

Aquarian Charter School 24/25 Science Fair Packet

When: [Thursday, February 6th](#), and [Friday, February 7th, 2025](#)

The [Alaska State Science and Engineering Fair](#) is in March - date TBD

Aquarian Science Fair [website](#).

Teachers will discuss Science Fair expectations with their classes. Students will choose topics and work on their projects at home. **Science fair projects are required for 3rd - 6th grade students and will be part of their science grades.** Kindergarten - 2nd grade students will participate in whole-class projects in their classrooms. Individual projects are optional for K-2nd students. Students may complete a science fair project individually or with a partner. Visit the [Science Fair website](#) for more information. bit.ly/ScienceFairHome

Entry forms are due to classroom teachers on Friday, December 6th.

Entry forms are due to the science fair committee by Tuesday, December 10th. Each student will select the type of project, Experiment, Research, Model/Demonstration, or Collection (K-2 only), and write a brief description on the entry form. All projects must have an entry form! The entry form is a second quarter science assignment for students in the 3rd-6th grade.

Students must attach the appropriate project type (Experiment, Research, Model/Demonstration, or Collection) checklists to the back of their science fair boards. The checklists are in this packet and will also be given to students by their classroom teachers after the science fair committee reviews entry forms. These checklists assist students in making sure that all necessary components are present on their science fair boards.

Your child's teacher may require projects to be turned in early. This expectation will be clearly communicated with plenty of notice.

Thursday, February 6th

Students set up their projects in the gym upon arrival to school starting at 8:00 a.m. Judges will interview students throughout the morning. Science Fair ribbons and scores will be delivered to classrooms on Friday.

Science Fair is open to families for viewing from 3:15-5:00.

Friday, February 7th

Science Fair is open to families for viewing from 7:45-8:30.

Classrooms will view the fair throughout the day.

All projects must be taken home at the end of the day.

March TBD

The State Science Fair begins. We strongly encourage participation. Student projects do not have to win first place at Aquarian to be able to participate.

Project #

Aquarian Charter Science Fair Entry Form 2024/25

Student Name

First _____ Last _____ Grade _____ Teacher _____

PARTNER

First _____ Last _____ Grade _____ Teacher _____

Does your project need an electrical outlet for presentation? (Circle one) YES NO

*Note: Electricity will not be available at the State Science Fair.

What kind of project are you doing? (Please see descriptions in packet and below)

Check only one.

Ask your teacher if you need help.

<input type="checkbox"/> Research	<input type="checkbox"/> Experiment	<input type="checkbox"/> Demonstration/Model
<ul style="list-style-type: none">● Investigate a scientific topic● Consult an expert● Research scientific websites and books (not Wikipedia)● List sources on board	<ul style="list-style-type: none">● Ask a question● Test a hypothesis● Test variable while maintaining a control (one thing changes the rest does not)● Clearly state question, hypothesis, procedures, results and conclusion on board.	<ul style="list-style-type: none">● clearly demonstrates or creates a model for a scientific principle or fact● Show research about your topic● Does not ask a question or test a hypothesis● List sources
Examples: magnets, genetic mutations, why hair turns gray, earthquakes	Examples: Which will freeze faster, salt water, sugar water, or tap water?	Examples: model of a cell, demonstrate how something (earthquake) works.

Neatly and in complete sentences, describe what you will do for your project:

Parent Signature _____ date _____

Teacher Signature _____ date _____

Due Date: Friday, December 6th

Suggested Student Science Project Timeline

September: Science fair packet available on the Aquarian website or in the office. Think about what you are interested in finding out more about. Search books, websites, etc. that give you information about your interest area.

Get specific about your topic and your question. If you have more than one question or topic, choose the one you think you can answer with the resources you have.

October-November: Study your topic, take notes, continue to research, make your hypothesis and do your experiments. Remember, live animals, plants, molds, and chemicals are not allowed in your display. Take photos or draw sketches of your process instead.

December: Evaluate your findings so far. Make your conclusions. Make graphs or other visuals if appropriate, get photos developed. Think about how to display your findings. Gather materials needed for this. (i.e. poster board, photos, markers, lettering etc.) **Turn in your completed entry form to your teacher. This is part of your science grade if you are in 3rd - 6th grade!**

December 6th: Entry forms due to classroom teachers

December-January: Complete your project board (This always takes longer than you think!!) The visual presentation of your knowledge is evidence of your pride in what you do. **DON'T WAIT UNTIL THE LAST MINUTE!** The work should be yours – not a parent's!

February 6th (or earlier if your teacher requires): Bring your project to school. You will be assigned a spot in the MPR based on what you told us about your project on the entry form. You will be interviewed by two different judges. They will ask you questions! **KNOW YOUR STUFF!** You are the expert on your project.

February 7th: Everyone in the school will see your project on display! Pick up your project after school, and take it to the State Science Fair, if you can, in March. All projects must be picked up at the end of the day **Friday**. If you need help, make sure a parent knows.

Research

In this type of project, a student investigates a chosen topic (for example, what is causing the decline of King Salmon on the Deshka River?) by consulting primary sources, speaking with experts (scientists, nurses or doctors, etc.), and investigating a scientific site (fish hatchery, lab, factory, etc.)

- **Students MUST consult an expert. This means contacting and meeting an expert in person, phone interview, or by email exchange. Students should prepare questions before meeting with an expert.**
- **Students MUST research scientific books and/or websites (not Wikipedia).**
- **All sources MUST be listed on the display board clearly.**
- **Students MUST do extensive research on topic. This could be any combination of scientific websites visited, scientific locations (lab, factory, office, etc.), books, and periodicals.**

Students should explore the topic in depth and report the information in an interesting manner through photos, a journal, drawings, etc.

Students must use and identify scientific sources. See scoring guide #1 for more details and full criteria.

Demonstrations or Models

These projects demonstrate a particular science principle or fact, or display some kind of scientific apparatus or instrument. A student may want to demonstrate the way something works, a science phenomenon, or how something is created in a lab.

The student should label any parts and describe the topic being demonstrated in all written materials. Students must use and identify scientific sources. See scoring guide #3 for more details.

Examples

- You wonder, how does the human eye work? You make a model to show how it works.
- You wonder, what are the different layers of the earth? You make a clay model to show the different layers of the earth's surface.
- You wonder, how does a camera work? You make a model of a pinhole camera and document your findings.
- You wonder, what causes light from the sun to break into different colors? You construct a model to show how light bends.

Experiments

A student thinks about a topic of interest, poses a question about this topic, designs an experiment to investigate the question, records and reports the results, and makes conclusions based on the results (that is, they follow the scientific method). The final project is a display of the steps the student took, any successes or failures, and the implications of the data. For more details, please see scoring guide #2.

Examples

Which will freeze faster, salt water, sugar water, or tap water?
How does weight affect distance when skiing down a hill?
Which paper towel absorbs the most water?
How does the color of an object affect how warm it gets?
Do preservatives stop bread mold from growing?
What materials conduct electricity the best?

How to do an Experiment for the Science Fair

1. Choose a **topic** you are **interested** in.
2. Create a **scientific question** about your topic.
3. **Research** your topic.
4. Form a **hypothesis**.
5. **Plan** your project. Include a **time schedule** and all the **materials** you will need.
6. **Collect** all your materials.
7. **Conduct** your experiment several times. Write out your procedures step-by-step.
8. **Record** the data.
9. **Organize** the data in an orderly graph or table.
10. **Draw conclusions** from the data. **Write** a paragraph about your conclusions.
11. Gather your procedures writing, graphs, pictures, photos, drawings, journal of work, and diagrams.
12. Construct your **science fair display**. Be sure to include these parts in your display: Question, Hypothesis, Procedures, Data, Results, and Conclusion. Be sure to display where you got your information from and thank anyone who helped you.

*Ten points are awarded for clearly stating the question on the display. To be clear, the title may be written as a question, or as a topic with a question as a subheading. Either way, the question must be CLEARLY stated on the board.

Student _____ Grade Level _____ Teacher _____
 Partner _____ Grade Level _____ Teacher _____
 Project # _____ Judge _____

Science Fair

RESEARCH/DEMO/MODEL Project Scoring Guide

Topic is clearly stated on display	circle one No/0 Yes/10
Display includes pictures/diagrams/photos/ journal that support project research	___ /15
Written explanation of your topic and what you learned from the research	___ /15
judges, check one <input type="checkbox"/> Research project: Evidence of expert consulted/interviewed -or- <input type="checkbox"/> Demonstration/Model: accurate representation of the scientific topic	___ /10
Information clearly displayed	___ /10
Websites and other sources identified and listed on board as a <u>source list</u> (not Wikipedia or Google)	circle one No/0 Yes/10
Project is well-organized, neat, & visually appealing	___ /10
Student completed project (with appropriate amount of parental help)	___ /10
Effective oral presentation	___ /10
TOTAL _____/100	

Judge's Comments:

Student _____ Grade Level _____ Teacher _____
 Partner _____ Grade Level _____ Teacher _____
 Project # _____ Judge _____

Science Fair

EXPERIMENT Project Scoring Guide

Question is clearly shown in display	circle one No/0 Yes/10
Hypothesis is clearly shown in display	circle one No/0 Yes/10
Display includes DATA (graphs or tables) AND pictures, diagrams, photos, and/or journal that support project research	___/10
Procedures clearly outlined	___/10
Evidence of a variable that is tested	___/10
Results clearly stated	___/10
Conclusion is logical and thoughtful	___/10
Project is well-organized, neat and visually appealing	___/10
Student completed project (with appropriate amount of parental help)	___/10
Oral presentation reveals student observations	___/10
TOTAL _____/100	

Judge's Comments:

Science Fair Judging Criteria

We are looking for excellence in these three areas:

1) Project Content/Scientific Content or Process Skills: Judges will look for whether you used some or all of these: observation skills, measurement, making comparisons, and/or accurate data collection and reporting. They will also look at whether your information is scientifically correct.

2) Creativity/Appropriateness: Does your project show a level of uniqueness or original thought? Is it appropriate for your grade level?

3) Display/Neatness: Is the display neat and easy to read? Does it show good workmanship, correct spelling and accurate illustrations? Is the information displayed in a way that it is easy to identify the important parts?

Potential Interview Questions

Students should be prepared to answer these potential interview questions. Each interviewer will be asking more than just scientific questions regarding the Science Fair project.

- * How did you get the idea for your project? Tell me how you went about doing it.
- * Where did you find the information about the project? Did you interview anyone?
- * What was the hardest part about finding information?
- * What observations did you make while working on the project?
- * What three things did you learn from this project?
- * What was your favorite part?
- * If you had help from someone, in what ways did s/he help you?
- * If you do the project again, how or what would you change?
- * Did this project make you think of any future projects you would like to try?