



STEM Science Fair, May 7th from 2:30pm-4:30pm at the Fairbanks Museum

Science Fair Day Details:

The fair will be set up between the two downstairs classrooms of the museum. Because of this any project requiring open flames or chemical interactions will have to be filmed and presented as a video on a phone, iPad or computer. We will ask for outside judges to complete a rubric and have four categories for prizes based on age groups: 6-7, 8-9, 10-11, and 12-13 year olds. Categories may change based on the students who sign up.

- Entry Fee: \$5 per student
- Set up start time: 2pm – 2:30pm
- Fair and judging starts at 2:30pm
- Awards ceremony: 4pm
- Fair ends at 4:30pm with break down and clean-up of each project.

Poster Size:

Maximum overall poster board size: 40 inches (trifold 10 in x 20 in x 10 in = 40 in) across by 28 inches tall. Each student will have half a table to work with = 3 feet x 2 feet. There are electrical outlets and cords for use in the Lecture room.

Topic:

Select a topic or problem you would like to research. Gather lots of information on your topic to formulate a problem you would like to solve. This is a chance to explore particular way of solving a problem with a question you would like to answer called the scientific method (outlined below). Form a hypothesis which potentially answering your question or solves a problem you present.

You will display your efforts through the creation of a poster and create a short presentation to explain your project to the fair judges. It is also a chance to share with your family, friends and other participating students.

The museum will supply the judges for the event.

Recommended research media includes:

- Library books
- Periodicals
- Journals
- Trusted Internet sites
- Interviews of professionals or people familiar with your topic

Here is an overview of the Scientific Method and how you might apply it to your project. Depending on projects, we may have equipment that can be used to support the exploration of your idea.

Scientific Method:

- Ask a **Question**. What is something that you observed that you want to ask a question about, i.e. What, When, Who Which, Why or Where? A question that is measurable can be helpful.

- Do Background **Research**. No need to start from scratch. Use resources like the internet to help get you started gathering information on your topic.
- Construct a **Hypothesis** or educated guess about how something works. A good hypothesis can aid you in making a prediction such as: If __ (I do this) __, then __ (this) __ will happen. It is a good idea that predications be easy to measure.
- Test with an **Experiment**. Have only one variable or factor change one at a time in experiment. Doing an experiment once may give you desired results by accident. It is good to repeat your experiment a number of times and look for similar results.
- **Procedure** working Y or N : If no, troubleshoot procedure. If yes, analyze data and **Draw Conclusions**. Explain your findings in a summary. Did the data you collected support your findings? If not, what is your new prediction if you were to do the experiment again? Results or findings may align with hypothesis or only partially or not at all depending on what the data tells you.
- Finally, **Communicate** those results through a display of a poster and presentation. All of the above highlighted words should be included in your display. We are interested in your results whether they support your hypothesis or not. This is a fun opportunity to communicate what you have learned with others.