



Dear Riverside Families,

Riverside School will hold its annual science fair Monday, February 4th through Friday, February 10th.

Each student is expected to participate in this important learning experience. Student projects are to be completed at home and independently by the student. We are asking parents and family members to assist their child in preparing his/her exhibit. Science teachers will be discussing possible projects, guidelines, and rules with their students. At the same time, assistance at school is limited to answering questions, steering him/her to resources, offering encouragement, and keeping the student on track. However, students must complete their own projects independently. This packet contains a great deal of information that will help you with that preparation.

Students are encouraged to select a project that captures their interest and gives them an opportunity to use the scientific processes and critical thinking skills. Students will be expected to create a hypothesis that will lead to an experiment in which they can test their hypothesis. Just a few ideas:

- What is the effect of fertilizer on plant growth?
- How does moisture affect the growth of bread mold?
- How do different substances absorb the sun's energy?
- To what extent do different insulating materials affect heat loss/gain?

Additional ideas are contained in this packet and can be found in libraries and on the internet. Included is a very helpful guide to creating a science fair project as well as board requirements and the scoring rubric. Please utilize the internet as it provides a wealth of knowledge and amazing science fair project ideas for students.

Safety is a key element in a science fair project. Because these are independent projects, it will be up to the family of the student to review his/her plans and ensure that any planned activities will be safe for your student and for others. Another important aspect of science experimentation is quality assurance. This means that appropriate respect is required for any persons or animals involved in a project. Common sense should be the rule. Risk of injury or any harm should be eliminated or reduced to a minimum. If you have any questions about the safety or quality assurance of a project it is best not to do it or to check with your student's science teacher

We look forward to the many amazing science fair projects that our scholars will create. Thank you for your support.

Thank you,

The Science Fair Committee

Mrs. Morris, Ms. Brier, Ms. Gjinatori, Ms. Toles, Ms. M. Reading

Science Fair Project Selection

TO: Parent /Guardian and those who assist with science fair projects

The greatest outcome of a science fair project would be a WOW moment – when a young person was excited by suddenly seeing something happen and understanding WHY it happened. Also so important would be the real gift to the young person of having YOU share that moment with them.

So, don't panic, and let's think about how we could clear the way for such a WOW moment of scientific discovery to happen. Do your best, write it up, and you have a science fair project. Some ideas:

1. **Safety First.** Safety is a key element in science. It is up to the family of the student to review his/her plans and ensure that any planned activities will be safe for your student and for others. **Quality Assurance** means that appropriate respect is required for any persons or animals involved in a project. Common sense should be the rule. Risk of injury or any harm should be eliminated or reduced to a minimum. If you have any questions about the safety or quality assurance of a project it is best not to do it or to check with your student's science teacher. For safety reasons, volcano eruptions or tornado simulations are not permitted at the science fair.

2. **Observation is Key:** Scientists learn by observing. The closer we look, the more we can learn. And, when we keep a record of what we see, we have the DATA to explain our science.

KEEP IT SIMPLE: What should you observe? Something you are interested in and something nearby. EXAMPLES: The habits of a pet, the behavior of a person (yourself or someone you see regularly); the nutrition label on the food containers you use; the weather outside your window; the plants in your house, yard or nearby; seeds you would plant; the contents of household products; the seconds of commercials during a TV or Radio show; how long a battery lasts in different things.

Observation does not have to be really long, just long enough to help you answer your question. Five or seven days of observing something that happens daily may be enough. For some things, one or two good clear observations may be enough.

3. **Questions are important:** Science starts with a question. When someone wonder's what will happen, they give themselves the opportunity to make a "scientific" discovery on some level.

KEEP IT SIMPLE: Help the student "wonder." Is your student interested in: whether the family pet wakes the people up or the opposite? What the clouds look like the day before it snows (or rains)? How many days for a flower bud to open into a flower? What foods have most protein? What products smear on glass and what products help clean the glass? Etc.

4. **Turn a Question into a HYPOTHESIS.** A hypothesis is a prediction or educated guess at what will happen and why. It does not have to be right in the end just a guess that will tell me what to try and what to observe.

KEEP IT SIMPLE: If my question is: When does my cat most enjoy playing with toys? My hypothesis might be: "My cat most enjoys playing with toys more in the morning than in the evening?" I could test that by trying to play in the morning and evening and recording the outcome.

5. **Keep Good Records:** Scientists record their data. They keep clear records with dates, times (if important), and what they observed.

6. **Display your work:** You can't lose. Whether your hypothesis is right or wrong, when you write up what you have learned you contribute to science. Now we know EITHER "why something happens" OR one false reason that "is not the cause" of something happening.

Riverside School – Science Fair 2019

Grades 3-8

JUDGING OBJECTIVES: Science Fair Projects will be judged in four categories. This chart will guide the judges as they rate each project.

Objectives	Superior 10 or 9 pts	Excellent 8 – 7 – 6 pts	Good 5 – 4 – 3 pts	Satisfactory 2 or 1 pts
1. KNOWLEDGE: <i>Shows knowledge of the <u>Scientific Method</u> and connects it to the project presented</i>	- Can explain all 6 parts of an experimental science project; and justify conclusion.	- Can explain at least 5 parts of an experimental science project with understanding	- Can explain most parts of an experimental science project with the help of the display board.	- Tries to answer questions (posed by judge) and/or has some steps missing.
2. PROJECT: <i>Shows real understanding and speaks knowledgeably about the project</i>	- Student able to share many details about the project through the scientific process.	- Student shows an understanding of the project.	- Student knows about the project and offers minimal explanation.	- Student can answer some questions when asked.
3. PRESENTATION: <i>Presents data on a board that is well organized and visually appealing.</i>	- Board shows data in an organized, neat manner, complete with charts, tables and pictures that are labeled.	- Board is neat and attractive and has limited charts, tables and pictures.	- Board lists major headings of the scientific process and some data.	- Board lists major headings of the scientific process and limited data.
4. EXPRESSION: <i>to the judges about the project</i>	- Student eager and able to tell all about the project.	- Student is pleasant and shares some information about the project.	- Student tells about the project only when asked a question.	- Student answers some of the questions about the project.

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Time Line for Students and Families

A. Due Dates:

Set Up Project Display: Feb.4 ... (details will be given closer to the date)

Science Fair Judging: February 5th,6th and 7th **Tuesday**, Wednesday and Thursday

Parent Viewing of Displays:

Thursday, Feb. 7 – 4:00pm to 5:00 pm

Friday, February 8 – 9:00-10:15am followed by a Science Fair Awards Assembly at 10:15 am -11:30am

Take Down Displays: Friday, February 8th. after the awards assembly.

B. Staying Organized With a Schedule

Science Fair projects are rather long range activities often requiring several weeks to complete. They require good planning project so it is very important to prepare a schedule and stay organized. Science Fair projects are also independent and will require students, with the support of their families, to keep the ball rolling. **The December holiday break will give some extra time for projects.** The following pages will outline when parts of project should be completed and provide support for planning and recording each part of the project.