2021

4th/5th Grade Packet

SCIENCE FAIR

Scientific Method

PURPOSE
What would you like to learn?

RESEARCH
Collect as much info about your subject as you can.

HYPOTHESIS
Make a prediction about the outcome of your research.

EXPERIMENT
Design a test to confirm or disprove your hypothesis.

ANALYSIS
Record what happened during the experiment.

CONCLUSION
Was my hypothesis correct?

Science Fair Digital Slides Layout Information

What do I need on each slide?

Instructions Slide: Delete this slide before submitting your Slide Deck on 2/15/21.

Purpose/Question: State your purpose as a question or a statement. What is it you that you want to find out by doing this project?

Hypothesis: Form a hypothesis. What do you think is going to happen? Based on what you know or found out, what do you think the results of your experiment will be? After doing the experiment, it may turn out that your guess was wrong. It's okay if this happens.

Background/Research/Works Cited: Look at any books that might help you, make observations by simply looking at things, talk to people, and find out as much as possible about your topic. Write down any ideas you have and where you got them.

Experiment Materials: List all materials that will be used in your experiment. Include exact quantities for each item used.

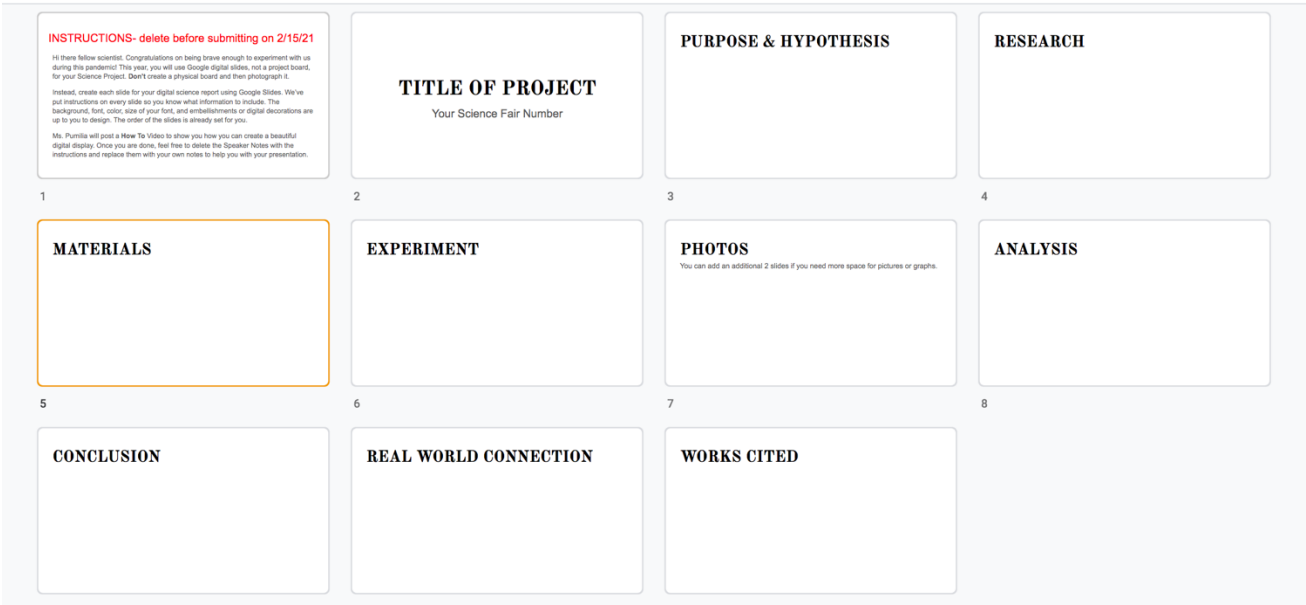
Procedures: List and describe the steps taken to complete the project. Present the steps in a chronological order or numbered order.

Data: Collect information during your experiment. Take pictures of the process. Organize the information in chronological order.

Results: Explain the experiment outcomes. Show what happened by making a chart, graph, or table. Include the date, the time, and any other useful information. Write measurements clearly.

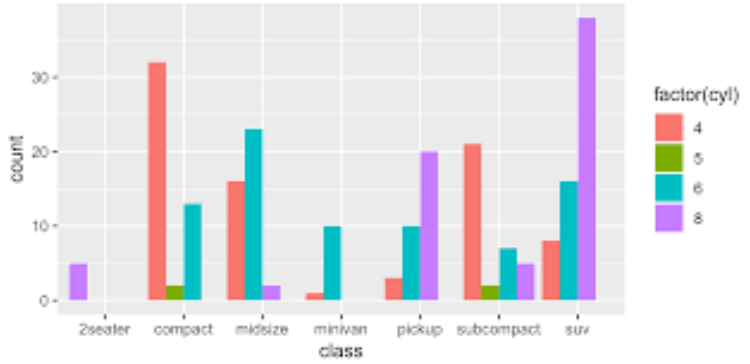
Conclusion: This is a brief statement explaining why a project turned out the way it did. Students should explain why the events they observed occurred. The conclusion should tell whether the hypothesis was proven or not proven. It should offer an answer to the student's original purpose.

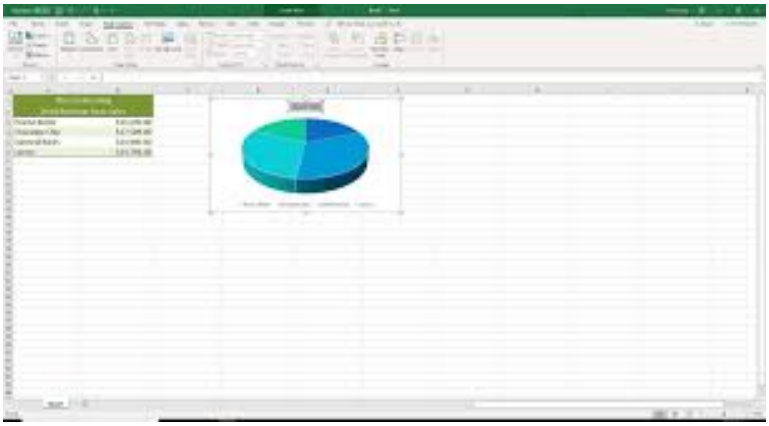
Real World Connection: This is a statement describing why the experiment you completed is important to the world. Why does it matter? How can you or your friends use this information to make decisions about the world around you?



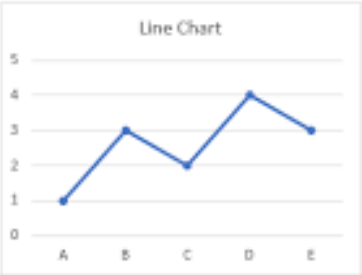
Fourth and Fifth Grade Graphing Examples

Students in 4th/ 5th should explore Excel/Google Sheets and attempt to generate a computerized graph.





	Data
A	1
B	3
C	2
D	4
E	3



Walt Disney Elementary Science Fair Rules and Regulations

GENERAL SAFETY RULES

1. Think safety first before you start. Make sure you have recruited an adult to help you.
2. Always keep your work area and experiment clean and free of contaminants.
3. Wear protective goggles when doing any experiment that could lead to eye injury.
4. Do not touch, taste, or inhale chemicals or chemical solutions.
5. Respect all life forms. Do not perform an experiment that will harm an animal.
6. All experiments should be supervised by an **adult!**
7. Always wash your hands after doing the experiment, especially if you have been handling chemicals or animals.
8. Dispose waste properly.
9. Any project that involves drugs, firearms, or explosives is not permitted.
10. Any project that breaks district policy, and/or local, state or federal laws is not permitted.
11. Use safety on the Internet! Never write to anyone without an adult knowing about it. Be sure to let an adult know about the websites you will be visiting or have them guide you through the research.
12. If there are dangerous aspects of your experiment, like using sharp tools or experimenting with electricity, please have an adult help you or have them do the dangerous parts.

SCIENCE FAIR RULES

1. I will research Science topics and choose an experiment I find exciting.
2. I will complete the Google Form Application with my parent's help.
3. I will use the Google Slides template board that will be assigned to me as a Google Assignment.
4. Even though I know my parents can help gather materials and supervise the experiment, I will do the work on my own and discover as much as I can about the scientific process.
5. I will focus on an experiment not a demonstration. I know that there is a difference:

An experiment takes place over time (ex. multiple attempts or a period of observation) to show evidence of your hypothesis. demonstration is done once to show a discrepant event like mixing Diet Coke and Mentos or baking soda and vinegar.

6. I will make a real -world connection to my experiment and ask why is the experiment important?
7. I understand that the digital boards will be completed in English.
8. I understand that I can't perform my project or experiment live. I will do my best to explain what I learned and discovered to the judges.
9. I will demonstrate my effort and hard work through my display board which will be a Google Slides assignment. I will add pictures and be knowledgeable during my live Zoom presentation to the judges.
10. I know that my presentation has a limit of 5 minutes. I may or may not be asked follow up questions by the judges after my presentation. I will be prepared for a discussion either way.
11. My live presentation will be done by me with the Science experts on Zoom, and even though my parents can watch, they will not help me. I will rock the presentation on my own!
12. I will respect all the adults involved in the virtual fair, especially the experts! I know they are there to help me grow as a scientist. All the comments I receive are to help me become a great thinker!
13. I understand that all decisions from the experts and the Science Fair Committee are final.
14. I promise to have fun learning something new!

Science Fair Project Slides and Presentation Check List

1	My digital slides are typed accurately, grammar is correct, slides are pleasing to read.	
2	My title, purpose, and hypothesis are stated!	
3	All of my resources are cited- I've included at least 3 sites and/or articles.	
4	I have listed my step-by-step experimental procedures.	
5	I can show measurable data that includes at least 3 or more trials. My data and results are shown visually with graphs, charts, or tables.	
6	I have a well-written and organized conclusion based on my results.	
7	I practiced my 5 minute presentation out loud.	
8	I have an in-depth knowledge base of the topic and am able to use related vocabulary at my grade level.	
9	I have stated a real life connection to my experiment.	
10	I can answer the question: *Given the chance, what would you have done differently?*	

Judge's Scoring Rubric for 4th – 5th grade

Scoring: 5 = Outstanding, 4 = Above Average, 3 = Average, 2 = Below Average, 1 = Unsatisfactory

GENERAL

The **question** clearly explains what is going to be experimented.	5 4 3 2 1
Hypothesis shows a relationship between independent and dependent variables.	5 4 3 2 1
Procedure is logical, replicable, and provides for repeating tests for validity.	5 4 3 2 1
Qualitative (observations) and **quantitative** (recorded data) observations are evident.	5 4 3 2 1
Conclusion/ results states whether the hypothesis was right or wrong and why. This would include any discussion on how the data supports the conclusion.	5 4 3 2 1
The **scientific method** shows completeness of thought and cause and effect are clear.	5 4 3 2 1

Score _____

DIGITAL LAYOUT

Slides are attractive, easy to read, and layout is in a logical order.	5 4 3 2 1
Variables (independent, dependent, and controlled) are clearly stated.	5 4 3 2 1
Materials listed with quantities and units of measure are stated.	5 4 3 2 1
Graph and data are clearly labeled, summarized, and easy to understand.	5 4 3 2 1

Score _____

ZOOM PRESENTATION

Student demonstrates an understanding of the project by presenting the project, hypothesis, and their results, and not reading off the slides.	5 4 3 2 1
Student was able to explain data table/graph demonstrating understanding of the contents.	5 4 3 2 1
Student was able to answer any questions posed by judges.	5 4 3 2 1
Student was able to discuss desired changes if they were to repeat the project.	5 4 3 2 1
Student was polite, courteous, and enthusiastic about his/her project.	5 4 3 2 1

Score _____

Total Score _____

TOTAL POINTS - 75