

Science Fair Presentation:

Preparing for Science Fair Judging— Practice Makes Progress!

- If you can communicate your science fair project well, you maximize your chances of winning.
- Write up a short "speech" (about 2-5 minutes long) summarizing your science fair project. You will give this speech when you first meet the judges. (Remember to talk about the theory behind your science fair project-why your project turns out the way it does.)
- Organize a list of questions you think the judges will ask you and prepare/practice answers for them.
- Practice explaining your science fair project in simple terms so anyone can understand it.
- Make good use of your display board. Point to diagrams and graphs when you are discussing them.
- Be confident with your answers; do not mumble.
- If you have no idea what the judge is asking, or do not know the answer to their question, it is okay to say "I do not know."
- Treat each person who visits you like a judge, even nonscientists.
- After the science fair, always ask for feedback from the judges to improve your project.

What do and what to say

(Make sure you are standing just off to the side of your project so that everyone can see it when they walk up. Appearance can be important, so do hesitate to dress up. Don't be slouched in a chair and have the judge get you ready for YOUR presentation! Shake the judge's hand and introduce yourself. **EYE CONTACT IS KEY!**)

- Hello, my name is (your name) and my science fair project is on (very brief description of your topic, but don't be too vague).

-The reason that I chose this particular project is because (explain why you wanted to do this project: Interesting, fun, challenging, etc.). The first part of the experiment was to develop a hypothesis on the outcome of the experiment. My hypothesis was (state your hypothesis, along with why you think that would be the outcome).

-Before I began the procedure, I researched some literature on the subject. The sources that I chose to read were (list your sources and say why they are relevant). According to my research, the outcome of the experiment should be (state the theoretical or experiments conducted on the same topic. Do they agree with your hypothesis?)

-The materials that I used in my experiment were (list materials and say how they were relevant to the experiment, as well as any safety precautions that you had to take with any of the materials).

-This experiment followed a specific procedure as follows: (list the steps IN ORDER and thoroughly explain each step so that there is no confusion. The last thing you want is a judge not knowing what you even did!)

-After following all of the steps in the procedure, the results that I found were (explain the outcome. What happened? Don't omit any details in the results that could be useful in the conclusion!)

From the results, I came to the conclusion that (What did you learn? Were you right/wrong? It's ok to be wrong because then you can talk about what you learned, which is the point of the whole science fair. Did you enjoy the process? Is there anything else that you can draw from these conclusions?)

-Thank you for your time. Do you have any questions? (Answer any questions that judges or spectators may have about your experiment. Be thinking of questions that might be asked so you are prepared and have a confident response. At the end shake the hand of the judges one more time and thank them again.)

Science Fair Project:

Every student at RT Alderman is expected to complete a project to share in our Celebration of Learning in our R. T. Alderman School Science Fair on Jan. 28, 2021.

Some projects will be chosen to represent our school at the Calgary Youth Science Fair on April 17, 2021.

Project Ideas:

Check these websites out for ideas: : www.cysf.org, <https://sciencefaircentral.com/>,

www.sciencebuddies.org, and List of Science Fair Ideas and Experiments You Can Do. Save all your work. Student work must be put in the student Log Book (duo-tang provided by school).

Home:

- Proposal (decide with parents) ✓
- Purchasing of materials needed for experiment ✓
- Experiment ✓
- Pictures of experiment ✓
- Observations and data collection ✓
- Anything not completed during school time ✓
- Finish work not complete by due date ✓

School:

- Proposal (final approval by teacher)
- Background research
- Write procedure/plan
- Hypothesis and problem formulating
- Data analysis
- Graphing
- Conclusions
- Create poster (provided by school)
- Practice presenting

| Step | Description | Due Date | Check |
|--|---|--|-------|
| Write a proposal | - Approved by teacher | Dec 3, 2020 | ✓ |
| Background Research | - Typed as a written report - One or Two paragraphs | Dec 10, 2020 | ✓ |
| Make a plan | - Write Procedure/Plan for your experiment | Dec 10, 2020 | ✓ |
| WORK AT HOME - Take lots of Pictures | - Perform your experiments - Revise/Record observations, data (three or more replications) | DUE - first day back after Winter Break: Jan 5, 2021 | ✓ |
| At School - What happened ? | - Data analysis, graphs - Conclusion | First week of Jan (analyzing data, writing conclusion) | ✓ |
| Prepare a poster | - At school | Jan 11- Jan 15 | ✓ |
| Write & practice presentation. | - Practice presenting - Practice answering questions | Jan 18- Jan 22 | |
| Present your work | - Present your project at the school science fair. | Jan 28, 2021 | |

Possible Ideas for Science fair

Task:

- Write down ideas
- for each idea list variables
- Controlled
- Manipulated / Independent
- Responding

Idea's

Freeze dry Almond-milk VR Cow milk

Manipulated = Almond milk and Cow milk

Controlled: Freeze dryer / time / amount

Responding: which one last the longest or which one is heavier

What temperature effect magnet strength

Due Dec 3

Science Fair Proposal

Student name:

Harlow

Preston

Project Title (be creative) — (Can be added later)

Project Question (What problem are you going to explore?):

Which type of milk is more viable to transport based on weight.

Hypothesis based on your project question.

Example: **If**...(I do this) ...**then**...(this will result)... **because**

If I freeze dry ^{2%} cow milk VR almond [✓] milk vs soy milk
then I think the cow milk will be
heavier because I think ^{2%} cow has more fat
then almond

Variables:

Manipulated variable (what you change): ~~* amount of milk~~ types of milk

Responding variable (what you watch for): which milk ends up heavier

Constant variables (what stays the same): amount of milk
time, ~~the~~ process of freezing.

Required materials:

Freeze dryer = to freeze dry it.

Almond milk = to compare

Cow milk = to compare

Scale = to see which one is heavier

measuring cup = measure

Container = to store my finished product

| | |
|--|--|
| Can you find at least three sources of information on the subject? | <input checked="" type="radio"/> Yes/ <input type="radio"/> No |
| Is your experiment safe to perform (for yourself and others)? | <input checked="" type="radio"/> Yes/ <input type="radio"/> No |
| Will you be able to get all the materials/equipment you need ? | <input checked="" type="radio"/> Yes/ <input type="radio"/> No |
| Do you have enough time to do your experiment for Jan 5 ? | <input checked="" type="radio"/> Yes/ <input type="radio"/> No |

FOR STUDENT: I have discussed the project idea and the checklist with my parents/guardian and I am willing to commit to following through on this project.

Student Signature HP Date Nov 30/2020

FOR PARENT: **I have discussed the project idea and the checklist with my child** and I believe they can follow through with this project. I will support them, as needed, in the completion of this project. I understand that while parents can support their child in completing the project, the student is expected to do the work themselves and learn from their mistakes as part of the scientific process.

Parent Signature [Signature] Date Nov 30/20

Approved by Teacher:

[Signature] Date Dec. 3, 2020

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GRADE 5 SCIENCE FAIR RUBRIC

ENGLISH LANGUAGE ARTS

Name: _____

| 4 Excellent | 3 Good | 2 Basic | 1 Not Yet |
|--|---|--|--|
| <p><u>Asks specific questions to insightfully guide project</u></p> <p>Develops and adjusts plan to organize information</p> <p><u>Numerous sources</u> are selected and they are all</p> <ul style="list-style-type: none"> • Specific • Relevant • Properly cited | <p><u>Asks relevant questions to intentionally guide project</u></p> <p>Develops plan to gather and organize information</p> <p><u>Several sources</u> are selected and they are generally</p> <ul style="list-style-type: none"> • Specific • Relevant • Properly cited | <p><u>Asks general questions to guide project</u></p> <p>Uses a familiar plan to organize information</p> <p><u>Some sources</u> are selected and they are occasionally</p> <ul style="list-style-type: none"> • Specific • Relevant • Properly cited | <p><u>Identifies questions related to the project</u></p> <p>Attempts to use a familiar plan to organize information</p> <p><u>Few sources</u> are selected and they are rarely</p> <ul style="list-style-type: none"> • Specific • Relevant • Properly cited |
| <p><u>Writing (is) consistently</u></p> <ul style="list-style-type: none"> • Clear • In your own words • Demonstrates proper formatting • Includes specific vocabulary • Attends to spelling and grammar | <p><u>Writing (is) generally</u></p> <ul style="list-style-type: none"> • Clear • In your own words • Demonstrates proper formatting • Includes specific vocabulary • Attends to spelling and grammar | <p><u>Writing (is) occasionally</u></p> <ul style="list-style-type: none"> • Clear • In your own words • Demonstrates proper formatting • Includes specific vocabulary • Attends to spelling and grammar | <p><u>Writing (is) rarely</u></p> <ul style="list-style-type: none"> • Clear • In your own words • Demonstrates proper formatting • Includes specific vocabulary • Attends to spelling and grammar |
| <p><u>Slide visuals/ layouts consistently</u></p> <ul style="list-style-type: none"> • Enhance communication • Engage audience | <p><u>Slide visuals/layouts generally</u></p> <ul style="list-style-type: none"> • Enhance communication • Engage audience | <p><u>Slide visuals/layouts somewhat</u></p> <ul style="list-style-type: none"> • Enhance communication • Engage audience | <p><u>Slide visuals/layouts rarely</u></p> <ul style="list-style-type: none"> • Enhance communication • Engage audience |
| <p><u>Presenter consistently</u> includes/uses</p> <ul style="list-style-type: none"> • Relevant specific details and vocabulary • Eye contact • Clear speech • Appropriate volume • Appropriate pace | <p><u>Presenter generally</u> includes/uses</p> <ul style="list-style-type: none"> • Relevant specific details and vocabulary • Eye contact • Clear speech • Appropriate volume • Appropriate pace | <p><u>Presenter occasionally</u> includes/uses</p> <ul style="list-style-type: none"> • Relevant specific details and vocabulary • Eye contact • Clear speech • Appropriate volume • Appropriate pace | <p><u>Presenter rarely</u> includes/uses</p> <ul style="list-style-type: none"> • Relevant specific details and vocabulary • Eye contact • Clear speech • Appropriate volume • Appropriate pace |

Science Fair Presentation Check List ✓

This check list is to help you stay organized and complete your Science Fair presentation on-time.

Due Date: **MONDAY, JANUARY 25, 2021**

Check off the boxes **ONLY** when the section in your Google Slide is **100% completed**:

- ☐ TITLE
- ☒ QUESTION
- ☒ HYPOTHESIS
- ☒ BACKGROUND RESEARCH
- ☒ MATERIALS
- ☒ VARIABLES 29
- ☒ PROCEDURE 15 56
- ☒ GRAPH
- ☒ ANALYSIS OF RESULTS (making statements about your graph)
- ☒ OBSERVATIONS
- ☒ CONCLUSION
- ☒ DISCUSSION (write about your findings. Explain why what happened, happened. Explain your results)
- ☒ REAL WORLD APPLICATION
- ☒ SOURCES OF ERROR
- ☒ NEXT QUESTIONS
- ☒ BIBLIOGRAPHY (make sure all sources are cited properly and in alphabetical order)
- ☒ EDITING (double check for proper spelling, capitalization, etc)
- ☐ MARK YOURSELF ON THE SCIENCE FAIR RUBRIC
- ☐ PRACTICE YOUR PRESENTATION

SCIENCE

| 4 Excellent | 3 Good | 2 Basic | 1 Not Yet |
|---|--|--|--|
| Develops a comprehensive <u>plan</u> to carry out a <u>fair test</u> that is <u>easily</u> replicated <ul style="list-style-type: none"> • Question • Research • Hypothesis • Variables • Materials • Procedure | Develops a <u>substantial plan</u> to carry out a <u>fair test</u> that <u>can be</u> replicated <ul style="list-style-type: none"> • Question • Research • Hypothesis • Variables • Materials • Procedure | Develops a <u>basic plan</u> to carry out a <u>fair test</u> that <u>can be</u> replicated <u>with support</u> <ul style="list-style-type: none"> • Question • Research • Hypothesis • Variables • Materials • Procedure | Develops a <u>limited or incomplete plan</u> to carry out a <u>test</u> that <u>cannot be</u> replicated <ul style="list-style-type: none"> • Question • Research • Hypothesis • Variables • Materials • Procedure |
| <u>Insightful reflections and interpretations</u> <u>clearly</u> states <ul style="list-style-type: none"> • Conclusion based on results • Observations with strong explanations • Sources of error • New questions • Real life applications | <u>Relevant reflections and interpretations</u> states <ul style="list-style-type: none"> • Conclusion based on results • Observations with reasonable explanations • Sources of error • New questions • Real life applications | <u>Basic reflections and interpretations</u> states <ul style="list-style-type: none"> • Conclusion based on results • Observations with basic explanations • Sources of error • New questions • Real life applications | Limited evidence of <u>reflections and interpretations</u> states <ul style="list-style-type: none"> • Conclusion • Observations • Sources of error • New questions • Real life applications |

Slide 1 Science fair google slide

- Title
- Name and last name

Slide 2

- Question

Slide 3

- Hypothesis

Slide 4

- background research

Slide 5

- materials

Slide 6

- variables

- manipulated

- responding

- constant

Slide 7

- Procedure

Slide 8

- Observations

Slide 9

- Graph

Slide 10

- analysis of results

Slide 11

- real world application

Slide 12

- CONCLUSION

Slide 13

- Sources of Error

Slide 14

- next questions

Slide 15

- Bibliography in abc order