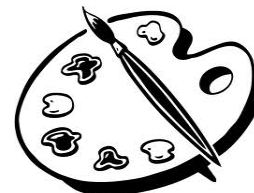


# 2018 Sloan PTO Science & Art Fair



The Sloan PTO Science & Art Fair will be **Friday, March 23, 2018 from 6:00 - 8:00 pm**. The purpose of the fair is to encourage students to develop a greater interest in science, technology, and art and to develop skills in creativity, innovation, critical thinking, research, problem solving, and use of the scientific method to answer a question.

Every student can enter the Sloan PTO Science & Art Fair. It is a non-competitive event. Everyone who enters gets recognized, and the classroom with the highest level of participation will earn a reward.



## K- 4<sup>th</sup> Grade

At the primary level, this fair is designed to be a non-competitive way to work on a fun, hands-on, inquiry-based project that uses a broad range of interdisciplinary skills. **A science project** can be a great way to spark a student's interest in science or to help a student develop a broader interest in research.

**An Art project** can be a starting point for a lifelong career in creative exploration and skill development.

**Students in K-4 are not eligible to enter the judged portion of the fair.**

Appropriate Types of Science Projects for K-4 <sup>th</sup> Grade	
<b>Model</b>	Use pictures or 3D dioramas to show how something works or where something lives. This is best when accompanied by a written description.
<b>Collection</b>	Organize and classify a set of items, such as collections of leaves, rocks, or insects.
<b>Observation</b>	Observe a place over time to study what is there or what is happening (e.g., What living things are found in a cubic foot of soil?).
<b>Experiment</b>	Collect and analyze data. Record quantitative observations and compute averages, ratios, and other analyses (e.g., What is the average February temperature here?).
<b>Demonstration of a Scientific Principle</b>	Clearly explain a scientific idea such as how electricity travels or what causes erosion with text, diagrams, pictures, and/or models. These projects are not research questions, because the answers are already known.

## 5<sup>th</sup> Grade

Fifth graders have the option to enter the non-competitive fair **or** the Judged Contest. **Only 5<sup>th</sup> graders have the option to enter the Judged Contest.** The Judged Contest is modeled after the Pittsburgh Regional Science and Engineering Fair (PRSEF), which Middle and High School students can enter with the hopes of earning cash and scholarship prizes. Although Sloan students are too young to enter PRSEF, they could expand upon their Sloan experience, using their entries in our Sloan PTO Science & Art Fair as the basis for their PRSEF projects later on. In keeping with the PRSEF spirit, contest entrants will explain their projects to a judge. For the Judged Contest in science, students should use the scientific method, but we encourage all 5<sup>th</sup> graders to use the Scientific Method.

Appropriate Types of Science Projects for 5 <sup>th</sup> grade	
<b>Demonstration of a Scientific Principle</b>	Clearly explain a scientific idea such as how electricity travels or what causes erosion with text, diagrams, pictures, and/or models. These projects are not research questions, because the answers are already known.
<b>Experiment using Scientific Method</b>	Test a hypothesis often by using a controlled experiment to answer a question. A controlled experiment uses two groups - one that is managed and one that is variable. E.g., What is the effect of temperature on a mealworm?

## For 5<sup>th</sup> Graders – About the Scientific Method

The scientific method is a consistent way of answering a question in a scientific way.

- **Question** Think of a question that can't be answered with a simple "YES" or "NO," but make it simple enough that you'll be able to think of a trustworthy way to answer it.
- **Hypothesis** A hypothesis is a good guess at the answer to your question. It is always okay to be wrong, so don't pick a question to which you already know the answer!
- **Experiment** Design an experiment, or think of a procedure you will follow to find an answer to your question. Make a careful list of all materials you use for your experiment. List each step of what you do.
- **Data Collection** Carefully record data that you collect during your experiment or from your procedure. It's better to have too much data than not enough, so keep lots of notes. Graphs can make it easier to see what your data is telling you.
- **Data Analysis** Think carefully about what your data tells you, even if it shows that your hypothesis is not correct. Think carefully about all the data together, not just one or two pieces of data, especially if they're very different from the rest.
- **Conclusion** The conclusion is simply the answer to the question with which you started. Be sure your conclusion is based on the results of your experiment, survey, or demonstration.

## Looking for Ideas? – All Students

The chart below provides some examples of types of projects all students can do in different areas of Science and Art. Do some research and use your imagination! Share something you love or what fascinates you. These are only suggestions!

Area of Study	What does this include?	Types of Projects in this area
Physical Science	Light, sound, electricity, magnetism, mechanical energy, physics, chemistry, rocketry, atomic and nuclear energy, heat and force, technology	Simple Machines, Good conductors of electricity, pH factors, two-cycle engines, flying airship, photography, radio, light, computer programming, nanotechnology
Earth Science	Weather and climate, geology,, astronomy, space, oceanography, meteorology	Rocks and minerals, stalagmites, global warming, crystals, clouds and weather, glaciers, stars, the Moon, Mayan calendar
Biological Science	Plant life, animal life, animal behavior, botany, zoology, biochemistry, physiology, health and safety, pharmacology	Teeth, the digestive system, how the heart works, effects of smoking, early man, cheese, chameleons, carnivorous plants, beaver lodges, gerbil training, chemistry of cooking
Environmental Science	Water, air, land use, urban problems, ecology, conservation management, pollution, pesticides	Pollution, fracking, recycling, DDT, endangered species, water cycle, solar panels, acid rain
Art	Paint, clay, paper, fabric, music, poetry, creative writing, photography, sculpture, crafts. Use of textures, colors, shapes, sound and smell	Water color, oil, acrylic, paper mache, clay, Legos, fabric, yarn, short story, poetry, write a song, cartooning, comics, photo essay, computer animation, natural dyeing of wool.

## Important FAQs

- While teachers are available to advise students, the initiative and responsibility belongs to the students.
- Parents may assist their children with their projects, but their input should be limited. This is about learning, not perfection!
- Projects should not be something that has already been completed for school.
- Only individual projects (of 5<sup>th</sup> Graders) are eligible to be judged.
- Students may work in teams, but 5<sup>th</sup> grade team projects are NOT eligible to be judged.
- Students may enter both a science and art project if they so choose.
- For the Judged Contest, Sloan teachers will act as judges and use a standard rubric for assessment. This will occur on Friday, March 23<sup>th</sup> during school. Students will be asked to stand near their projects and answer 3-5 questions from a judge about what they learned. The rubrics for science and art entries and sample questions will be shared once a 5<sup>th</sup> grade student has registered to be judged.
- We will contact parents of 5<sup>th</sup> graders with judged projects with the date/time of judging. If you do not hear from us by Tuesday, March 20<sup>th</sup>, please contact us to ensure that your child is registered correctly. Once the judging schedule has been arranged, times cannot be changed.
- Please drop off projects in the gym. Please park and enter through the gym door. You will be asked to sign in and pick up a project card. This card will stay with the project at all times.



*Did you know?*

**Science Night will also be occurring throughout the school during the Science and Art Fair.**

**Please be sure to visit all the wonderful events and exhibits! More details will come home soon!**

## Prizes

- All participants receive a special token to show their participation.
- The classroom with the highest participation will win a gift card. The teacher and class can then decide how to best use the reward.
- **5<sup>th</sup> Grade judged contest only:** We will award one winner in Science and one in Art based on the rubric scores.
- There will also be honorable mentions in Science and Art combined, based on the rubric scores in the 5<sup>th</sup> grade judged contest.
- In the event of any ties, winners will be determined by a random drawing.



# Rules and Guidelines

1. No liquids are allowed in student displays.
2. Displays should be freestanding. Display boards are available at craft or office supply stores.
3. If you do not want your project to be touched, please provide a sign. Projects will not be supervised 100% of the time, so please do not leave anything valuable out on the tables.
4. Projects should not be dangerous in nature.
5. Projects will be moved so please be sure that everything is securely affixed.
6. Please include the student's name, grade and teacher somewhere on the project.
7. Projects should not be transported on the school bus.
- 8. Projects not removed by the close of the Fair at 8:00 pm will be discarded.**
9. If you need to leave before the close of the fair, you may take your child's project home after 7:00 pm.

## Timeline

Important Dates	What to Know
Friday, March 2	Entry forms due
Tuesday, March 20	Parents of 5 <sup>th</sup> grade students being judged will be notified of date/time for judging.
Wednesday, March 21, 3:30 – 7:00 pm	Project drop-off
Thursday, March 22, 8:45 – 9:15 am	Project drop off
Friday, March 23, during school hours	Eligible 5 <sup>th</sup> grade projects will be judged
Friday, March 23, 6:00 – 8:00 pm	Science and Art Fair in Sloan Gym
<b>Friday, March 23, 8:00pm</b>	<b>Remove all projects from the gym</b>

**NOTE:** we will only accept projects during the times listed above. We can't allow anyone to bring projects in at another time due to security issues.

If you have special space requirements, please contact

Eryn Devola: [erynrenn@gmail.com](mailto:erynrenn@gmail.com)



Thanks in advance to all of the students participating! We are excited to see your amazing projects!

And thank you to all those volunteering to make this night possible! Your support is truly appreciated!

# Sloan Science and Art Fair Entry Form

**Deadline: Friday, March 2, 2018 – turn into your teacher**

## Project Type (one project per form):

Non-judged Individual Science (K-5)

Judged Individual Science (5<sup>th</sup> gr)

Non-judged Individual Art (K-5)

Judged Individual Art (5<sup>th</sup> gr)

Non-judged Team Science (K-5)

Non-judged Team Art (K-5)

## Student(s) Information

Please fill out only one entry form for a team project, listing all students' names on it and select one parent below as the key contact.

Name	Grade	Teacher

In our continued effort to go paperless, please provide a parent's info below for any communication.

Name:

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Phone:

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Email:

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Volunteers help to make this night happen. If you can help out with project drop off, please let us know below! Even an hour is appreciated. Thanks!



Wednesday, March 21 – 3:00 – 7:00pm

What time works for you?

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Thursday, March 22, 8:45 – 9:15 am

Thank you from the Science & Art Fair Chair  
Eryn Devola: [erynrenn@gmail.com](mailto:erynrenn@gmail.com)