

WSFCS Science Fair 2022

*Speas Global
Elementary School*



Science Project Instructions

❖ Due on December 9, 2022

***Each project should be displayed on a tri-fold board. We are returning to in-person science fair with a board displayed to show your work. Boards will be judged at Speas and the winners will move on to the district competition Thursday, Jan. 12, 2023 at Kaleideum North.

Tri-fold boards can be found at some Dollar Trees, Wal-Mart, Target, CVS, Office Depot/Max, Michael's, and other retailers that carry them.

Projects should include the following sections and labels:

1. **Question**

- Think of a topic that you really enjoy. A science fair project is much more interesting if it involves something that you really enjoy!
- Choose a question that you can test. For example, instead of “How does a plant grow?” choose “How does fertilizer affect plant growth?”

2. **Hypothesis**

- Guess an answer to the question. There is no right or wrong answer at this point – it is whatever you think the outcome may be.
- For example, “I think that fertilizer will make the plants grow taller.”

3. **Materials**

- List everything that you will use in your experiment. This is just a list, nothing more.

4. **Procedure**

- Write out step-by-step directions. These directions should be written so that someone knowing nothing about the experiment could conduct the exact same experiment just by following what is written.
- This section should be numbered or bulleted so that it is easier to follow.
- Keep in mind that a good scientific experiment includes a variable (what is being tested) and a control. In the example above, fertilizer is the variable. This means that I would include plants with fertilizer (variables) and plants without (control).
- Aside from the variable, all the conditions should be kept the same throughout the experiment.
- Repeat the experiment a minimum of *three* times and average the data together for a more accurate experiment.

5. Data

- This is all the information collected during the experiment. For example, if I measured the growth of the plants every day, I would put that information here.
- When possible, display data in chart or graph form. This makes for easier reading and understanding.
- Include any photos of the experiment in this section.
- If you used any animals in your experiment, include photos of them here. You may not harm animals in any way in your experiment.

6. Conclusion

- Write the answer to the question here. This is the answer that you determined through your experiment.
- Include any information that you learned here.
- What might you do differently now that you have completed the experiment hoping to better your results.

7. References

- Include in this section any books, Web Sites, and people that helped you with your project.

Suggested Questions You Can Answer with Your Science Project

1. How does the type of soil affect the growth of a seedling?
2. Which brand of dish soap makes the most bubbles?
3. Which brand of diaper holds the most water?
4. How does the amount of liquid in a bottle affect the pitch of a noise made by blowing on the top of the bottle?
5. How does the color of an object affect the amount of heat absorbed by that object?
6. How does soaking the seeds affect the amount of time for seed germination?
7. How does the number of wraps of the electrical wire affect the strength of an electromagnet?
8. Does the shape of a kite affect its flight?
9. Will more air inside a basketball make it bounce higher?
10. Do boys or girls have a higher resting heart rate?

Didn't Find a Question that Interests You?

Our Speas Media Center has some excellent resources on Science Fair Projects. Public libraries also have many materials that will give you ideas for a project and guide you through the completion of that project.

The following websites will help too:

- <http://www.all-science-fair-projects.com/>
- <https://www.basef.ca/choosing-a-science-fair-project-topic-steps-and-inspiration/>
- <https://www.sciencebuddies.org/science-fair-projects/topic-selection-wizard/background-info>
- <https://www.scholastic.com/parents/school-success/homework-help/homework-project-tips/science-fair-101-how-to-pick-perfect-project.html>
- <https://www.livescience.com/38122-science-fair-project-topics.html>
- <https://www.jpl.nasa.gov/edu/learn/activities/science-fair-project/>
- <http://scifair.org>

Be sure to choose a question that you have the ability and materials to answer. Be realistic!

GOOD LUCK AND HAVE FUN WITH YOUR PROJECT

2022 Science Fair Project Timeline

Name _____

Science Fair Project Assigned/Packet sent home	
Title Short title of your experiment	
Research Question/Purpose Compose a question that asks what it is you are investigating.	
Hypothesis A statement that answers your Research Question and states what you think will be the outcome of your experiment.	
Materials Make a complete list of all supplies, equipment and quantities used in the experiment. Each item should be listed on a separate line. (If you need help in getting materials, please let your teacher know.)	
Procedures Number each step of your experiment so that another person could perform the same experiment. You should use pictures, or drawings to illustrate your procedure.	
Results/Data You must have an explanation of what happened. Explain all the variables and observations. You must have data in a table or graph form. Use graphs and charts attaching paper if needed.	
Error Discussion (if needed) It is not an error if your hypothesis is wrong. You only need this section if something went wrong with your experiment procedures.	
Conclusion A paragraph that states what you have learned from completing the experiment.	
Research and References Is the answer to your research question already well known? Research must be in your own words – not copied from the internet! Include a list of at least three references or sources used.	
Project <u>Completed projects must be placed on a display board.</u> Do not forget to put your name and grade level on the back of your board.	



2022 Science Fair Project Outline

Projects are due on December 9, 2022

Title:

Short title of your experiment

Research Question/Purpose:

Compose a question that asks what it is you are investigating.

Hypothesis:

A statement that answers your Research Question and states what you think will happen in your experiment.

Materials:

Make a complete list of all supplies and equipment and quantities used in the experiment. **(If you need help in getting materials for your project, please let your teacher know.)**

Error Discussion:

It is not an error if your hypothesis is wrong. You only need this section if something went wrong while conducting your experiment.

Conclusion:

A paragraph that states what you have learned from completing the experiment.

Research and References:

Is the answer to your Research Question already well-known? **Research must be in your own words.** Include a list of at least three references or sources used.

1.

2.

3.

Completed Project: Due December 9, 2022

Science fair judging will be conducted after all projects are turned in on December 9, 2022.