

REMARKS OF DEPUTY ADMINISTRATOR GARVER
GIRL SCOUTS ROCK@NASA
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Good afternoon. Welcome to NASA Headquarters. It's good to see so many enthusiastic young women here at NASA.

I would like to congratulate the Girl Scouts for working to make a difference in the lives of girls for 100 years. I was a Girl Scout. And there is no question that being a scout shaped me and taught me things that continue to help me in my job today.

The organization strives to teach girls self-reliance and resourcefulness. It also encourages girls to seek fulfillment in the professional world and to become active citizens in their communities. There are no better skills to prepare you for the future.

You are also learning a sense of adventure and how to serve the world you live in.

In a 1929 Girl Scout Handbook, it says that the Girl Scouts were named after the explorers of the West: "The most resourceful and hardy and experienced of the number went ahead to find the best way for the others to follow. They were called the scouts of the expedition. They had to have courage and perseverance and endurance, an understanding of the ways of animals and plants, of the meaning of the winds and the water, and the lay of the land. Their success meant the success of those who followed-they made the best trails through the land... Adventure was theirs and the joy of accomplishment and the satisfaction of great service to others."

It would have been hard (for the Girls Scouts' founders, who wrote that handbook) to imagine that the winds and water of our frontier are now solar winds and water on Mars... but the scouts pioneering continues in the frontier of space, and we tap that same spirit of courage and perseverance and adventure to explore our universe.

I think we would all agree that brave and adventurous are words we would like to use to describe us. But perseverance – being determined – is just as important.

I was in sixth grade going through church confirmation, and our group came up with a word to describe each individual. Of course, I had been in for the group discussion of everybody else's word, and I knew they were all words like "good listener" or "beautiful."

Imagine this – sitting there on Confirmation Sunday, waiting to hear your minister call your name and say the one word that all your peers thought best described

you. What is the word your friends would have used to describe you in sixth grade?

And on Confirmation Sunday, sitting there as a sixth grade girl the word that my peers chose to identify me with was "determined." I almost cried onstage. That is not what a sixth grade girl really wants to be known as, when the girl next to me was "beautiful."

If I could talk to my sixth grade self, I'd tell her that determination is not a bad thing. In fact, being determined is what got me where I am today. No one else is going to drive you to the things you dream of being but you. You have to commit yourself to the road you want to be on.

While I'm giving advice, let me share another quality that I think pioneers need: assertiveness. We are often taught as girls to be nice and polite. You can be polite and assertive. Being assertive isn't about being combative. It's about speaking up. If you have an idea or see something that needs to be changed, speak up. Your voice is important.

Just as the Girl Scout founders could not have imagined our life today – we can't imagine all the opportunities that await you in your lives. In the space field, you will be able help us invent new vaccines through research on the space station, discover Earth-like planets rotating around distant stars, or help millions of people have access to a fresh water supply by studying our own planet from space. You could also have the chance to be a pioneer: travel to an asteroid, or walk on Mars.

While we don't know exactly what it looks like, NASA has a very bright future.

Our vision: To reach for new heights and reveal the unknown, so that what we do and learn will benefit all humankind.

In Earth science, we are studying our home planet from a range of perspectives with 16 spacecraft.

In space science, we have spacecraft operating around our Moon, Mercury, Mars, Saturn, and on the way to Pluto and Jupiter.

In aeronautics, we are helping to make commercial aviation safer, more fuel efficient, quieter, and more environmentally friendly.

In human spaceflight, we are operating the International Space Station and its vital research 24/7. Facilitating commercial access to low Earth orbit. And building the next rocket and crew vehicle that will take astronauts to an asteroid and Mars.

NASA is often associated with astronauts, and for good reason—they've done incredible things. One of NASA's finest astronauts...Pam Melroy, will be speaking to you this afternoon. And, earlier this year, we started the process for recruiting our next class of astronauts, who will fly to the International Space Station and visit farther destinations. We will continue to need astronauts, and I believe the path we are on will allow many more people to go to space and do exciting and meaningful work.

But we also need astrophysicists, engineers, mathematicians, astronomers, geologists, and biologists. Equally as important are our writers, educators, photographers, website designers, budget staff, as well as economists and political scientists... like me.

Right now, we have a lot of amazing women working at NASA:

- Maria Zuber is the principal investigator for the GRAIL mission
- Beth Robinson is our Chief Financial Officer, a position that requires confirmation by the Senate
- Fiona Harrison is the principal investigator for the NuSTAR mission
- Linda Cureton is our Chief Information Officer
- Jeri Buchholz heads up our Human Capital office
- And of course, we have launched 43 women into space since Sally Ride became America's first woman astronaut in 1983, including Shuttle commanders, pilots and International Space Station astronauts.

Progress – but...

The greatest percentage of our workforce are scientists and engineers (over 70%) Of those, only 22% are women. So why is that... ? The answer is likely complex.

March was Women's History month, and I was asked to speak on this topic several times and my thoughts that I have been sharing are along the lines of: women have a tendency to want to go into fields where they can see the direct benefit of their work and help make the world a better place. We have not "sold" the hard sciences and engineering in this way. I mean, we even call them the "hard sciences," as opposed to biology and medicine, which are somehow considered "soft."

We talk about rocket science and how we want to see smoke and fire, blow things up, blast big rockets into space. Yes, that can be "fun" – shuttle launches were amazing... But what we do here at NASA is so much more than that. We don't just do things to make a big fire. We go to space to expand the frontier of science and discover ways to make life better here on Earth.

While I have speculated that this is one of the underlying reasons fewer women enter STEM fields... I was thrilled to find out from my deputy last night that, appropriately, the Girl Scouts recently researched this topic and released a report that explored this issue as well.

Their data shows:

- Seventy-four percent of high school girls across the country are interested in the fields and subjects of STEM.
- Girls are interested in the process of learning, asking questions, and problem solving.
- Girls want to help people and make a difference in the world.
- Girls who are interested in STEM fields are actually interested in many subjects and career opportunities—STEM is just one area of interest among many.
- Perceived gender barriers are still high for girls and may help explain why STEM fields aren't their top career choices.
- Girls interested in STEM like to understand how things work (87% vs. 65% non-STEM girls), solve problems (85% vs. 70% non-STEM girls), do hands-on activities (83% vs. 56% non-STEM girls), and ask questions (80% vs. 54% non-STEM girls).

(Thus – my advice to be adventurous and assertive)!

The study concludes that: Two-thirds of STEM girls are interested in medicine/healthcare (careers such as a doctor, veterinarian, nurse, pharmacist, dentist) as a career.

Nearly all girls (98%) wish to be in a career that they love. More STEM girls have philanthropic motivations such as helping people (94% vs. 83% non-STEM) and making a difference in the world (92% vs. 82%), compared to non-STEM girls. Additionally, STEM girls are motivated by being in a career that requires them to think (87% STEM vs. 75% non-STEM) and a career that changes the way people do things (77% STEM vs. 66% non-STEM).

I'd love to hear from you in the Q&A what fields and careers you are going into and why. But to conclude, I wanted to share a note I got a few hours ago from my mom. She is 81 and was my and my sister's girl scout leader for at least 5 years. I sent her an e-mail last night letting her know that I would be speaking to Girl Scouts today in honor of their 100th anniversary and to ask her if she had any memories I could share. I got the following note from her – which will likely be most appreciated by the scout leaders among you:

- Dear Lori, Thanks for asking me about my memories of you as a Girl Scout – the sash that you wore over your shoulder that we sewed all the badges on is full of badges and is still hanging in your room here in

Michigan. I remember you being enthused about earning them, and doing all the requirements specified. (Unlike Renee Cisco, who wanted the badge, didn't do the work, & Irma always gave her the badge anyway). You always liked camping the most and I took the our troop to Wacusta, near Grand Ledge, along the river. We cooked over a fire and slept in tents. When it rained, you never seemed to mind a bit. You went to lots of other camps, with more scouts, up north too.

Leading was a good experience for me, especially with Kay--when they moved, Irma not so much! I liked getting to know other girls that weren't your friends, some of them who had fewer opportunities than you did. I wish I could remember their names so we could look them up on Facebook and see what they are doing. I think about them often and hope being a Girl Scout gave them some opportunities they would not have had otherwise. The leaders were well organized, and I was in charge of cookie sales, which was a very big job. I met other interesting women in the community, some of whom I still see occasionally.

About 5 years ago, driving back from Florida, we stopped in Savannah to go through the childhood home of Juliette Lowe, founder of the Girl Scouts. I think she would be proud that what she started helped teach so many girls to be confident and fulfill their dreams.

I'm sure your speech will be fun to hear for the scouts of today. Could you send us a copy? Can't wait to talk to you this weekend! Love, Mom

So a special shout out to the scout leaders among you – I may not have fully appreciated my mom being a leader when I was your age – but just getting that e-mail tonight really made me recognize (and as a mom now) what a gift that was that she gave the troop.

It was my honor to be at the White House last week when President Obama presented the Presidential medals of Freedom. The Medal of Freedom is the nation's highest civilian honor, presented to individuals who have made especially meritorious contributions to the security or national interests of the United States, to world peace, or to cultural or other significant public or private endeavors. John Glenn was receiving the medal along with Madeline Albright, Bob Dylan and founder of the Girl Scouts, Juliette Lowe.

So it is an honor to talk with you – today's scouts. I hope that some of you will choose to work for NASA in the future – but I mostly hope that you will all build on your scouting years to lead fulfilling and productive lives

Best of success in whatever path you choose. I'll be happy to answer your questions. Enjoy the rest of your weekend here in DC!