



LEVELING THE SCIENTIFIC PLAYING FIELD: MAKING STEM ACCESSIBLE

Emma Twedt, STEM Ambassador

OPENING DISCUSSION

At your tables, go around in a circle and share the following pieces of information about yourself (if you are comfortable doing so):

- Where did you grow up?
- How large was your school?
- What was the most advanced STEM course you took?
- What was the most advanced STEM course available at your school?
- What STEM-related extracurriculars were available to you?

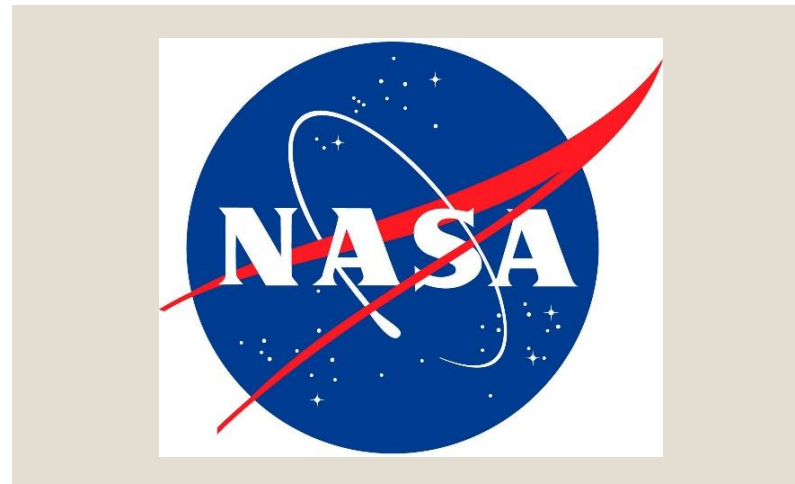
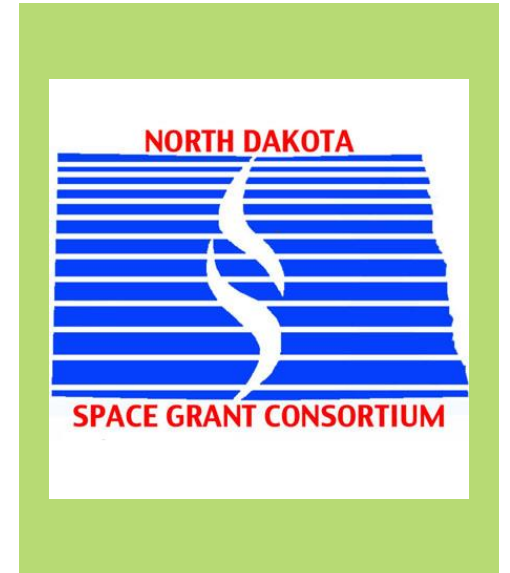


- Raised in Kindred, ND
 - Graduated with a class of 60
 - Took every advanced STEM course – Anat/Phys, Physics, and College Algebra
 - No extracurriculars available, but did a few day-long events and participated in ND Governor’s School for science
- Senior in Biological Sciences Education at NDSU
- Student teaching at Park Christian School in Moorhead
- Second-year STEM Ambassador

MY BACKGROUND

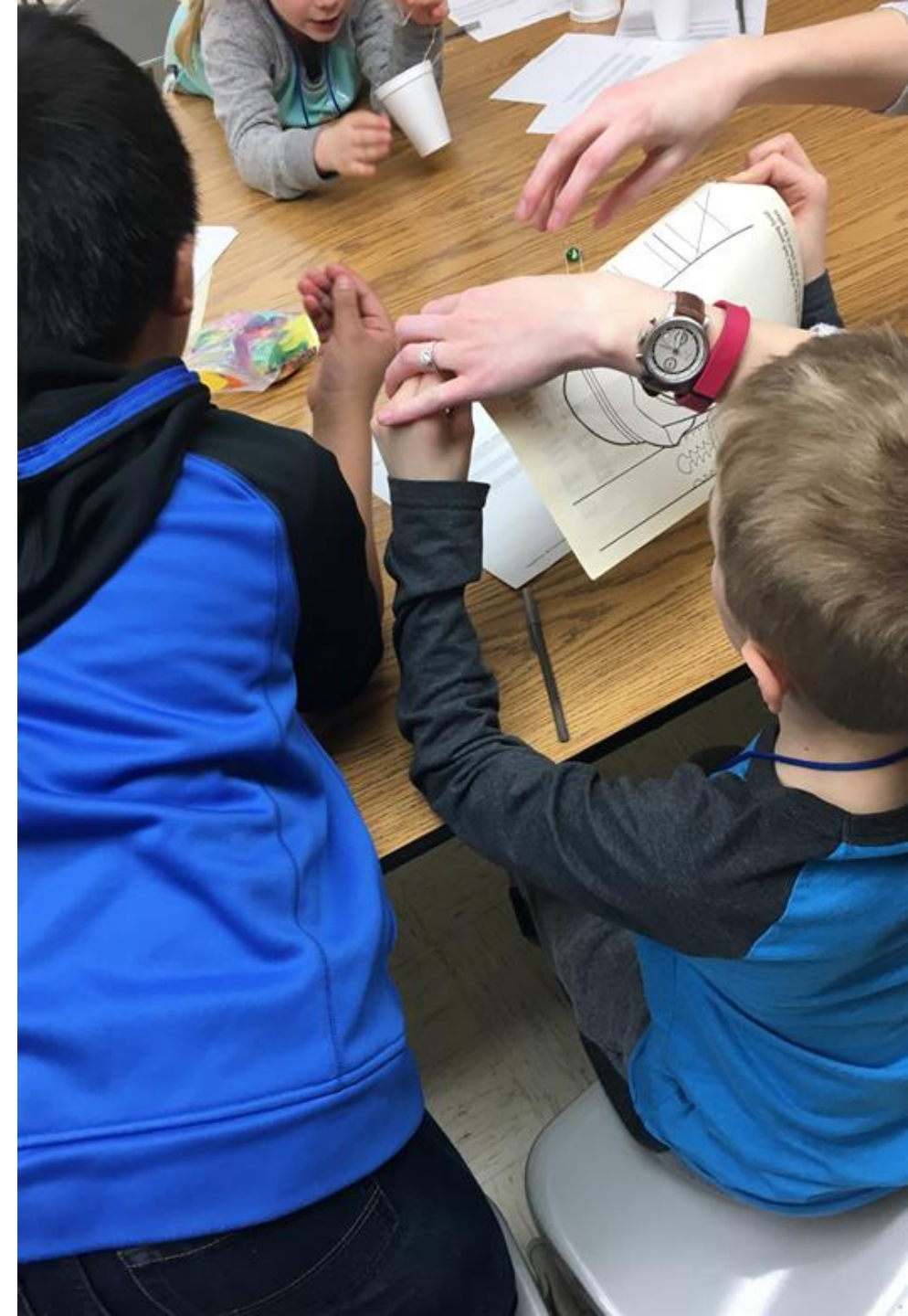
LIFE AS A STEM AMBASSADOR

- Long-term commitment
 - 28th and 12th After School Program
- Short-term commitments
 - Litchville, ND visits
 - Destination Imagination



28TH AND 12TH AFTER SCHOOL PROGRAM

- Free program for Lincoln Elementary School students
 - 40% non-white population, 45% free/reduced lunch
- My role: provide a weekly science time
- Limitations
 - Around 1/2 of program's students from single-parent homes with limited access to extra-curriculars
- Equalizers
 - Provide students with more direct assistance
 - Deepen content knowledge in a less school-like environment



LITCHVILLE, ND

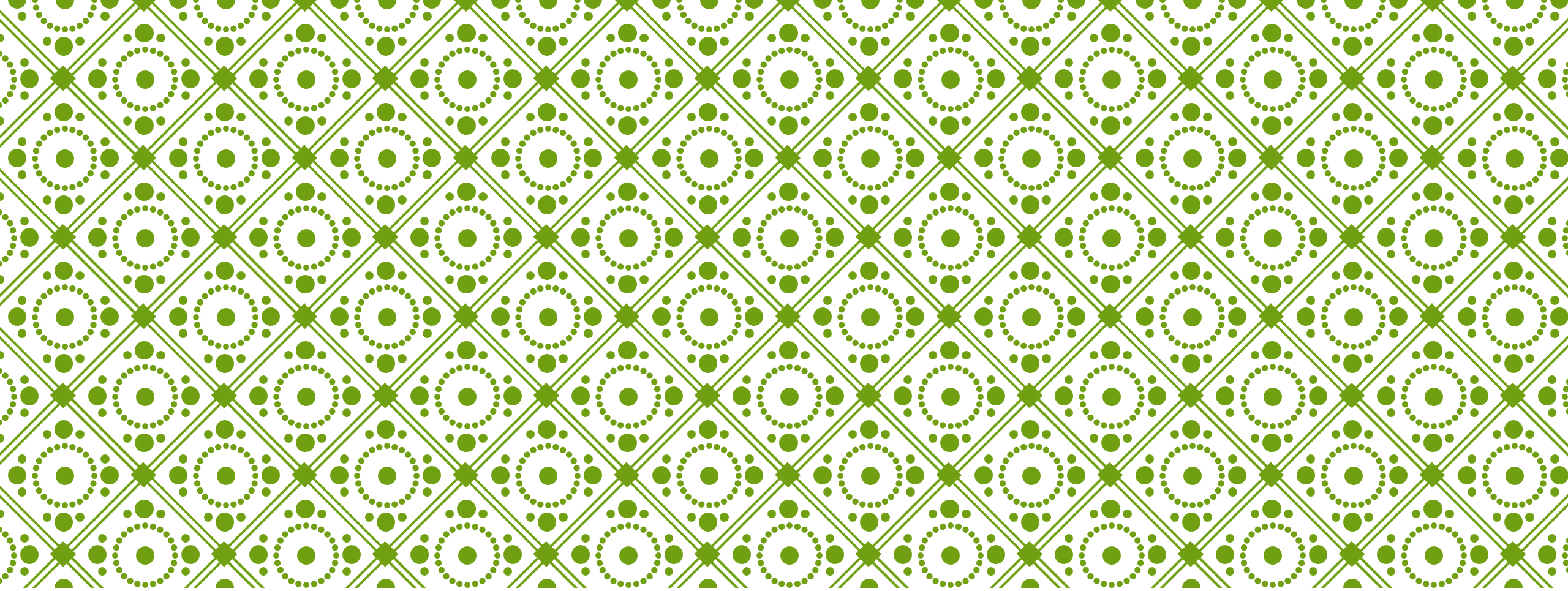
- Rural school
 - 115 students K-12
 - 35 minutes from Valley City
- My role: come in as a guest to facilitate activities and speak about NASA in general
- Limitations
 - Limited students = limited ability to participate in certain activities
 - Non-computer resources not easily accessible
- Equalizers
 - Give students access to special STEM activities
 - Make them aware of available opportunities



A light-colored map of North Dakota showing county boundaries and names. The map is overlaid with a grid. The text is centered over the map.

WHY IS STEM OUTREACH NEEDED IN NORTH DAKOTA?

- Resource availability
 - Brings activities to rural students
 - Helps low-income students have necessary tools for success
- Our state is a state of contrasts, but also one of opportunity!
- Provides opportunities to students who might not otherwise be aware of them
- Sets students up to be competitive in an increasingly interconnected economy



QUESTIONS?



SOURCES

<https://www.fargo.k12.nd.us/Page/1364>

<http://www.litchville-marion.k12.nd.us/>

Logo images courtesy of North Dakota Space Grant Consortium

All photographs my own

15 MINUTES ON THURSDAY, 40 MINUTES ON FRIDAY SO FAR