



COMMERCIAL CREW PROGRAM

2019

Children's Artwork

CALENDAR

Miss You My Dear
Deepshikha, 9
Uttar Pradesh,
India



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.



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.



Eric Boe
NASA Astronaut
Air Force Colonel (retired)

Piloted space shuttle Endeavour for STS-126 and Discovery on its final flight, STS-133.

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 human-rated 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

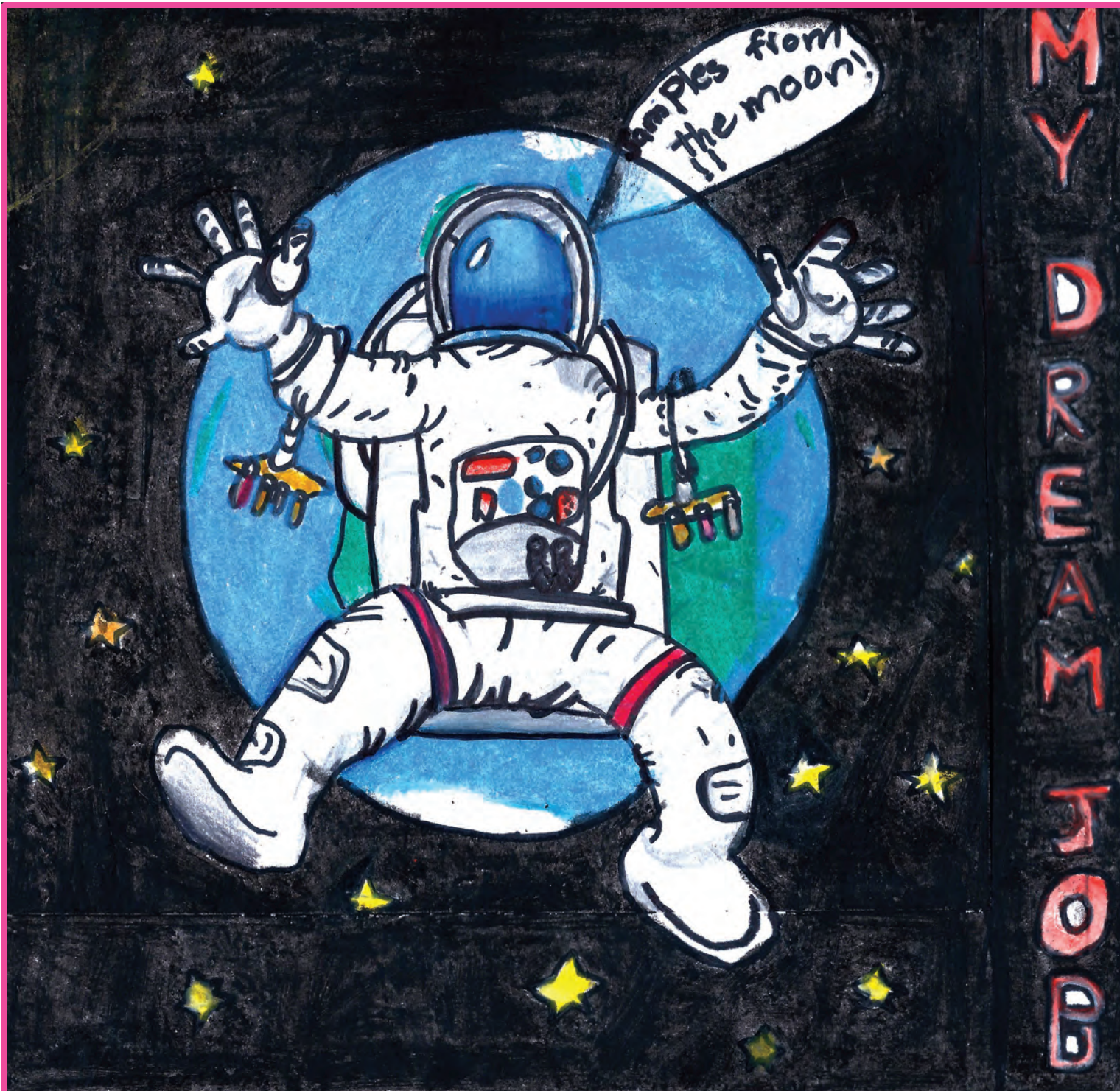
Spent 166 days on the International Space Station for Expeditions 37/38.



Victor Glover
NASA Astronaut
Navy Commander

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

COMMERCIAL
CREW



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.

Sharan, 9
San Diego, California

AstroHero

Sunday

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December 2018

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New Year's Day

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Martin Luther King Jr. Day

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31

Astronauts
Samuel, 5
Duarte, California



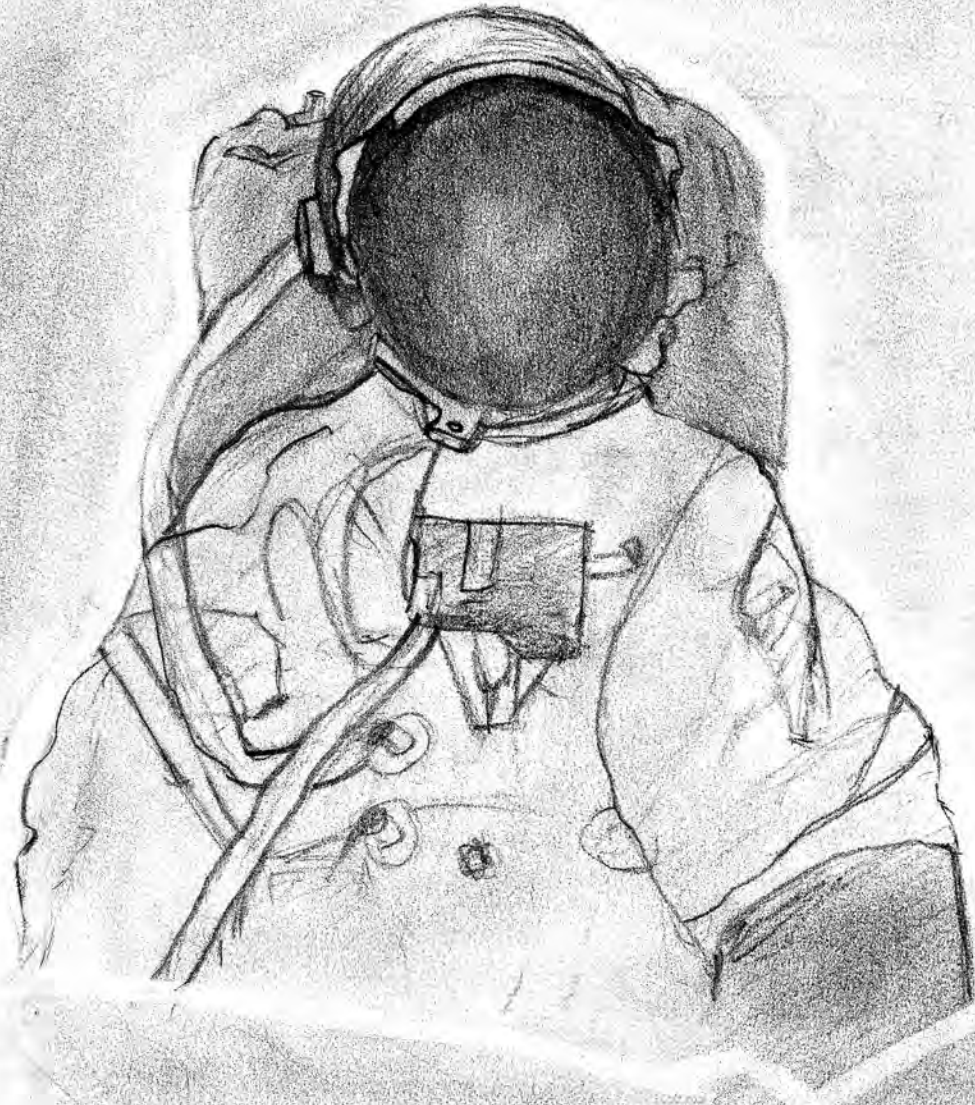
Astronauts
Did you know?

NASA recently announced to the world the first astronaut crews to fly aboard commercial spacecraft from Boeing and SpaceX. These astronauts will be the first to launch from America since 2011 when the last space shuttle flew. To meet the new crew, check out this YouTube clip at: <https://www.youtube.com/watch?v=RU6QkU8w60c>.

January
2019

BASIC TRAINING

PHYSICAL TRAINING



ADVANCED TRAINING

SURVIVAL TRAINING

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.

Hannah, 10
Northumberland,
United Kingdom

Training for Success

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January 2019

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March 2019

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10	11	12	13	14 Valentine's Day	15	16
17	18 Washington's Birthday	19	20	21	22	23
24	25	26	27	28		



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 <https://www.youtube.com/watch?v=gpouNl1sgqA>.

Space Explorer
Lila, 5
Apopka, Florida

February
2019



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.

Eileen, 8
Sammamish, Washington

Rainbow Camo Spacesuit

Sunday

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Saturday

February 2019

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10 Daylight Saving Time Begins	11	12	13	14	8	9
17 Saint Patrick's Day	18	19	20 Spring Begins	21	22	23
24	25	26	27	28	29	30
31						

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: <https://www.nasa.gov/feature/new-spacesuit-unveiled-for-starliner-astronauts>.

Bright in Space
Sahasra, 10
Santa Clara, California

March
2019



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.

Mridula, 8
Sunnyvale, California

Outer Space With Me!

<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
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28	29	30	<i>March 2019</i> 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	<i>May 2019</i> 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		



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: <https://www.youtube.com/watch?v=zrBTU389aqY&t=3s>

Space Adventure
 Breyanna, 10
 Hinesville, Georgia

April
 2019



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.

Uma, 4
Cary, North Carolina

Blast off to Space

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

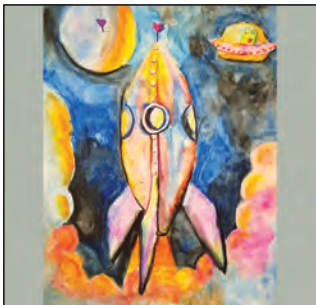
April 2019

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June 2019

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23 24 25 26 27 28 29
30

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12 Mother's Day	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27 Memorial Day	28	29	30	31	



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: www.nasa.gov/commercialcrew

Heart on the Moon
Bridget, 9
Orlando, Florida

May
2019



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.

Lillianne, 10
West Midlands,
United Kingdom

Countdown

Sunday

Monday

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May 2019

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July 2019

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Flag Day

Father's Day

Summer Begins



3-2-1 Blast Off! Launch Day in Florida

Before liftoff of a rocket launch, there is a countdown. Can you count backwards from 10 to 1?
<https://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/3-2-1.Liftoff.html>

Amazed Flamingos
 Sydney, 6
 Mercer Island, Washington

June
 2019



International Space Station

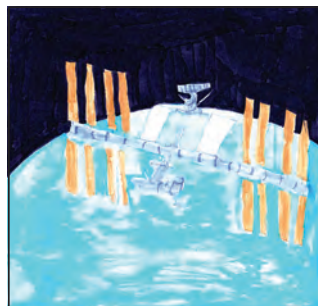
Look up! The International Space Station is orbiting about 250 miles above the surface of Earth, 24 hours a day, seven days a week, 365 days a year, at 17,500 miles every hour. On board, astronauts conduct very important experiments that help us here on Earth. They also are learning how to live for long 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.

Sahith, 10
Sunnyvale, California

Orbiting the Solar System

<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>																																																																											
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Space Station
Jed, 9
Cumbria,
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 <https://spotthestation.nasa.gov/>.
You can also see STEM demonstrations being done on the ISS at <https://www.nasa.gov/stemonstrations>.

July
2019



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!

Indrayudh, 10 and Srihan, 8
Maharashtra, India

Missing Earth From International Space Station

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July 2019

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Living and Working in Space

Living in space is not the same as living on Earth. What are the astronauts doing on the International Space Station? They work, eat, sleep and exercise to stay healthy, just like we do on Earth, but microgravity makes things a little more interesting. Check it out here!

<https://www.nasa.gov/audience/foreducators/stem-on-station/dayinthelife>

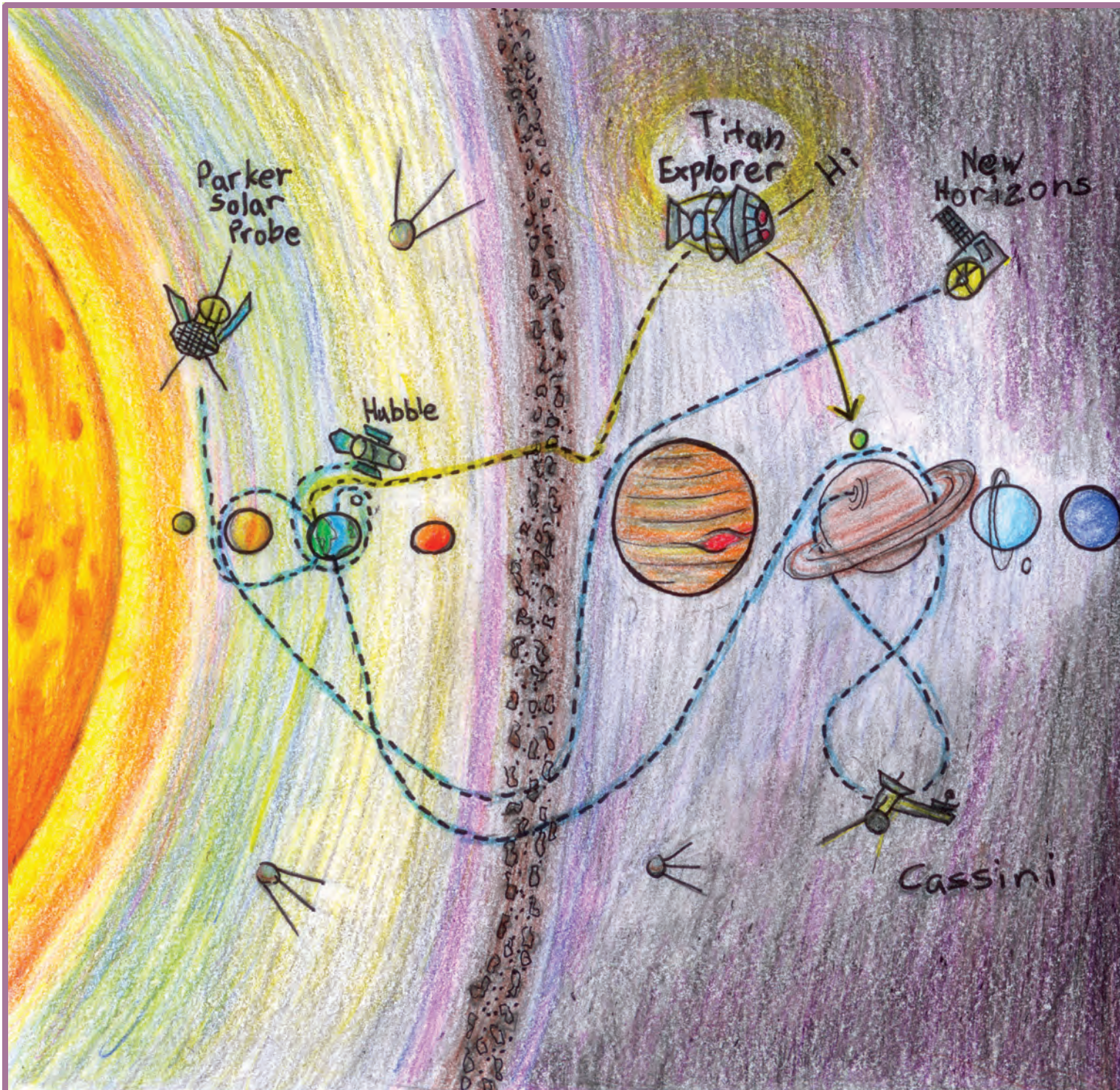
<https://www.nasa.gov/content/explore-the-diverse-ecosystem-of-experiments-being-researched-on-iss>

Working in Space

Yu Fan, 11

Walnut, California

August
2019



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.

Solar System Explorers Lead the Way

<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
1	2 Labor Day	3	4	5	6	7
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22	23 Fall Begins	24	25	26	27	28
29	30	<i>August 2019</i> 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		<i>October 2019</i> 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		



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: <https://solarsystem.nasa.gov/kids/do-it-yourself>.

A Ride in Space
 Prisha, 10
 Sunnyvale, California

September

2019

What Would You Take From Home?

Sunday

September 2019

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Monday

November 2019

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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

Home, Sweet Home
Tara, 12
Cupertino, California

October
2019



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.

Thenmukilan, 12
Tamil Nadu, India

Space Food

Sunday

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Saturday

October 2019

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December 2019

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23	24	25	26	27	28	29
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3 Daylight Saving Time Ends	4	5	6	7	1	2
10	11 Veterans Day	12	13	14	8	9
17	18	19	20	21	15	16
24	25	26	27	28 Thanksgiving Day	22	23
					29	30



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/ReelNASA/search?query=space+food>

<https://www.youtube.com/watch?v=DWkwoy1B1To>

My Space Garden

Isha, 7

Robbinsville, New Jersey

November
2019



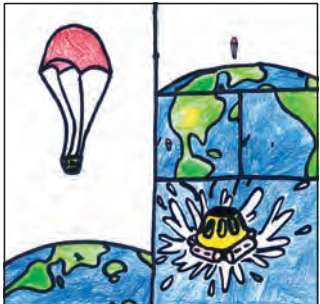
Returning to Earth

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.

Sydney, 6
Mercer Island, Washington

Coming Home from Starry Night

<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
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15	16	17	18	19	20	21 Winter Begins
22	23 Hanukkah Begins	24	25 Christmas Day	26	27	28
29	30	31 New Year's Eve	<i>November 2019</i> 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	<i>January 2020</i> 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		



Returning to Earth

Did you know NASA is celebrating its 60th Anniversary of becoming a government agency? NASA has led the peaceful exploration of space, learning and sharing discoveries that help all of the people on Earth! To find out how space exploration and research has effected your daily life, go to: <https://homeandcity.nasa.gov/>

Spacecraft Landing
 Kieran, 12
 Fort Mill, South Carolina

December
 2019

Commercial Crew Program 2019 Children's Artwork Calendar

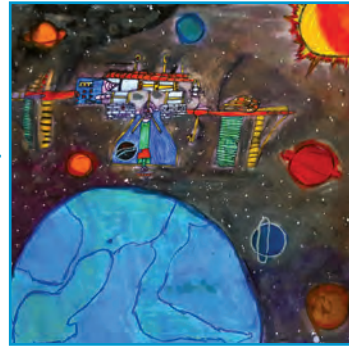
Astronauts



Spacecraft



International Space Station



What Would You Take from Home?



Astronaut Training



Rockets



Living and Working in Space



Space Food



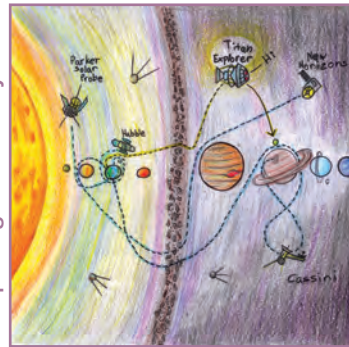
Spacesuits



Launch Day in Florida



Exploring the Solar System



Returning to Earth



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 the Moon and Mars.

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

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