leaving the International Space Station. The Starliner will land on land and the Crew Dragon will initially land in the ocean. NASA's Orion spacecraft will take astronauts beyond low-Earth orbit for deep-space missions on NASA's Space Launch System rocket, and will return to Earth landing in the ocean.

Landing Brylee, 4 Viera, Florida





NASA's Journey to Mars

NASA is preparing to send people to Mars! Astronauts on the International Space Station are doing research to understand how to survive on the journey to Mars, while on Mars, and on their trip back to Earth. What do you think it will be like to live on Mars? What kinds of buildings, tools, and vehicles do you think we'll need?



Uttaran, 8 Howrah, India

NASA's Journey to Mars





Students and Teachers:

Young explorers can take a trip to Mars with fun activities and teaching tools that share NASA's journey to the Red Planet. Download your Mars Survival Kit at <u>http://go.nasa.gov/1jfoW41</u>

Mission Accomplished Drew, 11 Katy, Texas





What Would You Take With You?

Today, every astronaut goes to space to do very special work. But because they're gone so long, they each take some personal items to remind them of home or small things to do during their limited free time. Some of those things astronauts take include musical instruments, mp3 players, or small toys. If you were traveling to space, what things might you bring to work or to play with? Draw a picture of you in space with your personal items.



Helen, 10 New York, New York



#LaunchAmerica

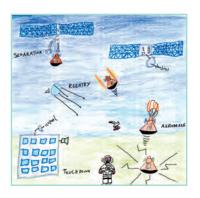














NASA's Commercial Crew Program is working with American companies to build new rockets and spacecraft that will launch astronauts into space, to places like the International Space Station. These spaceships will launch from Florida and take astronauts about 250 miles above the surface of Earth to perform experiments. Those experiments make our lives better here on the ground and prepare other astronauts for longer missions to places like asteroids and Mars.

For more information, go to: www.nasa.gov/commercialcrew and http://blogs.nasa.gov/commercialcrew www.nasa.gov









SP-2016-12-439-KSC