COMMERCIAL CREW PROGRAM CHILDREN'S ARTWORK

Solar System Chelsea, 10 Agoura Hills, CA



COMMERCIAL CREW

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 the Moon and Mars.

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ISS TASK TABLET

Boeing Crew Flight Test



Nicole Aunapu Mann NASA Astronaut Marine Corps Lieutenant Colonel

Selected as an Astronaut in 2013, this is Nicole's first spaceflight.



Chris Ferguson Boeing Astronaut Navy Captain (retired)

Piloted space shuttle Atlantis for STS-115, and commanded shuttle Endeavour on STS-126 and Atlantis on STS-135, the final flight of the Space Shuttle Program.



Mike Fincke NASA Astronaut Air Force Colonel (retired)

Aboard shuttle Endeavour on STS-134, Fincke served as Mission Specialist 1 on the flight deck and as a spacewalker and robotic arm operator.

Boeing's First Operational Mission



Suni Williams NASA Astronaut Navy Captain (retired)

Spent 322 days in space on two space station missions, Expeditions 14/15 and Expeditions 32/33. Commander of the International Space Station on Expedition 33.



Josh Cassada NASA Astronaut Navy Commander

Selected as an Astronaut in 2013, this is Josh's first spaceflight.

A NEW SPACE AGE

NASA's Commercial Crew Program spacecraft and rockets will carry up to four astronauts and about 220 pounds of cargo to and from the International Space Station. Commercial crew will resume human spaceflight launches from the United States and provide the nation with two unique spacecraft, two humanrated rockets and the necessary ground support systems. NASA and our commercial partners, Boeing and SpaceX, are working together to open access to low-Earth orbit.

BUILDING A NEW AMERICAN CAPABILITY

NASA's Commercial Crew Program has been redefining space system development for low-Earth orbit by forming strong public-private partnerships with the aerospace industry to encourage innovation while maintaining NASA's high safety standards and leveraging NASA's 50 plus years of spaceflight experience. Commercial crew partners with industry to advance a diverse economic market in space including Blue Origin with spacecraft, engines and systems, and Sierra Nevada Corporation with the Dream Chaser spacecraft. NASA selected the Dream Chaser's cargo version to ferry supplies, equipment and experiments to and from the orbiting laboratory under the Commercial Resupply Services-2 contract. Both Sierra Nevada Corporation and Blue Origin are also working toward the goal of flying people to and from low-Earth orbit.

PARALLEL PATH FOR EXPLORATION

NASA's work to turn over low-Earth orbit astronaut transportation to commercial companies, like Boeing and SpaceX, allows the agency to use other resources to develop the Orion spacecraft and Space Launch System rocket for missions into deep space. Both destinations—the International Space Station and deep space—are vital in the nation's space exploration efforts, and one cannot be successful without the other.

FLIGHT TEST AND FIRST MISSION CREWS

NASA selected eight of its astronauts in August 2018 to crew the first flights of Boeing's Starliner and SpaceX's Crew Dragon. In addition, Boeing introduced its astronaut for the company's Crew Flight Test, for a total of nine crew members. These brave men and women will be the first to fly to space on American-made systems since the space shuttle's retirement.

> Stay connected with NASA's Commercial Crew Program:

www.nasa.gov/commercialcrew

blogs.nasa.gov/commercialcrew

www.twitter.com/commercial_crew

www.facebook.com/NASACommercialCrew

SpaceX Demo-2



Bob Behnken NASA Astronaut Air Force Colonel

Flew aboard space shuttle Endeavour twice as a Mission Specialist, first on STS-123 and then on STS-130.



Doug Hurley NASA Astronaut Marine Corps Colonel (retired)

Piloted space shuttle Endeavor for STS-127 and Atlantis for STS-135, the final space shuttle mission.

SpaceX's First Operational Mission



Mike Hopkins NASA Astronaut Air Force Colonel

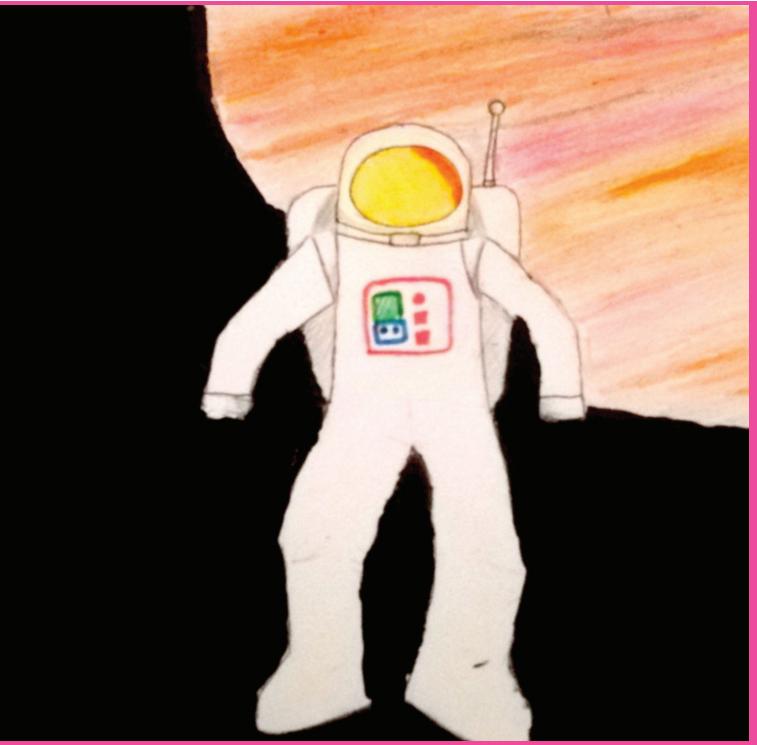
Spent 166 days on the International Space Station for Expeditions 37/38.



Victor Glover NASA Astronaut Navy Commander

Selected as an Astronaut in 2013, this is Victor's first spaceflight.





Astronauts

NASA's astronauts have many skills and experiences that make them perfect for the variety of jobs they do both in space and on the ground. During their careers, astronauts could pilot a spacecraft, run experiments on the International Space Station, train new astronauts and even help guide other astronauts through challenging work in space from Earth.

Elitsa, 12 Burgas, Bulgaria

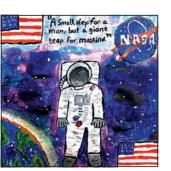
A Space Quest

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	December 2019 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	February 2020 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	1 New Year's Day	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20 Martin Luther King Jr. Day	21	22	23	24	25
26	27	28	29	30	31	



Astronauts Daniel, 8 Duarte, CA

> Space Sensation Twisha, 10 Kent, United Kingdom



Astronauts

There are nine U.S. astronauts who will be the first people to fly aboard commercial spacecraft from Boeing and SpaceX. They will be the first to launch from America since 2011 when the last space shuttle flew. To meet the crew, check out this YouTube clip at: <u>https://www.youtube.com/watch?v=RU6QkU8w60c</u>.





Astronaut Training

When astronauts are in space, they must perform physical fitness activities to keep them healthy and strong while living and working in microgravity. They currently can use a stationary bicycle, a treadmill and weight machines.

Chloe, 7 Hong Kong, China

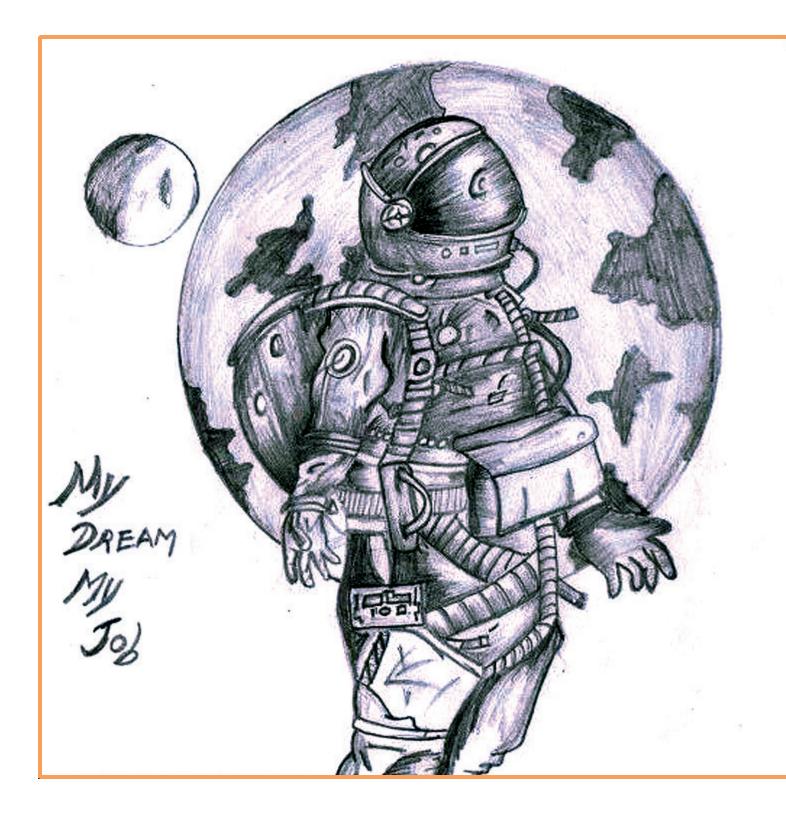




Astronaut Training

Do you want to know how astronauts prepare for possible emergencies or how they put on their spacesuits? Maybe you are interested in how they get ready for flight on top of a rocket. Find all this and more at <u>https://www.youtube.com/watch?v=gpouNI1sgqA</u>.

Astronaut Training in the Cave Nyah, 10 Vodice, Slovenia February



Spacesuits

An astronaut's space walk spacesuit is like his or her own personal spacecraft. Spacesuits keep astronauts safe by providing breathable air and keeping them warm and cool. Spacesuits also are 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.

Kizar, 11 Trichy, India

Spacesuit



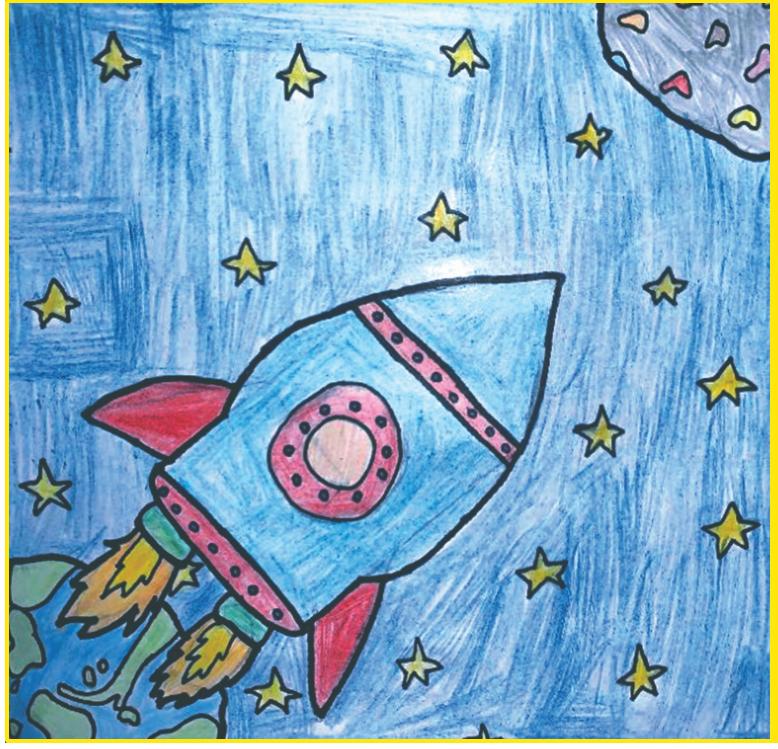


Spacesuits

New rides, new suits! Both Boeing and SpaceX have designed spacesuits for the new astronaut crews that will be launching on their rockets. The suits are full of new technologies and you can learn more about them at: <u>https://www.nasa.gov/feature/newspacesuit-unveiled-for-starliner-astronauts.</u>

Suit of the Future Uma, 9 Newcastle, United Kingdom





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.

Blast Off

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	March 2020 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	May 2020 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
5	6	7	8	9	10	11
12 Easter	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		



Spacecraft

Do you want to know what the new commercial crew capsules that will fly to the International Space Station are like? Both Boeing's Starliner and SpaceX's Crew Dragon are featured here: <u>https://www.youtube.com/watch?v=zrBTu389aqY&t=3s.</u>

Wonderful Railway Man, 10 Hong Kong, China





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.

Vincent, 8 Bayamon, Puerto Rico





Rockets

Commercial crew has launched a new app! Select your partner, mission, and crew. Then put your skills to the test as you launch and dock with the International Space Station. You can learn more about the real-life missions, dynamic vehicles and spacecraft as well as the heroes who make it all happen to ensure mission success: https://rocketsciencec2e.ksc.nasa.gov/.

Moon Rocket Catherine, 6 Orlando, FL





Launch Day in Florida

The rumble... the glow... the excitement! Every time NASA has launched people off the surface of Earth and into space, it has been from Florida's Space Coast. Commercial crew rockets will glow orange and make huge plumes of smoke as astronauts launch to the International Space Station from Florida. In the 2030s, we also will see astronauts launching from Florida's Kennedy Space Center as they fly back to the Moon and on to Mars.

Hailey, 11 Issaquah, WA

Behind the Scene



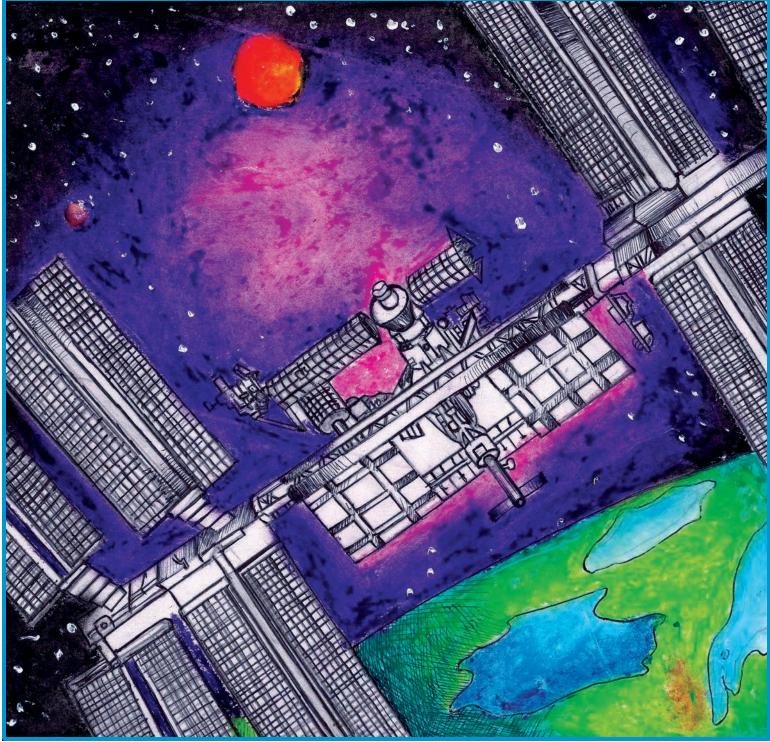


Launch Day in Florida

SpaceX's Demo-1, the first test flight of NASA's Commercial Crew Program, launched from Kennedy Space Center in Florida on March 1, 2019. Crew Dragon was the first commercially-built spacecraft designed to carry people to dock to the International Space Station. Watch highlights of the seven-day mission at <u>https://www.youtube.com/watch?v=NhKFBW3S8Pg</u>.

Launch Day in Florida Aashish, 11 Bangalore, India



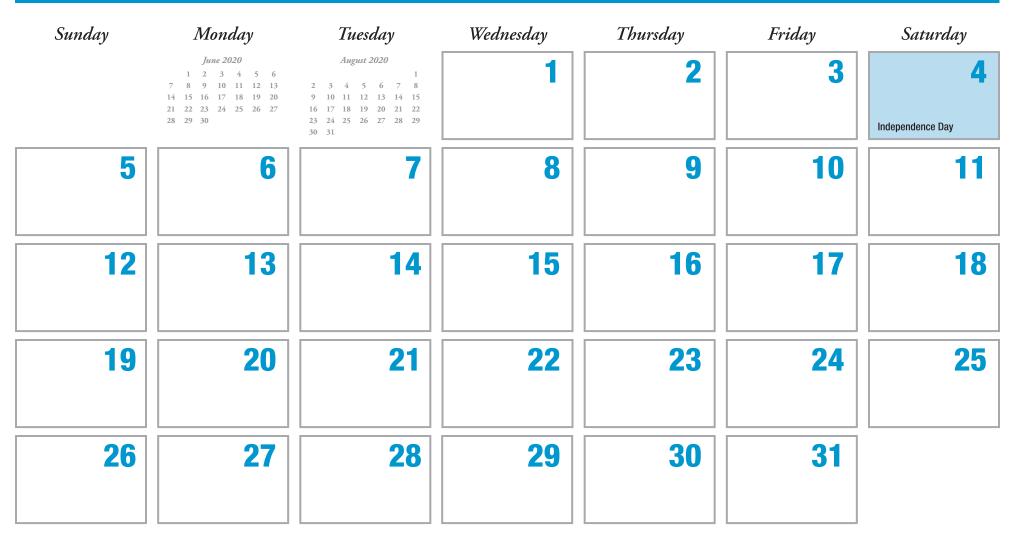


International Space Station

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 17,500 miles every hour. On board, astronauts conduct very important experiments that help us here on Earth. They also are learning how to live for long periods of time in space, which will help future astronauts as they live on the Moon and Mars. Commercial crew spacecraft will carry up to four crew members on NASA missions to the station so that important experiments can continue.

Daniel, 11 Ernakulam, India

International Space Station



My Space Station Tanush, 6 Dartford Kent, United Kingdom



Station

The International Space Station is the brightest object in the sky and you can find it just by looking up! Find out when you can "Spot the Station" in your own backyard, at <u>https://spotthestation.nasa.gov/</u>.

You can also see STEM demonstrations being done on the ISS at https://www.nasa.gov/stemonstrations.

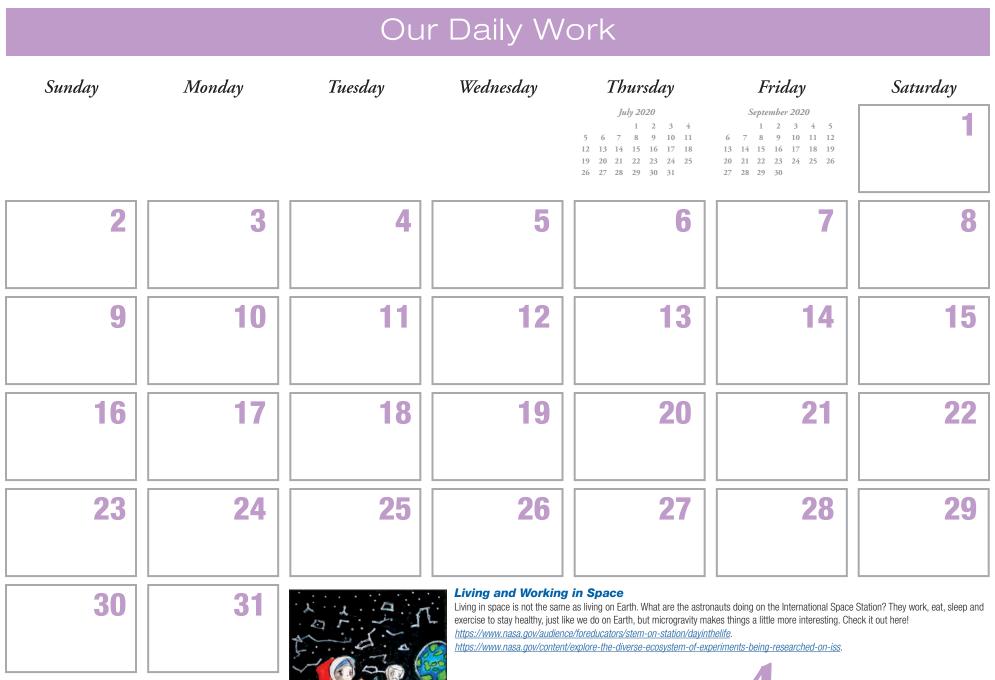




Living and Working in Space

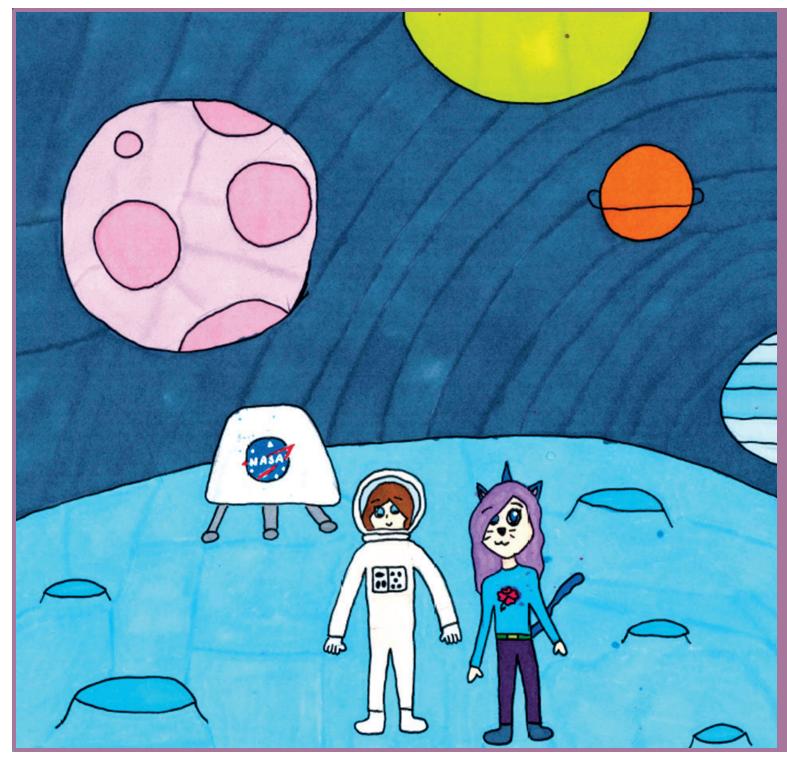
For nearly 20 years, astronauts have lived and worked in space on the International Space Station. They do all the same kinds of things you do here on Earth! They sleep and eat and take baths and work hard and exercise! A lot of their work is about studying how to survive in locations far from Earth, like on the Moon and Mars!

Hoi, 13 Hong Kong, China



Sketching Under the Stars Aisha, 11 West Java, Indonesia



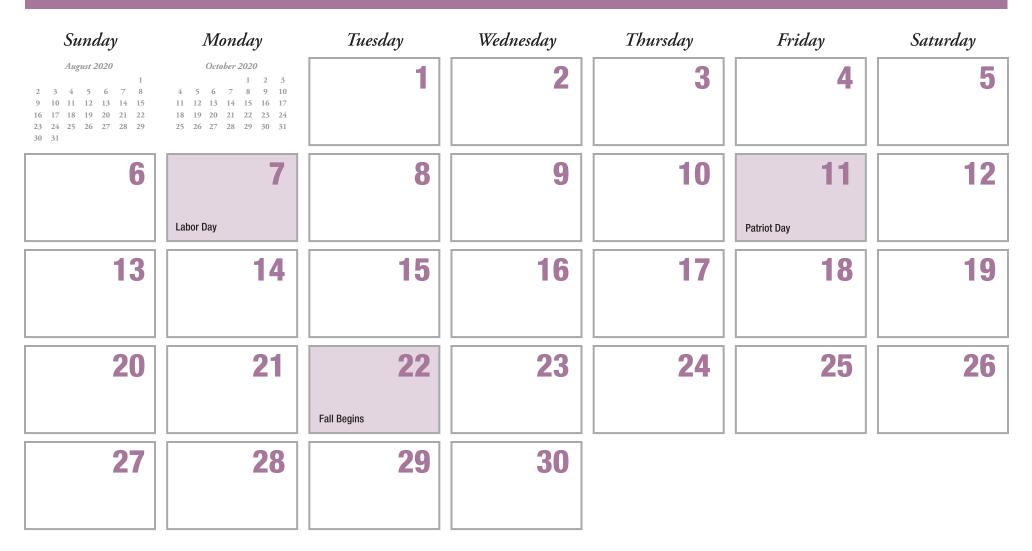


Exploring the Solar System

Every day, NASA explores deeper into our solar system—making new and exciting discoveries. From the two Voyager spacecraft that have taken us on a journey of our solar system for the past 40 years, to robotic explorers on Mars right now, we are learning about the many challenges that must be overcome for human space exploration.

Barbara, 11 Szczecin, Poland

Making New Friends

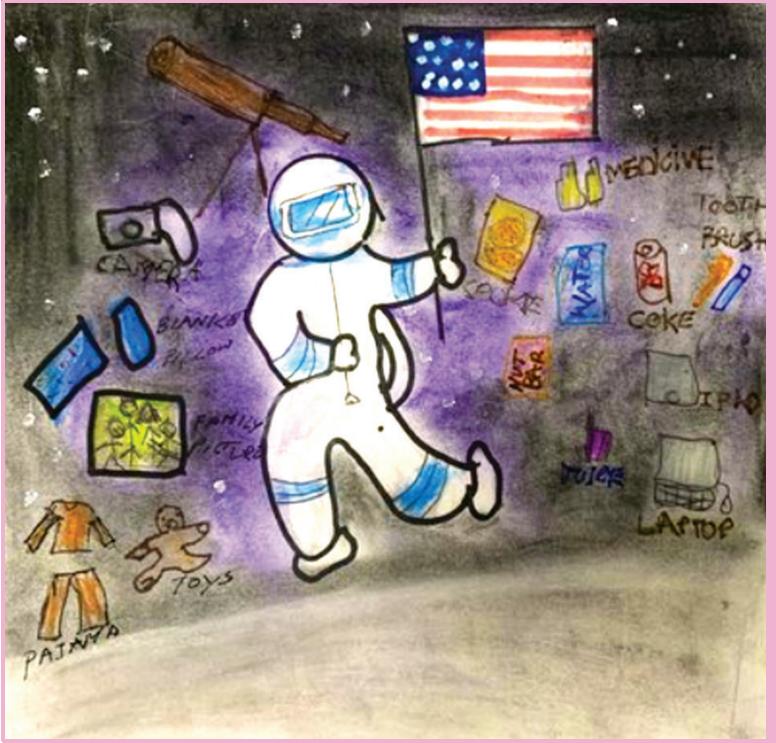




Exploring the Solar System

Our solar system is located in the vast Milky Way Galaxy. It consists of the Sun (our star) and everything that orbits around it, including the eight planets and their natural satellites (like our Moon), dwarf planets, asteroids and comets. More than 300 robotic spacecraft have explored destinations beyond Earth's orbit, including 24 astronauts who orbited the Moon, helping us learn how we can safely explore deep space and make exciting discoveries. Go here to find activities that you can do: <u>https://solarsystem.nasa.gov/kids/do-it-yourself</u>.

My Friend and I Pak, 4 Hong Kong, China September 2020



What would you take from Home?

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.

Saketh, 5 Frisco, TX

What I Will Take from Home to Space

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		September 2020 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	November 2020 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 Columbus Day	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31 Halloween



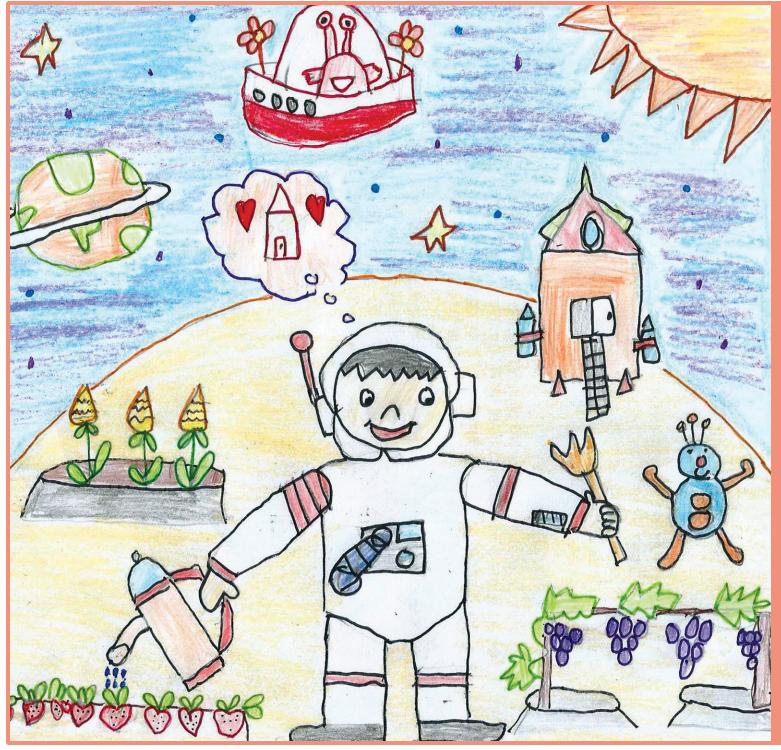
What would you take from Home?

The International Space Station is about 250 miles from Earth, but astronauts usually spend months at a time there. What would you take with you? What would you do to stay busy? The astronauts have special jobs to do while they are in space, but they also have some free time. Whatever the destination in space, you're going to need to plan carefully!

https://spaceplace.nasa.gov/review/classroom-activities/pdf/mars_packing.pdf

The Creator Adyaashree, 6 New Delhi, India





Space Food

There are no grocery stores in space. When new supplies are sent to the International Space Station, there's always some fresh food like fruits and vegetables, but almost everything is prepackaged so it will last a long time. The goal is for astronauts to eventually grow crops that can help supplement their nutrition. We've also discovered growing plants in space can make the astronauts happy since it reminds them of Earth.

Arjun, 8 Newcastle, United Kingdom

Space Food





Space Food

How would you feed a crew of four astronauts on a 75-million-mile trip in space? That's how far they travel during a six month stay on the station. There are no grocery stores, gardens, farms, fertile soil or a resupply vehicle! The goal is for astronauts to eventually grow crops that can help supplement their nutrition. Growing plants in space can make the astronauts happy, because it reminds them of Earth! https://www.nasa.gov/content/space-food-systems

https://www.youtube.com/user/ReeINASA/search?query=space+food https://www.youtube.com/watch?v=DWkowy/B1To

From Space Gardens to Dining Table Thanumi, 5 Sonthern, Sri Lanka

November 2020



Returning to Earth

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.

Deepshikha, 10 Noida, India

Welcome Back Mom





Returning to Earth

Did you know NASA is celebrating 20 years of human presence on the International Space Station? More than 220 people from 17 countries have visited the space station over the past twenty years. Learn about the discoveries aboard station that have improved life here on Earth at <u>https://www.nasa.gov/mission_pages/station/main/index.html</u>

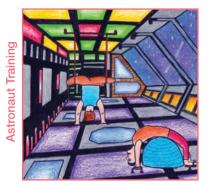
Returning to Earth Angelo, 10 Western Cape, South Africa December 2020

Runners Up



Rifa, 4

Coonoor, India



Sumedha, 12

Bangalore, India



Yashwanth, 11

Dindigul, India



Samriddhi, 11 Dehradun, India



Alondra, 8 Naranjito, Puerto Rico



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

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

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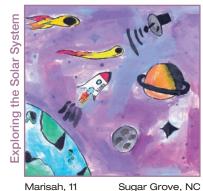
Lorena, 10 Oak Park, CA



Tamil Nadu, India



South Tyrol, Italy



Nora, 6

Grove City, OH



SP-2019-09-2403-KSC

www.nasa.gov

NASA's Commercial Crew Program is working with American companies to build new rockets and spacecraft that will launch



and Working DO

Dominik. 5

Rithvik, 10



Vibulan, 4

Dindigul, India



lvy, 10

Orlando, FL

