

# 2025 Science Fair

Dear Students and Parents of grades 3, 4, and 5:

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, understanding of emerging science and technology. Science fairs involve students in the practices of science and engineering, requiring them to apply those skills to a topic of interest to them.

We are happy to announce that the time is drawing near for our annual science fair. Projects will be due on Monday, January 27, 2025. The Science Fair presentations and judging will take place on Tuesday, January 28, 2025, by faculty and alumni now attending Seton.

Grading Rubrics and a Science Fair Project Planner are attached. These are designed to help you walk through your project and keep your student on track. Students are required to fill in their project planner as a rough draft with their trifold. Each step of the project planner is due on the schedule due date and will be graded.

## DUE DATES:

Step 1&2 Topic and Purpose: December 13

Step 3&4 Research and Hypothesis: January 13.

Step 5&8 Experiment, Materials, Analysis, and Conclusion: January 20.

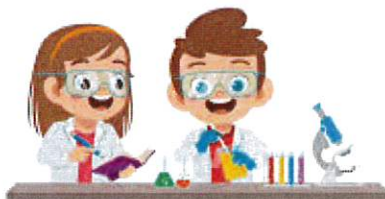
Projects and Trifold brought to school: January 27.

Presentations and judging: January 28.

Science Fair Family viewing: January 29 at 3:00 PM

Projects will be sent home on January 30.

Please feel free to contact your teachers for any questions you may have or need assistance.





# 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

Data

A large dashed-line rectangular box with rounded corners, intended for recording data. The box is empty and occupies most of the page below the 'Data' label.

# 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 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: \_\_\_\_\_

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Did the results support or contradict the hypothesis? Explain. \_\_\_\_\_

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How would you improve or change the experiment? \_\_\_\_\_

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# Project Presentation

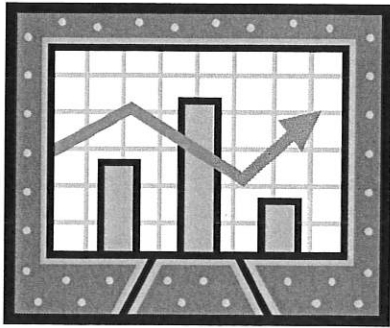
## Display board

Now that you have completed your experiment you will begin setting up your display board to communicate the results of your experiment to others.

Remember, the board is graded on the information you present, not how colorful or pretty it looks. Your display board must have ALL of the following components located in the same places.

## Other board guidelines:

- Font should be easy to read and at least a size of 16pt or greater.
- Photos should not include faces of students.
- Information on the board can be typed or written neatly by hand.

<p><b>Hypothesis</b></p> <div data-bbox="126 907 443 1054"></div> <p><b>Key Words and Research</b></p> <div data-bbox="126 1159 443 1327"></div> <p><b>Procedure and Materials</b></p> <div data-bbox="126 1432 443 1705"></div>	<p><b>Question/Title</b></p> <div data-bbox="535 907 1047 982"></div> <p><b>Photos or Drawings</b></p> <div data-bbox="560 1102 1047 1249"><div data-bbox="560 1102 706 1249"></div><div data-bbox="722 1102 868 1249"></div><div data-bbox="885 1102 1047 1249"></div></div> <p><b>Graphs</b></p> <div data-bbox="600 1365 987 1690"></div>
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# 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.

<b>Component</b>	<b>Points Possible</b>	<b>Points Received</b>
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.

<b>Content</b>	<b>Points Possible</b>	<b>Points Received</b>
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 Reflection

Name: \_\_\_\_\_

1. What went well with your science fair project?
2. What didn't go so well with your science fair project?
3. How well did you/your group stay on task to meet deadlines?
4. What would you do differently if you were to do your science fair project over again?
5. If you worked with a group, how well did you work together?

# 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.

<b>Name:</b> 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:	

<b>Name:</b>	
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:	

<b>Name:</b>	
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:	



# 2022 Science Fair

Dear Students and Parents of grades 3, 4, and 5,

January 3, 2022

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, understanding of emerging science and technology. Science fairs involve students in the practices of science and engineering, requiring them to apply those skills to a topic of interest to them.

We are happy to announce that the time is drawing near for our 8<sup>th</sup> annual HTCS Science Fair. **Projects will be due Thursday, January 27<sup>th</sup>, 2022. The Science Fair judging will be held on Friday, January 28<sup>th</sup>, 2022 by our very own HTCS alumni.**

This year students will be judged in one of three categories: Earth Science, Physical Science/Engineering, or Life Science. A winner will be chosen from each category, 4<sup>th</sup> and 5<sup>th</sup> will be judged together.

Grading Rubrics and a Science Fair Project Planner are being sent home today. These are designed to help you walk through your project and keep you on track. Students are required to fill in their project planner as a rough draft for their trifold. To keep you on track, each step of your Project Planner will be due to your teacher and will be used as a grade.

## Due Dates

Grade	Steps 1 & 2: Topic and Purpose	Steps 3 & 4: Research and Hypothesis	Steps 5-8: Experiment, Materials, Analysis, and Conclusion	Projects and Trifolds brought to school
3 <sup>rd</sup>	January 6 <sup>th</sup>	January 13 <sup>th</sup>	January 20 <sup>th</sup>	January 27 <sup>th</sup>
4 <sup>th</sup>	January 6 <sup>th</sup>	January 13 <sup>th</sup>	January 20 <sup>th</sup>	January 27 <sup>th</sup>
5 <sup>th</sup>	January 7 <sup>th</sup>	January 14 <sup>th</sup>	January 21 <sup>st</sup>	January 27 <sup>th</sup>

These experiments and tri fold project boards should be completed at home and parental guidance is welcome!

Please feel free to contact us for any supplies you may need to borrow from the science lab. **The Elementary Team will be available for additional Science Fair project help after school Monday through Thursday until 3:45, with the exception of Tuesday, 1/18. Parents must email homeroom teachers at least one day before attendance. If we are not notified if your child is staying, then students will not be allowed to participate and we will contact you to come get them.** These days will not be teacher directed, but will be more teacher guided. Therefore, students must come with their materials and be prepared. **Students are not required to come, but services will be offered each day if students need assistance.**

Sincerely,

Cynthia Erickson, 4<sup>th</sup> Grade Curriculum  
[CErickson@charlestandioocese.org](mailto:CErickson@charlestandioocese.org)

Erick Hugo, 5<sup>th</sup> Grade Curriculum  
[EHugo@charlestandioocese.org](mailto:EHugo@charlestandioocese.org)

Kendra Trexler, 3<sup>rd</sup> Grade Curriculum  
[KTrexler@charlestandioocese.org](mailto:KTrexler@charlestandioocese.org)

Michelle Harrison, 2<sup>nd</sup> Grade Curriculum, Science  
Curriculum Coach  
[MHarrison@charlestandioocese.org](mailto:MHarrison@charlestandioocese.org)



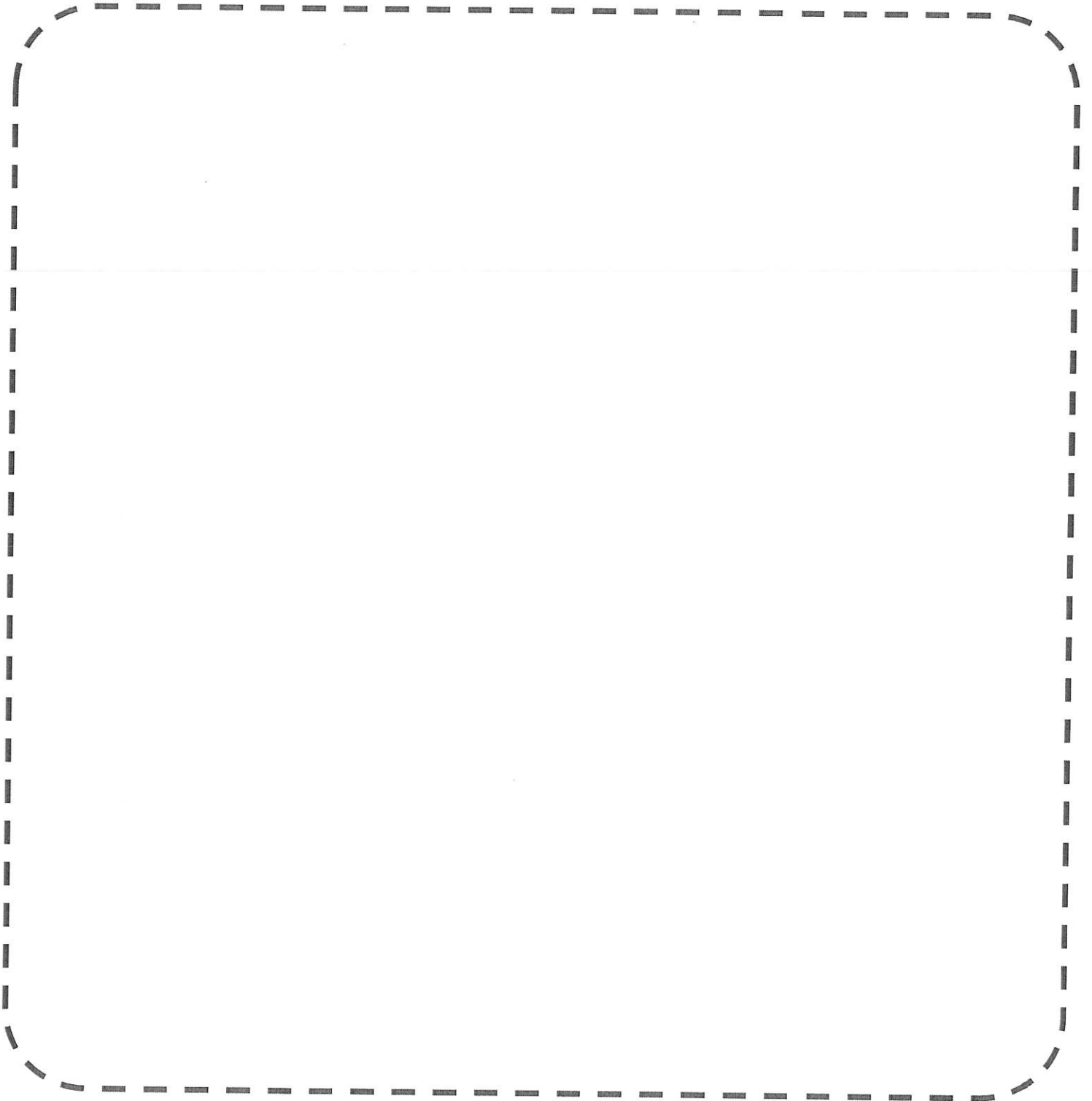




# Project Experiment

## Materials

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

A large, empty rectangular box with rounded corners, outlined with a dashed line. This box is intended for the student to list all materials needed for the experiment.

# Project Experiment

## Design Your Experiment

Clearly write out the procedure you are going to follow. Remember that your experiment needs to follow the scientific process and that you need to have one variable that you are going to change (independent variable). There are three variables in a scientific experiment: independent, dependent, and controlled. The *independent variable* is the one, and only one, variable you will change. The *dependent variables* are those being observed and measured throughout the experiment.

The *controlled variables* are those that remain constant and allows you, the scientist, to understand how the experiment would react under normal circumstances.

Independent Variable:

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Dependent Variables:

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Controlled Variables:

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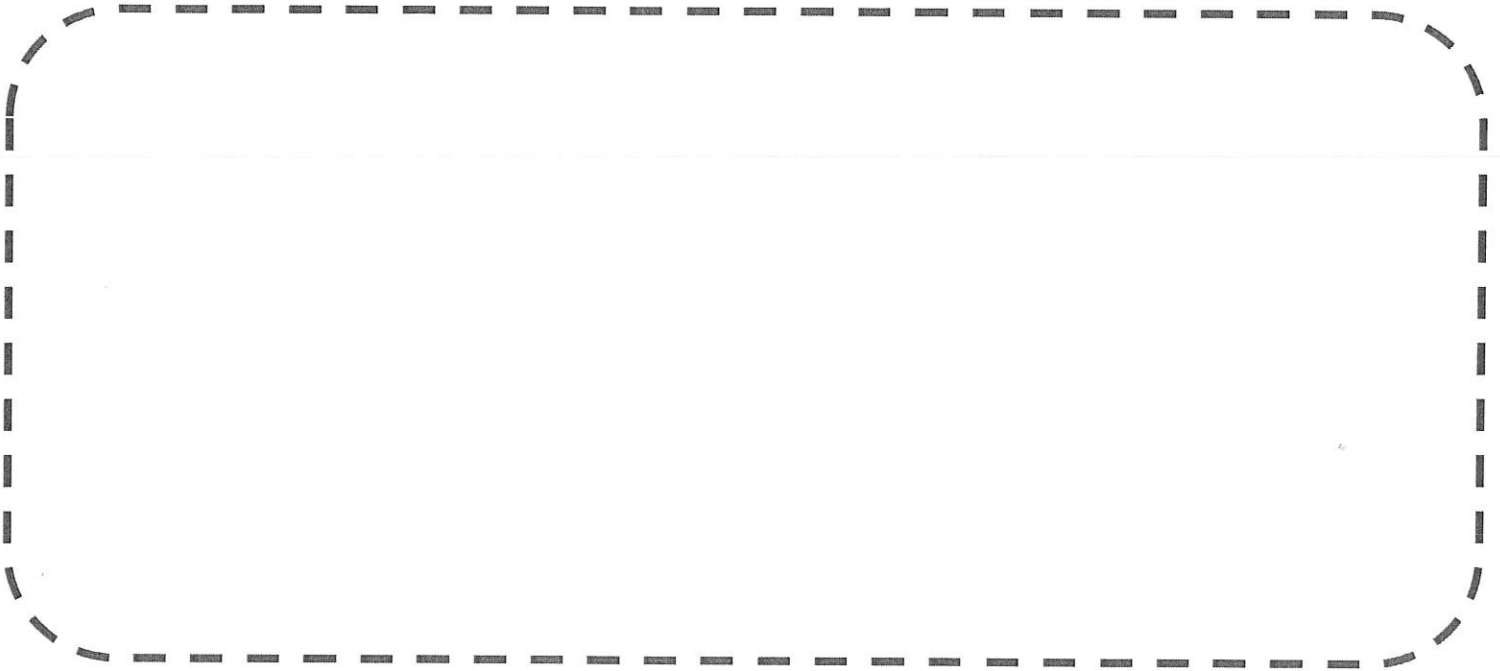
# Project Hypothesis

## 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.

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# 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 Question

## Think of a Question

Your question will drive your entire project. Make sure that your question is something that can be measured and answered by following the scientific process. You may use the project question for your project title.

Brainstorm some possible questions that you are interested in learning more about.



Once you have decided on your project question, write it on the lines below and then get approval from your teacher to begin your project.

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# Science Fair Project Planner

Name(s): \_\_\_\_\_

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