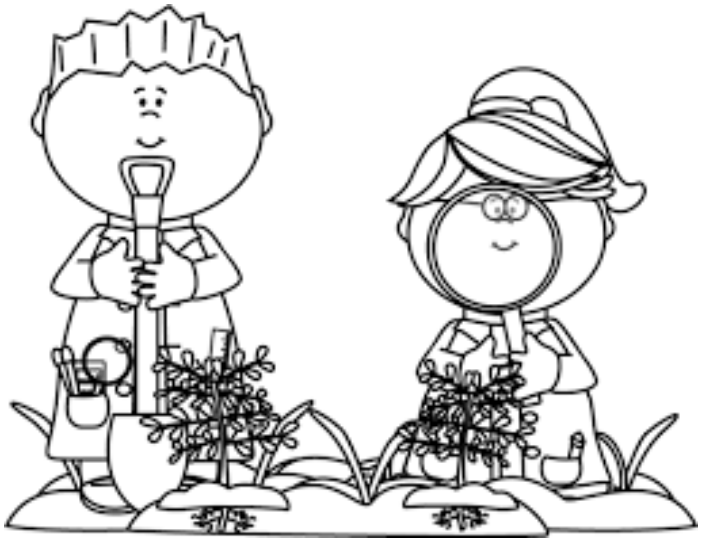
Armstrong Elementary Science Fair Packet



February 4th and 5th, 2026

Included In This Packet:

- The General Rules for Science Fair
- Science Fair Safety Rules
- A guide to help you design and run your science fair project
- A worksheet and checklist to help you get started and stay on track
- Entry Form

VERY IMPORTANT: Before you turn this page, recruit an adult to help you! They come in VERY handy and you will need to get their permission before starting!

Contact Info:

PTA Coordinators: Karina Pauly and Mitra Smith

Science Fair General Rules

1.) Science fair is open to all students and is **highly encouraged for 4th graders**

2.) Students may work in groups no larger than 1-2 students in the same grade.

3.) Entry forms can be found at the back of this packet and are **due by January 23rd.**

4.) Science Fair will be held on **February 4th-5th** in the **Armstrong Elementary Small Gym.** Please bring your projects to the gym during drop-off time between **7:30am-8:15am on February 4th**. If your project requires electricity you must provide a 25ft extension cord in order for us to set it up.

5.) Judges and classes will view the projects during the school day on February 4th-5th and parents and friends may come on the 5th between 3:15-4pm. Please bring your projects home on the 6th (between 3:15pm-4pm).

6.) Please be sure to clearly print your name, grade and teacher on the BACK of your project.

7.) Judges will evaluate the projects using an evaluation form. Each student will receive a participation award and their individual evaluation.

Science Fair Safety Rules

These rules are for your safety and the safety of those involved in the science fair. Safety rules will be strictly enforced and the science fair committee has the right to refuse a project if it is considered unsafe.

1.) Make sure you have an adult to help you if needed and wear protective goggles or gloves if necessary. Use safety on the internet, too! Never email or chat with anyone without an adult knowing about it. Be sure to let an adult know about what websites you will be visiting, or have them help you search.

2.) Respect all life forms. Do not perform an experiment that will harm an animal or put someone in an uncomfortable or dangerous situation.

3.) Any project that involves drugs, firearms, or explosives is not permitted.

4.) Any project that breaks district policy, and/or local, state or federal laws is not permitted.

5.) All hazardous experiments are prohibited. Examples of hazardous experiments include displays of toxic, caustic, explosive (including rocket parts or propellants), flammable or pathogenic substances. Displays should not include live animals, human blood or bodily fluids, live disease-causing organisms, microbial cultures, fungi syringes, pipettes, flames, dangerous chemicals, class 1 or class 11 lasers.

6.) Any liquid brought in with the presentation on the day of the science fair must be securely sealed to prevent spills and slips.

7.) The student is responsible for all necessary equipment and materials. The Science Fair Committee members are not responsible for lost or stolen materials.

8.) Incentives such as candy, stickers or samples given away at display board stations are prohibited.

Science Fair Guide

The point of the science fair is to experience what it is like to be a real scientist running experiments using the scientific method. This means you will have to come up with a question, a hypothesis, and an experiment to test your question and hypothesis. You will then need to show your results and conclusions on a project display board at the science fair. This guide will walk you through each of these steps and help you make a great project you can be proud of completing!

STEP 1: COMING UP WITH A QUESTION

What interests you? Science can be found in everything you do and enjoy. Ask yourself what you would like to learn about these things. Do you like video games? Why not test how playing games affects your ability to do homework after playing. How about cooking? Why not see how changing the ingredients in your favorite recipe can change the taste or look of the food? If you are having trouble coming up with a question on your own, don't worry. Try out these websites which have some great science fair ideas. The important thing is running the experiment and finding out what happens not coming up with a super original idea.

1.) http://www.teacherstryscience.org/kids-experiments (71 experiments to get you started)
2.) http://www.sciencebuddies.org (Over 1000 experiments plus a questionnaire to help choose)
3.) https://www.education.com/science-fair/ (1000+ experiments sorted by grade or subject)

STEP 2: YOUR HYPOTHESIS

Once you know what question you wish to ask, you need to make a guess what the answer might be. This is called your hypothesis. A hypothesis is a "smart guess" or prediction about what you think will happen in your experiment. Don't worry about being wrong or right – both are great in science! Make sure you have a reason WHY you think the way you do. Learning about your project through internet searches or books is a great way to help you come up with a good hypothesis.

Example Question: Which paper towel is most absorbent?
Example Hypothesis: I think Brand X will be the most absorbent because it's a more popular brand and it's thicker than Brand Y and Brand Z.

STEP 3: YOUR PROCEDURE AND VARIABLES

A procedure is a list of steps you will do to conduct your experiment, try to answer your question and see if your hypothesis was correct. If you want to see which fertilizer helps plants

grow the most, how will you test that? This is your procedure. Make sure you write your procedure down!! Not only will you need this for your presentation but it's important to have it if something goes wrong. That way you can look back and see what needs to be changed.

As you design your procedure you need to think about something called variables. Variables are anything that can change in your experiment. Each variable can have an effect on your experiment so you want to try to make all the variables stay the same except the one you *want* to change. Let's use the example of testing which fertilizer helps plants grow. We will want to test different fertilizers to see which one works the best so this is our independent variable. It is the one we want to change to see what happens. Plant growth is our dependent variable. It changes in response to our independent variable (which fertilizer we use).

But aren't there other things that can affect how a plant grows besides just the fertilizer? What about sunlight? Or the amount of water a plant gets? In our example we aren't testing these variables so we want to make sure they stay the same and don't change our results. These are called our controlled variables. In this example we might make sure each plant we are testing gets the same amount of sunlight and the same amount of water each day.

STEP 4: YOUR EXPERIMENT

This is the really fun part! Follow your procedure and run your experiment. If possible, do the experiment multiple times. If you get the same results each time this makes what you find more believable and if you get different results then you can try to learn from that and figure out why. Make sure to write down everything that happens and take lots of pictures! Pictures will be great to add to your presentation and help you remember what you did.

STEP 5: YOUR RESULTS AND CONCLUSION

As you went through your procedure and changed your independent variable, what things happened? What did you see, smell, hear, taste or feel? How did your variables change?

Your results should be neatly organized using diagrams (a drawing or picture of what you did or observed), tables (where your results are neatly organized in columns and rows), and graphs. Make sure to add titles and labels to all your diagrams, tables, graphs and pictures so anyone can understand what they are looking at without having to ask you.

Once you have shown your results, try to explain what they mean. Was your hypothesis correct? Why or why not? This is the time to discuss why you think things happened as they did. Even if things didn't go as planned, tell us why you think that happened. Also at this point make sure to think about what your results might lead to. Is there another experiment you

could do to find out more? What if you did something a little differently, do you think your results would change? A conclusion is never an end in science, just the beginning of a new experiment!

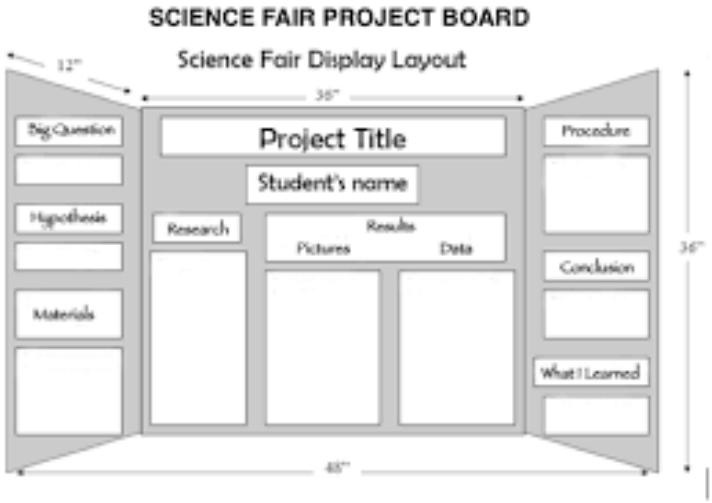
And there you go! Great Job! Now share what you learned with your friends and family by making a presentation for the Science Fair.

STEP 6: YOUR PRESENTATION

All presentations should be on a trifold presentation board capable of standing on its own. Any color is okay. Dimensions should be 28" x 40". There are typically two sizes of presentation boards – this is the smaller one. It is more appropriate for an elementary school science project and will give more space for the many projects we have. You can find presentation boards at basic supply stores. For convenience, presentation boards will also be sold in the Eagle store for $3.

Please try to be neat with your presentation – this will also be one of the things the judges and your teachers will look at. All writing should be typed not handwritten and everything should be glued or taped on neatly. Have fun with it and add some color and flare but keep it classy and proper for a school environment.

Below is an example of a neat looking Science Fair Display Board. Your exact display may have a different layout but should still contain all the components listed below. You may also bring parts of your experiment with you if you feel it will enhance your presentation. For example if you make slime, you might wish to bring slime samples in tightly closed containers to display in front of your poster board. Just make sure it all fits in the space in front of your display board and that it follows the safety rules.



Components to include:

#1. Title and Student Name (s)
#2. Your Question
#3. Hypothesis
#4. Information about your topic
#5. Materials used (with pictures)
#6. Procedure and Variables (with pictures)
#7. Results (with graphs, diagrams, and pictures)
#8. Conclusions and ideas for future experiments

Armstrong Elementary Science Fair ENTRY FORM

Fair Date: Feb. 4th and 5th, 2026

Entry Forms Due: January 31, 2026

Please return this form to your classroom teacher.

Grade Level _____

Classroom Teacher _____

Student Name (If two students are working together, EACH student must submit an entry form.)

_____

Partner's Name _____

Project Title:

_____

_____

Briefly describe your project:

_____

_____

_____

Please fill out the back of this form with more details about your project.

*All parents/guardians must sign and approve the child's Science Fair Project.

I acknowledge that I have received and reviewed the materials for the Science Fair and I am aware that my child is required to complete a Science Project once this form is submitted. I have approved and given permission for my child to participate in this year's Science Fair.

Parent Signature _____ Date _____

Parent Email _____

Science Lab/Teacher's Approval of Project Signature _____

What is your testable **QUESTION:**

_____

_____

What are your **VARIABLES?**

a. Independent Variable (what is the ONE thing you will be changing):

b. Dependent Variable (what are you measuring or observing):

c. Controlled Variables (what things will you keep the same):

What **MATERIALS** will you need?

_____

_____

What is your plan for timing? How long will your experiment take?

_____

_____

What is your **HYPOTHESIS**? What do you think the answer to your question will be and why?

_____

_____