

Interview



An Out of This World Quilter Karen Nyberg

A NASA astronaut and avid sewer talks about quilting in space and a globe-spanning quilt project.

How did you become interested in sewing?

My mother sewed a lot when I was a kid. She made a lot of things for us: clothes, snow mobile suits – she was just always sewing. She also taught me to sew. I was probably five or six years old when I first started showing interest. By the time I was eight, I had made a shirt. I sewed a lot, and during summer vacations, a lot of my time was spent sewing things.

So the very first thing you sewed was a shirt?

I think I made things before that, but that was the first thing I could actually use. I look at it now and I'm actually surprised at the quality of it! It was from a pattern, and I think I used a plaid flannel or something. I actually wore it! Before that I had tinkered around with things like doll blankets and various random things, but that was the first thing I was actually able to use and wear.

What other kinds of decorative arts do you enjoy?

I've always enjoyed drawing and painting. Since I was little, I'd very seldom just sit at the television. I usually had a sketch pad, and doodled and drew. I used to draw people a lot. I started with pencil and then got into charcoal. Then I took a couple of painting classes when I was in college, which was a little more difficult. I found that color was a lot harder than working in black-and-white. I've always been interested in that. I also enjoy other crafts too.



Karen on the International Space Station (ISS) with her quilt square.

How did you get into quilting?

I remember making a quilt when I was in high school. It was just randomly sewn together blocks, nothing fancy, but it was an entire full-size quilt. It wasn't until graduate school that I made my first quilt where I actually looked into the process of quilting and started buying supplies. I really don't remember what turned me on to it or what made me decide to do it, though.

Are you in a quilting community?

I'm not currently part of a guild or quilt-making society. I've thought about it, but with my schedule I just haven't had time.

Have you ever quilted on clothing?

I've done some appliqué on various things like bibs, and gifts for people, but I haven't done quilting on clothing. I'm trying to think of all the projects, but I've made so many things as presents for people that I can't remember everything I've done.

Has your son Jack shown any interest in the hobby?

A couple of times he's mentioned that he wanted to use my sewing machine, but he's only four years old, so we'll see. I told him that he needs to be bigger.

He at least has to reach the peddle.

Exactly! I'm also worried about him getting his little finger under the needle. I've done that a couple of times.

Some antique sewing machines are hand operated.

I actually have one of those. It was my grandmother's and right now it's up in my sewing room. It's in one of those nice old cabinets they came in.

It might be a good machine for him.

I haven't tried getting into it and making it work, but she used it until she died at 95. I should do that.

What gave you the idea of trying to sew in space, and how did you choose a quilt piece as a test project?

Well, we live up there, and when you're up there for five or six months, you have weekends where you have a lot of time – not as much time as I thought there'd be – but you have free time. A lot of people bring books to read, or various other things. Since one of my favorite hobbies on earth is sewing, I decided to bring up various fabrics and give it a shot.

I had been quilting a lot lately, so I decided to buy some quilt fabric and take it along. That kind of stuff is normally supposed to be packed a little bit before launch, so you have to plan ahead. But I didn't plan ahead, I just bought the fabric, and put it in the vehicle, and launched it. I didn't know what I was going to do with it until I got there.

Did you tell them that you were taking this stuff into space?

No, I didn't. I just went ahead and bought it. I should have!



Karen used a 3x3 inch square of cardboard to measure the squares and estimated seam allowances.

The quilt pattern you did was really interesting. Did it evolve as you started working on it?

It kind of evolved with learning how to cut things out. I realized that I couldn't do anything that was too exact, it was just too difficult. So it came as I was doing it. I started sewing pieces together, and then I cut, I think it was a 3x3 block that I did. I sewed the pieces together, and kind of designed it as I went. Actually, that's how I do it here on earth, too. I often times design it as I go. When I buy fabric, I have no idea what I'm going to do.

What are some of the challenges that you encountered trying to sew in space?

The biggest challenge was cutting out the fabric. You can just imagine if you hold onto a piece of fabric and hang it in front of you and try to cut straight lines, that's about what it's like.

Generally, we lay it on a table or on the floor, and it lays flat when you cut it. Especially in quilting, a lot of times I use a rotary cutter along these perfect, exact, measured lines. In space it was really hard to do that. I ended up trying to stretch it with one hand as I cut it with the other. I also found myself taping fabric to surfaces to get it to lay out. That was the biggest challenge.

To make sure the blocks were the right size, I measured a 3x3 square on a piece of cardboard, and I would actually trace this onto my fabric and cut what seemed like a 1/4" seam allowance around that.

There was also the hand sewing, primarily because I don't hand-stitch that much. I think that if I was more comfortable with hand-stitching and done it more, it wouldn't have been quite so bad.

The fabric just doesn't lay nice in zero-G, so with both the cutting and the sewing, that's the biggest problem.

You mentioned wishing you had brought different material to work with. Are there restrictions on the kinds of materials that can be used aboard the ISS?

I think that I would have chosen a fabric that doesn't fray, perhaps maybe a felt or something like that in hindsight, so seam allowances don't matter as much.

We do have a lot of safety measures for flammable materials. I had to keep this fabric stored. They don't like things just to be out randomly. If something caught fire, you'd want to minimize the spreading of the fire. But I think most fabrics would probably be fine to use.

Ziplock bags also come in very handy. I had to keep all my extra fabric, and thread and scissors, and all the supplies I'm not using in a bag so they just don't float away.

What else do you wish that you had brought to make the job easier?

If I had more time, I think I could have figured out some sort of apparatus to make the job easier. I'm convinced that eventually, if people tried long enough, there would be better ways to lay the fabric or adhere it while you cut it out.

You're a mechanical engineer. It would be an interesting problem to solve.

Yeah, I know! If I only had more time. I really need to go back up there for another six months.

You didn't bring any pins with you. Why was that?

Pins aren't a good thing to have free-floating on a space station. Frankly, though, it just didn't cross my mind to bring along pins as I was putting things together. I tried taping the edges to sew, and I also used some of the five needles that I had as pins.

Do you have any words of wisdom for future astronauts who want to try this?



Karen kept her sewing supplies in Ziplock bags.

Gosh, I don't know if there would even be any in the current group. I think planning ahead would be good. What I should have done is to cut everything out and just sent up the pieces to put together. That would have made the job a lot easier. But like I said,



A velcro pad helped keep Karen's thread, needles, scissors, and straight-edge from floating away. The pad can also be anchored to velcro attachments on the ISS walls.

since I didn't plan ahead, I didn't do that. That probably would be the biggest thing.

You mentioned how hard hand-sewing is for you and that you usually use a sewing machine. Is there any prospect for a sewing machine in space some time?

I would say that if we get to the point where we are traveling long distances and spending long periods of time off the planet, it may be something we want to look into.

How would it be different to it's earth version?

There would have to be some way to hold the fabric. Something would have to be devised, because a sewing machine uses gravity; the fabric just lays there and you feed it through. Something would have to be devised to get it to feed through easily without gravity.

Where did you get the idea for a community quilt project? Was it while you were aboard the ISS?

It kind of evolved. Before I launched, I thought about it, but nothing happened, it just didn't come together. And then the International Quilt Festival came along, and our NASA folks had reached out to them and told them what I planned on doing, and did an interview with me.

Then somebody in the organization came up with the idea to organize this. So, it kind of came from them. Like I said, I had thought about it and wanted to do it, but just didn't know how to go about it. They started that, and got it all organized. It should be pretty neat to see everything.

You've invited people to send in star-themed quilt blocks. How will they all be assembled?

They're having a kind of quilting bee in La Grange Texas on the weekend of August 22nd 2014 where they're inviting folks to come and spend a weekend, like a quilters' retreat, to sew them together.

Any idea about the finished size?

It could be huge, if we get a lot of people sending in squares.

What else will NASA be showing at the Festival?

I'm not sure exactly what the plan is. The Festival is on the last weekend of October. Last year, NASA had a booth set up at the Festival. I think they had my video playing, and an exhibit of things like sewn samples from spacesuits and parachutes, a cargo transfer bag and other types of soft goods.

Once the quilt is finished, what is your next sewing project?

Since I've been back from space, I've already done quite a bit. I've redecorated my son's bedroom and made a quilt, curtains, pillows, and all sorts of things with a dinosaur theme. I also did a nursery for a good friend of mine where I sewed the sheet, bedskirt, and curtains. So I've already done a couple of projects since I've been back. For my next project, I think I'm going to work on a Christmas tree skirt for our Christmas tree.



Karen photographed a "dinosaur baby" she made, floating in an observation window of the ISS.

Are you making a Halloween costume for Jack this year?

Potentially. He wants to be a dinosaur. He has the head so he might need a dinosaur body. We'll see. He might change his mind in that amount of time, so I'm going to give it some time before I start working on it.

Thanks for talking about your hobby and your experiment with sewing in space.

Thank you! I've enjoyed it.

Karen Nyberg is a NASA astronaut who recently spent six months onboard the International Space Station (ISS). She is married to astronaut Douglas Hurley. They have a son. Her recreational interests include running, sewing, drawing and painting, backpacking, piano, and spending time with her family. Nyberg graduated summa cum laude with a mechanical engineering degree from the University of North Dakota in 1994, and earned her PhD at the University of Texas at Austin in 1998.

Watch Karen's YouTube [video](#) as she talks about her experience sewing in space.

Three SiW Members Send Star-Theme Quilt Squares

Three Silicon Web Costumers' Guild members have submitted quilt squares to include with Karen's Nyberg's in the star-themed quilt to be shown in October 2014 at the 40th International Quilt Festival.



Kathe Gust



Philip Gust



Elaine Sims