

Exploring the Galaxy
Grant Proposal

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Grant Opportunity: [Eau Claire Community Foundation](#)

INTRODUCTION

Exploring the Galaxy is a project from the Children's Museum of Eau Claire that will provide youth in the community the opportunity to expand their knowledge of space and the science surrounding it. This project allows museum visitors to experience the galaxy through hands-on learning experiences in a family-friendly environment, providing opportunities for all ages.

PROBLEM

As students progress through the school system, hands-on learning becomes less and less. Once in high school, science classes can become merely elective courses. *Exploring the Galaxy* looks to bridge the gap in STEM learning opportunities and offer more hands-on learning opportunities that students lack once they progress through the first few years of the K-12 school experience. These hands-on learning experiences and learning through play help children develop critical skills. Figure 1 on page one shows critical skills children develop in different areas of learning through play.



Figure 1

People, particularly young children, learn better through hands-on educational experiences. These hands-on experiences provoke children's critical thinking skills and imagination that desk learning and worksheets simply cannot. There is also a heavy focus on things such as math and language arts in schools. The Children's Museum of Eau Claire is most concerned with providing the science and space education students may not fully receive in a school setting.

METHODOLOGY

Explore the Galaxy aims to provide a high-quality learning experience to those in preschool through 12th grade. The project plans to do this through hands-on learning experiences. This project intends to place focus on space, stars, the planets, and space physics. *Explore the Galaxy* also aims to teach students about subjects beyond what they will learn in the classroom.

The Children's Museum of Eau Claire plans to bring awareness to the exhibit through local advertising, flyers, and mail announcements. We will inform those subscribed to the Children's Museum email list via an emailed newsletter. We want our staff to be thoroughly familiar with the functions and contents of each portion of the exhibit. Each staff member will be trained in the functionality of the exhibits to allow visitors to ask questions and make the most of their experiences. Staff will also be prepared to carry out live demonstrations and experiments to offer those who do better with auditory and visual learning a chance to take in information in a way most beneficial to their education.

As previously stated, to provide comprehensive space education, the *Exploring the Galaxy* exhibit plans to showcase space, stars, planets, and space physics. Because this exhibit has to do with space, this project allows students to see a day-in-the-life of an astronaut. Visitors will have the opportunity to simulate flying a spaceship, engage in simple versions of astronaut training exercises, and view a setup of historical information about space and space travel. The stars portion of the exhibit will feature similar to the Adler Sphere located at the Adler Planetarium in Chicago, IL. This portion of the exhibition is an interactive experience that allows

visitors to sit in a dome that simulates the night sky. Visitors will see different constellations and learn about how the stars change their positions based on the earth's rotation. Students will also have the opportunity to create their own constellation art.

The part of the exhibits featuring planets will feature a large-scale model of our solar system. Featuring moving parts and a light-up sun, students will be able to see how the planets move, as well as how the sun affects each planet's days. Finally, the space physics section of the exhibit will focus on gravity and black holes. Here, visitors will have the opportunity to learn about the differences of gravity on different planets and the moon and how black holes are formed. Blackholes will be showcased in short videos, while gravity will be shown through live demonstrations by museum staff.

EVALUATION

The Children's Museum of Eau Claire plans to show the effects of our exhibit through things such as interactive quizzes found within each portion of the exhibit. This exhibit will also offer the opportunity for educators to provide feedback and opinions based on how educational they found the experience to be. The museum will send each visitor home with a pamphlet of information about the exhibit highlighting facts and experiences from their visits.

Visitors (both adults and children) will be given surveys outlining questions about their experiences and what or if they felt they learned new things from this exhibit. We will use this data to revise the exhibit to make it a more educational experience for students.

DISSEMINATION

The Children's Museum of Eau Claire would like to use this exhibit as a case study. Using empirical evidence and observations over the course of the exhibit's life, we will write a case study report to demonstrate its effectiveness in education outside of the classroom and further the research on the effectiveness of hands-on learning experiences for children.

We would make this case study available on our website for the general public and educators to use as a resource. We would also share this information at any applicable Children's Museum conferences to allow other museums the opportunity to take lessons from our exhibit or make it their own.

ABSTRACT

Learning takes place in more than just the classroom. To add to this, children learn better through hands-on, tangible experiences. Through real-world experiences that involve learning through play and activity, demonstrations, and videos, visitors and students will be able to take away the knowledge they may not otherwise receive in the classroom due to a gap in science education. *Exploring the Galaxy* aims to bring the excitement of space exploration home and make more in-depth space education easily accessible through mini-exhibits within a whole program.