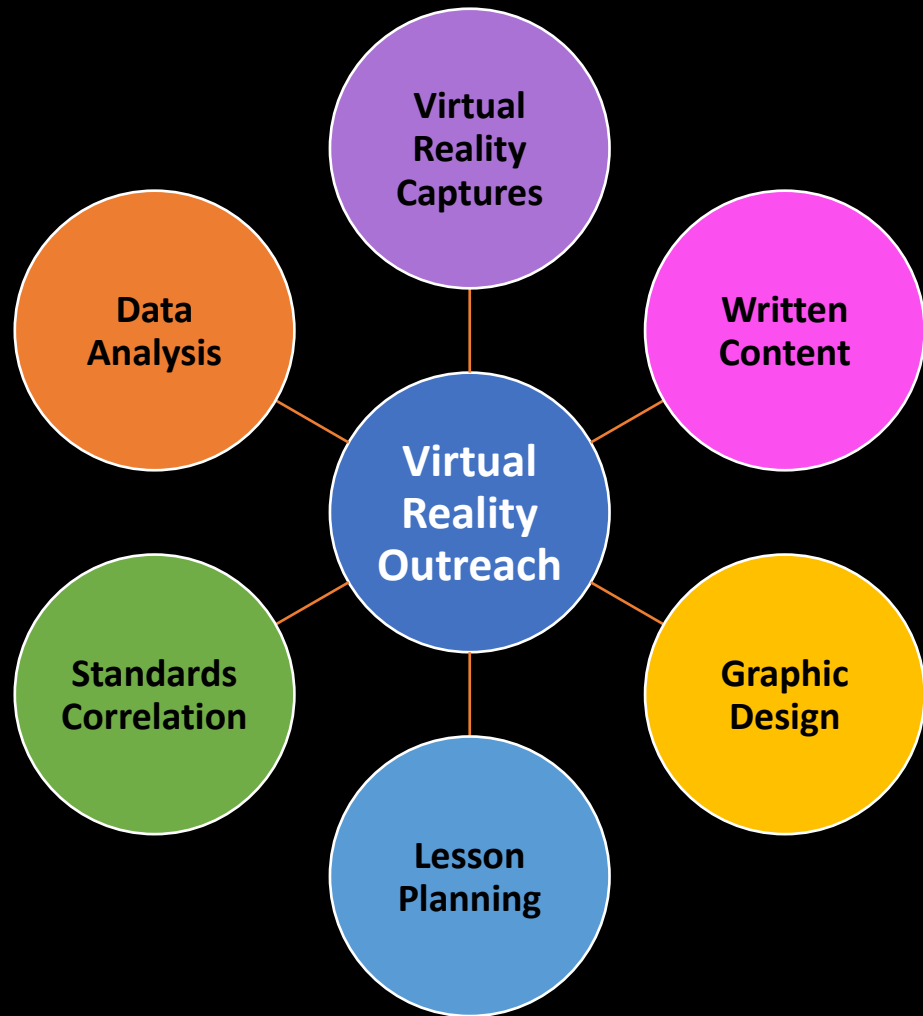


Escape from Astronaut Training

Creating a Cross-Curricular Virtual Reality
Escape Room for Grades 6-8

Michaela Neal, Project Lead/Developer
NDSGC STEM Ambassador

Escape From Astronaut Training



- Virtual Reality Escape Room!
 - Gamified Learning (Middle School)
- Team effort among STEM Ambassadors

Escape From Astronaut Training

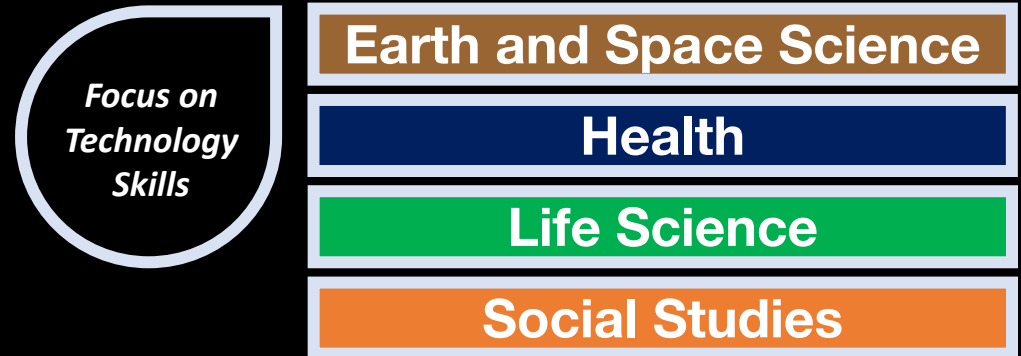
- Virtual Reality Escape Room!

- Gamified Learning
- Cross-Curricular
- Interactive Website

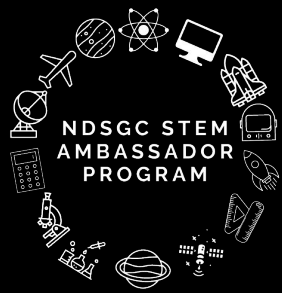
- Training Challenges

- Virtual Reality Scavenger Hunt

- Based on the *Inflatable Lunar Martian Analog Habitat @ UND*



Project Goals



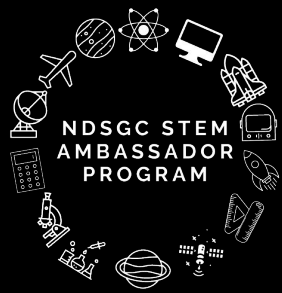
- Create a permanent, virtual exhibit
 - Reach the **whole** state
 - Interactive format to **engage** STEM learners
 - Incorporate place-based learning
- Amplify NDSGC's Outreach
 - Virtual Reality product with **purposeful** content
 - North Dakota connection
- Design cross-curricular lesson plans
 - **Interdisciplinary**

Challenges





- How can NDSGC's in-person exhibits be incorporated?
- How can we meet ND content standards?
 - Emphasizing ND connections
- How can we make online content **interactive**?
 - Can it feel like being there?
- How can we measure outcomes?
 - Interactive assessments?
 - Measuring reach?

Lessons



- Join Professional Development Communities!
 - ex. **Infiniscope Summer Workshop** on Virtual Tours!
- Define the scope up-front
 - Top Priority: Standards Alignment
- Future STEM Ambassadors
 - Find ways to keep blending in-person and online
 - Details take time
 - Clearly define a variety of virtual reality tasks

 = remote or campus

 = campus

Breaking Down Virtual Tasks:



Developer

- Creates content for online spaces and interactives.
- Designs worksheets and educator guides.



Curator

- Add info tags to virtual spaces.
- Design real-life experiences to translate into virtual spaces.



Tour Guide

- Records 3D, 360° tours using Matterport software.
- Work with media tools to create and embed videos and audio into tour.



Groundskeeper

- Tidies up virtual spaces by adding blur effects.
- Beta tests web pages.

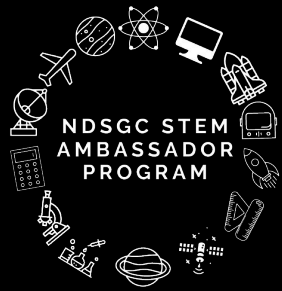


STEM Ambassador Experience



- Awesome student job
 - Creative outlet!
- Career Development:
 - Recognize importance for visualization in STEM
 - New outreach mode
- Future Goals
 - Accessibility
 - More sophisticated VR applications
 - VR museum?
 - Scientific animation?

Collaboration



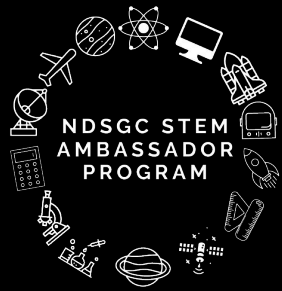
- North Dakota's Gateway to Science
 - Museum in Bismarck, ND
 - Share ND-relevant virtual content with audiences
 - Distribute *Escape from Astronaut Training* to ND schools
- Infiniscope
 - Escape Room geology module published on [Educator-Created VT site](#)*

*Compatible with Microsoft Edge, Firefox

TRAILER



Credits



• North Dakota Space Grant Consortium STEM Ambassadors

- [Michaela Neal](mailto:michaela.neal@und.edu) (Project Lead/Developer – michaela.neal@und.edu)
- Amanda Higginbotham (Graphic Design: Escape Room Certificate)
- Isabelle Adams (Graphic Design: Clue Cards; Web Editing)
- Jacob Hubbard (Web Support: Beta Testing)
- Jacquelyn Emery (VR Captures: 3D Photographer)
- Sydney Menne (Content Creator: Career Cards; Web Support: Beta Testing; Web Editing)

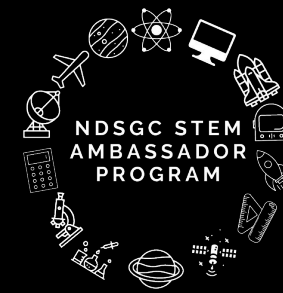
• Special Thanks

- NDSGC Core Team (Caitlin, Marissa, Tori)
- UND Space Studies Department
 - Inflatable Lunar Martian Analog Habitat (ILMAH)
 - Dr. Pablo de León (ILMAH Photos)
- Infiniscope
 - *Tour It* Platform



Scan for Full Credits

Resources



- Access the Beta Version of the Escape Room [Here!](#)
- [North Dakota Public Instruction Content Standards](#)
- [North Dakota Space Grant Consortium](#)
- [Gateway to Science](#) (NDSGC Affiliate)
- [Infiniscope](#) (Multimedia STEM Lessons/Creation Tools/Professional Development)
- Topic: [Inflatable Lunar Martian Analog Habitat \(UND Website\)](#)