

Invention Fair Procedure Basics



***everything in this slide show will
go into your notes...and more!*



Why do I need to rewrite a perfectly okay procedure?

- It doesn't fit the SPIF guidelines
- It needs a cause and effect question
- It needs variations of ONE variable



Cause and effect questions

What are they?

- This question will set up your entire experiment!
- It states within it the **dependant** and **independent** variable.
 - *What you will change* (independent)
 - *Type of data you will collect* (dependant)
- It is very specific!



Cause & Effect questions continued... *How to write them!*

■ Basic setup

- How does changing (the ONE thing that will change) affect (the type of data that you will collect) of (the thing you are working with)?

■ Great example

- How does changing length of the shovel handle affect the resistance force of a shovel blade?



THE Variable

- The experiment will have only **ONE** variable... **one** thing that will change!
- It will be necessary to have variations of the variable

How to set up the variable...

- What is the one thing that will change?
- Change the strength/ concentration/ time/length/percent of it. (It = variable)
- What does that look like?

Shovel Handle	1.0m	1.5m	2.0m	2.5m	3.0m
Pond Water	0%	25%	50%	75%	100%



Trials...

- There will be 5 trials
- Scientists repeat experiments to make sure the same thing always happens!



Magic number 25...

- 5 Trials times 5 variations = 25
- Start trials at the same time!
- This means 25 shovel attempts or 25 launches or 25 batches of bread!
- Yes, 25 is a magic number!!!



The following parts will be in all procedures.

- Title
- Cause and Effect question
- Introduction/Overview
- Materials List
- Safety Symbols
- Procedure
- Graphics/Diagram
- Bibliography at end



Title

- This is the ONE place to have fun with the procedure
- The goal of the title is to catch the attention of the reader



Cause and effect question

- Must be written in the proper format!
- Refer to earlier notes
- MUST be a testable question



Introduction/ Overview

- This is a brief synopsis of the relevance of the invention experiment.
- How does it relate to the world
- What will the inventor/experimenter learn?
- Why should I care about this invention?



Materials List

- The Materials list must...
 - Be a list
 - Include quantities
 - Include all materials needed for the experiment
- The box must be visible (don't hide the lines)



Safety Symbols

- Only necessary if the project/invention needs them!
- If they are left out points will be lost
- Refer to the symbols (teacher)
- Symbols can be found **easily** on the web and brought into the body of the experiment



Procedure

- Step by step, bulleted numbers
- Written in third person
- Tells someone how to create and use the actual invention
- Make sure to include the following...
 - How to set up the variable.
 - How to set up the invention experiment.
 - Explains what type of data will be collected.



Graphic/ Diagram

- This can be fun/silly
- If the invention experiment has a complicated set up PLEASE include a diagram of the setup!



Bibliography

- Attach a bibliography at the end/bottom of procedure
- (Only for the invention experiment idea)