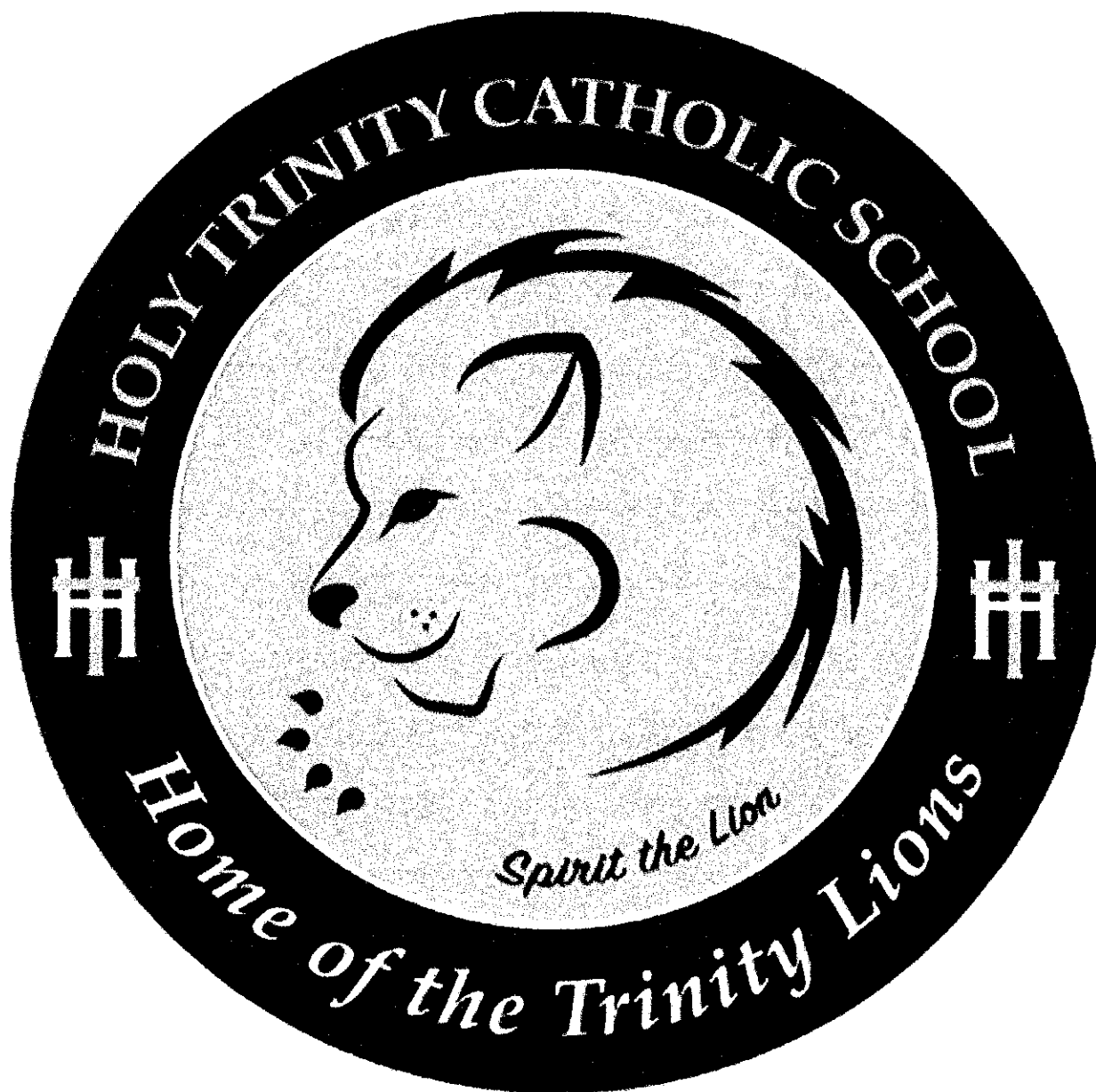




Holy Trinity Catholic School

Science Fair 2026



November 14, 2025

Dear Families,

As you know, science, technology and engineering are basic skills expected by employers. As twenty-first century citizens, our students will have to make some of the toughest decisions of any generation based on their faith and their understanding of emerging science and technology. Science fairs involve students in the practices of science and engineering, requiring them to apply these skills to a topic of interest to them. We are happy to announce that the time is drawing near for our annual science fair.

Grading rubrics and a Science Fair Project Planner are attached. These are designed to help students work through their project and keep on track. Students are required to fill their project planner as a rough draft, and turn this in when they come to school with their trifold. Each part of the science fair project is listed on the timeline and will be graded as it is turned in.

Timeline:

1. Choose a topic and submit it for approval. Your science fair project should ask a clear question (to which you don't already know the answer), create an opportunity for careful testing, and explain what you will learn in a way that others can easily understand. Due 11/20.
2. Do preliminary research. Collect and read books or articles (not AI summaries) for your topic. You need to have at least 3 to 5 credible resources. There is more on what defines a credible resource in your science fair packet. Due 12/4.
3. Develop a hypothesis based on your preliminary research. Due 12/5.

4. List the independent and dependent variables in your experiment, decide on the procedure that you will use to test your hypothesis. Due 12/11.

5. Make a list of the materials you will need and gather them, design your experiment. Due 12/12.

6. Conduct your experiment or build and test your invention. Compile your research. Record data. Due 1/8.

7. Organize your data and results. Due 1/8.

8. Write a draft of your science fair report. Due 1/8.

We will edit science fair reports at school, and create reference pages. I will be available after school to help with any aspect of the science fair. Families are welcome to attend after school science fair help sessions. I will keep you informed about these in your weekly newsletter. Your help is appreciated and encouraged - but this is the students' project and judges need it to be evident that it is the children's research, based on each students' understanding and presentation of their work.

9. Write and print the abstract, gather everything necessary for your project display. 1/15.

10. Turn in science fair projects and reports, display boards, and display items. Due 1/26.

11. Be prepared to present your project to classes, leadership, and judges on 1/27 .

If I can help you in any way, please let me know.

Thank you,

Annemarie Maguire

4th Grade Homeroom Teacher

3-5 Science, 3-4 Religion

What Makes a Really Good Science Fair Project?

A great science fair project is like a science adventure—it starts with a question, leads to a discovery, and ends with a story you can share!

Here's what makes a science fair project *really* good:

1. It Starts with a Curious Question

- Ask something you *wonder* about! If this topic is of great importance to you, you will do much better research!

2. It Uses the Scientific Method

A good project follows these steps:

1. **Ask a question**
2. **Make a hypothesis** (a smart guess)
3. **Do an experiment**
4. **Watch what happens** (observe!)
5. **Write down your results**
6. **Explain what you learned**

3. It's Safe and Hands-On

- You should be able to do the experiment safely.
- You should be the one doing the work.

4. It Has a Clear Display

- Use a tri-fold board with:
- An interesting title
- Pictures or drawings
- Charts or graphs
- Your question, hypothesis, steps, and results

5. It Teaches Something New

- A great project helps people learn something interesting.
- You should be able to explain it clearly to your classmates, teachers, and families.

6. It Shows Your Effort and Excitement

- Your project should show that you worked hard and had fun!
- Neat writing, colorful visuals, and your own words make it shine.

Remember: The best science fair projects don't have to be the biggest or fanciest—they just need to show your thinking, your testing, and your love of learning!

What Is a Reliable Resource in Science?

When scientists write or talk about their discoveries, they use reliable resources. That means they get their information from places that are trustworthy, accurate, and checked by experts.

Here's how to tell if a book, website, or article is a reliable science resource:

In a Book: Look for books written by scientists, science teachers, or science writers.

- Check if the book has a publisher you recognize, like National Geographic Kids or Scholastic.
- See if it has real facts, diagrams, and a glossary (a list of science words at the back).
- It should not be just someone's opinion or made-up story.

On a Website:

- Reliable science websites usually end in .edu (for schools), .gov (for government), or .org (for organizations).
- Good examples: NASA.gov, NationalGeographicKids.com, or SmithsonianEducation.org.
- The website should say who wrote it and when it was last updated.
- It should not have silly ads, fake facts, or things that sound too wild to be true.

In a Peer-Reviewed Journal:

This is a special kind of science writing. Let's break it down:

- Peer means another scientist who studies the same thing.
- Reviewed means they read the article carefully to check if the science is correct.
- A peer-reviewed journal is like a science magazine for grown-up scientists. Before anything gets published, other scientists double-check the work.

Think of it like this:

If you wrote a science report and your teacher asked two other science teachers to check it before giving you a grade—that's what peer review is!

Why It Matters:

Using reliable resources helps us learn the truth about the world—not just guesses or opinions. Scientists want to be sure their discoveries are based on real evidence, and we do too!

Science Fair Project Planner

Name(s): _____

✓	Due Dates	Tasks
	11/20	Choose topic and write project question.
	11/21	Get approval from your teacher.
	12/4	Research your topic. Write science terms and paragraph.
	12/5	Write hypothesis.
	12/11	Design experiment; list variables and write procedure.
	12/12	List and gather materials.
	1/8	Conduct experiment multiple times. Record observations and data.
	1/8	Create a table, chart, or graph of the data.
	1/8	Draw conclusions. Explain how you would improve your experiment.
	1/15	Make the project display.
	1/15	Write and print abstract.
	1/27	Present project at science fair.

Choose a topic for your science fair project:

What question do you want to answer by doing this science fair experiment?

Submitted for approval on 11/21

Approved: ____

Resubmit: ____

Teacher's notes:

Project Hypothesis

State Your Hypothesis

Based on your research, decide what you think the outcome of the project will be and make a good guess as to what you think the answer to your question will be.

Also explain WHY you think that will be the outcome. Remember, it is ok if you don't have the right answer; that is how scientists make discoveries. Make sure that your hypothesis is written in a complete sentence.

Start by listing some possible outcomes or answers to your question.



Decide which outcome is most likely. This will be your hypothesis. Clearly write your hypothesis in complete sentences.

Project Research

Research Your Topic

Spend some time learning more about your topic. Use reliable Internet sources, books from the library, your science book, or other resources. Not only do you want to be an expert on your topic, but you want to teach others about your topic.

Science Terms - locate at least 3 key science words related to your topic. Your science book is an excellent place to find these. Make sure that the words you choose are directly related to your topic. Provide a definition of each key word IN YOUR OWN WORDS.

Term	Definition

Project Experiment

Conduct experiment

Scientists conduct an experiment many times in order to get the most accurate data, so make sure you also conduct your experiment multiple times. During your experiment you need to collect data and make observations. You will record these in your Experiment Log. After you have completed the experiment use your log to write down the data and observations below. In your log you will need to:

Collect Data - you will need to collect numerical data; that means you need to take measurements during the experiment. Measurements can be temperature, distance, height, etc. Creating a chart is a helpful way to organize your data. You will analyze the data later to determine the results of your experiment.

Make Observations - as you conduct your experiment you will use your senses (sight, smell, touch, etc.) and write down any observations you make during the process.

Observations

Project Experiment

Materials

List all materials needed to complete the experiment. Be specific about type, size, brand, etc.

A large dashed rectangular box with rounded corners, intended for listing materials. The box is empty and occupies the lower two-thirds of the page.

Project Conclusions

Draw Conclusions

Analyze the results and determine how the results helps you answer your project question. Write your answer in a complete sentence using the question to begin your answer. You also need to tell whether your hypothesis was supported or if the results contradict the hypothesis. If it was not supported, explain why you think so. End this paragraph by saying how you would change or improve your experiment in the future.

Answer to your project question: _____

Did the results support or contradict the hypothesis? Explain. _____

How would you improve or change the experiment? _____

Project Results

Determine the Results

Now it is time to review your data and observations to find out what happened during the experiment. Think about the best way to show your data: bar graph, line graph, chart, etc. and then create a table or a graph below. This visual will help you analyze your data for trends.

Results

Use this space, or a separate sheet in your notebook, to sketch 1 or more tables, charts, or graphs to analyze your data.

Project Component Score Sheets

Name(s): _____

You will receive a grade for completing the required components of a science fair project. Use this score sheet as a checklist as you complete your science fair project.

Component	Points Possible	Points Received
Science Fair Planning Packet	10 pts	
Display Board with: Question/Title Hypothesis Science Terms/Research Procedure and Materials Photos/Drawings Chart or Diagram Results Conclusion	10 pts	
Experiment Log	10 pts	
Abstract	10 pts	
TOTAL →	40 pts	

Project Content Score Sheets

Name(s): _____

You will receive a grade for the quality of the content of your science fair project.
Use the score sheet as a guide as you complete your project.

Content	Points Possible	Points Received
Question * Question is relevant and testable through experimentation.	10 pts	
Research * Science terms and research are relevant to the question being tested.	10 pts	
Hypothesis * Hypothesis is based on observations.	10 pts	
Procedure * Procedure is clearly outlined and presents a controlled experiment.	10 pts	
Results * Results are communicated clearly through graph/chart and well written explanation.	10 pts	
Conclusion * Conclusion includes appropriate evaluation of data and proves or disproves the hypothesis.	10 pts	
TOTAL →	60 pts	

Science Fair Self and Peer Score

Name: _____

Reflect on how you and your group members worked together as a team. Complete the first section for yourself and then the rest for each of your group members by circling the appropriate number on the scale. 1 is the lowest score and 5 is the highest score. Provide comments to support your scores.

Name: Me	
Ability to work as a group, share responsibility, and solve problems appropriately.	1 2 3 4 5
Ability to stay focused and on task during science fair time.	1 2 3 4 5
Comments:	

Name:	
Ability to work as a group, share responsibility, and solve problems appropriately.	1 2 3 4 5
Ability to stay focused and on task during science fair time.	1 2 3 4 5
Comments:	

Name:	
Ability to work as a group, share responsibility, and solve problems appropriately.	1 2 3 4 5
Ability to stay focused and on task during science fair time.	1 2 3 4 5
Comments:	