North Dakota's Gateway to Science

General Visitor Resources
Grade K-12

North Dakota's
Gateway to
Science

Welcome to North Dakota's Gateway to Science!

Please start by reviewing the "Plan Your Visit" and "Group and Field Trip Expectations" found under the "Visit" tab at the top of our website - www.gatewaytoscience.org

What to expect

Designed for hands-on exploration, our exhibits engage curious minds of all ages, encouraging creativity, problem-solving, and a deeper understanding of the world around us. From physics and engineering challenges to earth sciences and robotics, every exhibit is an opportunity to spark curiosity and inspire lifelong learning. Whether you're building structures, experimenting with forces, or exploring the wonders of water and energy, there's always something new to discover.

Before your visit

The ideas below will help you plan an amazing experience for all visitors before arriving.

- Check the weather - whether taking in the beautiful sites on the deck or experiencing our Outdoor Explorium, it is important to have students dress for the weather conditions.
- Review the gallery map - make sure all teachers/chaperones know where the bathrooms, exits, and exhibit spaces are located.
- Make copies - have copies of the Student Journal or other documents ready for each student (up to 30 clip boards and pencils are available upon request).
- Review expectations - go over ND's Gateway to Science expectations with all students and adults.
- Pre-teach - pre-teaching topics such as the engineering design process, the scientific method, or grade specific standards matching gallery sections can help enhance student engagement and experience.

Student Journal

The Student Journal can be used by any visitor to reflect and remember their visit. Print the journal and review it with students before your trip.

Exploration Ideas

Discuss with students what a ND's Gateway to Science explorer is and does.

- Use words or pictures to capture your ideas in the journal.
- Find exhibits and areas that interest you and spend time digging in and learning.
- Try out all the exhibits, even if they seem too hard or you don't understand them.
- Talk to the Gallery Guides if you have questions or need explanations.
- Connect what you learn to learning that has happened in your classroom.
- Read the signs to get a better understanding of the science behind the exhibits.
- Think about and share what careers could be connected to the exhibits.
- Share what you learn during your trip and share with others after you leave.

After your visit

Be sure to have students share in class and at home what they learned and experienced on the trip.

You can also use the completed journals in the classroom to present about the trip to other classes, use information gained to do a project and create a new exhibit, and to write a reflection about their experiences.

North Dakota's Gateway to Science Activity Journal

Student Name _____

School _____

North Dakota's Gateway to Science

If I could make a new exhibit, it would be (draw or write):

North Dakota's Gateway to Science

Something I did that was hard:

Something I did with help/a partner:

North Dakota's Gateway to Science

One thing I learned:

One thing I learned:

North Dakota's Gateway to Science

Student Scavenger Hunts

The Student Scavenger Hunts help visitors engage in the entire gallery, giving the experience a gamafied feeling. The scavenger hunts are seperated by grade levels, but may be used across all ages with adult assistance.

Scavenger Hunt Use

Share the Student Scavenger Hunt of your choice with students before they arrive.

- Scavenger hunts can be completed individually or in small groups.
- Students should be reminded of the gallery expectations, especially to walk in the gallery space for safety.
- Be sure to discuss what a scavenger hunt is and how to complete it.
- Talk to the Gallery Guides if you have questions or need explanations.
- Have students connect what they see and learn to learning that has happened in your classroom.
- Encourage independant completion or team collaboration.
- Some scavenger hunts will require reading signs or problem solving, so be sure before your trip that the hunt is appropriate for your students

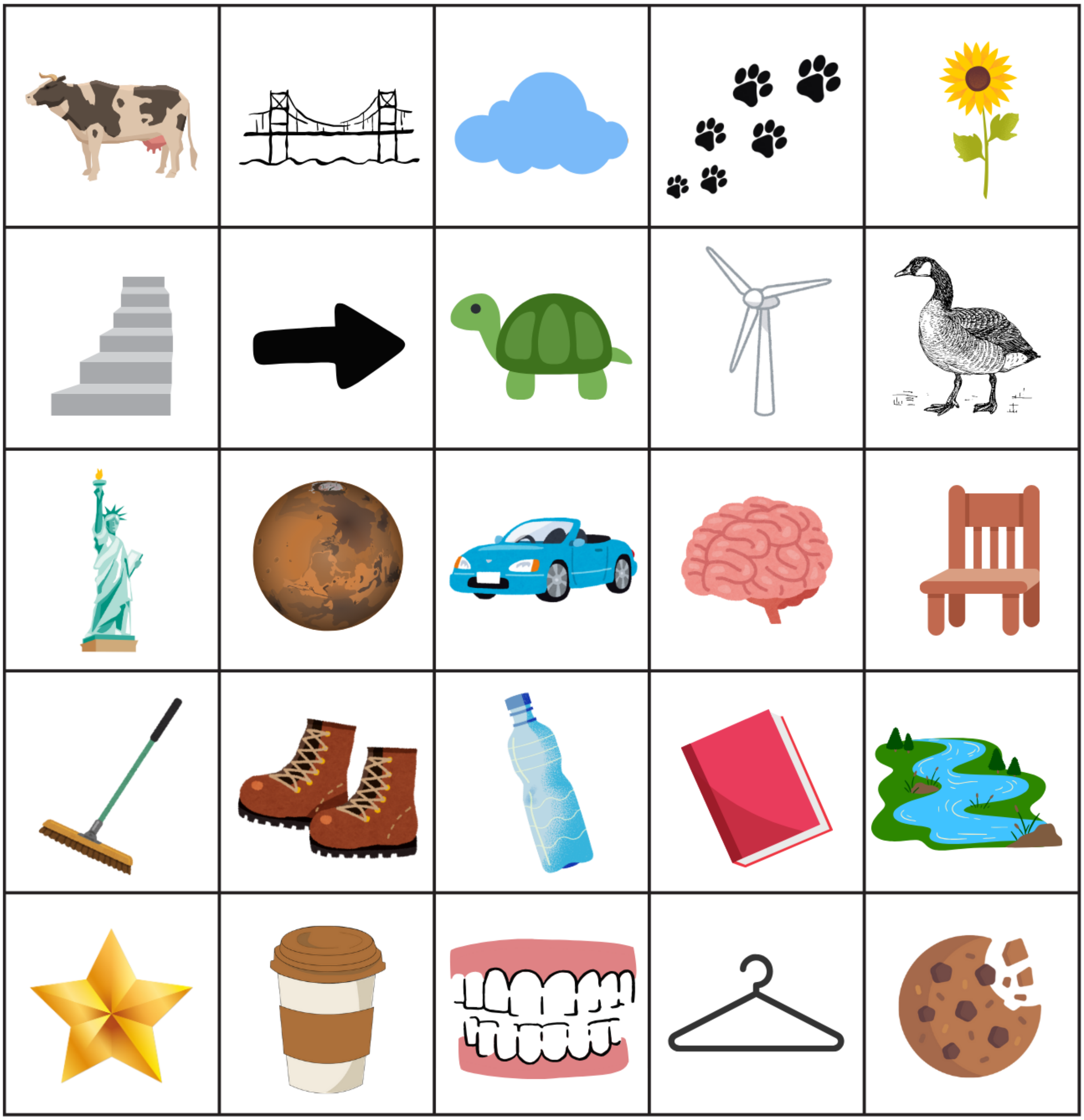
After your visit

The Student Scavenger Hunts can be used in conjunction with the Student Journal to reflect on the visit and what they learned.

They can also be used as writing prompts for reflective essays or classroom discussion prompts.

BINGO

Go on a “hunt” around the gallery and see if you can find any images that are SIMILAR to the pictures above. You might not find the EXACT thing, but find things like it. You may also have to look out the windows!



SCAVENGER HUNT

Use these questions and challenges to help guide your experience today!

You may have to try things out, read signs or screens to get answers, or work together!

1. Make a chain reaction with at least 5 parts at the chain reaction table.Draw a star here _____ when complete.

2. Test your reflexes! Try out your reflexes in the ALL ABOUT ME section and record your bestscore here _____. (How does it compare to your classmates?)

3. Play and win one level of the virus game. When you do, write a smiley face here _____.Extra challenge: can you beat all 3 levels??

4. Build a wind turbine at CAP THE WINDS POWER that will reach 300 RPM. If you do, draw a thumbs up here _____.

5. Make a cloud! What 3 things are needed for a cloud to form? _____,_____, and _____

6. Create a working circuit. Sketch it below:

7. How much does the ND ethanol industry contribute to the state economy? $_____

8. What are the 5 steps of water treatment plan? _____, _____, _____. and _____

9. Use the lock on the water table to get a boat from the lower level to the upper level and back down. Ask for help if you need it! If you complete it, draw a boat here _____

10. Make a human chain of at least 5 people at the pentaductor, letting the energy go through everyone! Ask for help if needed. If you do, draw a lightning bolt here _____

11. Send a post card to space! If you do, draw a moon here _____

Thank you for learning and playing with us today! With the space below, could you add any ideas you have to build upon our current exhibits or do you have ideas for new exhibits you would like to experience: