# 8th Annual Baldwin Elementary PTO Science Fair & Pancake Supper Thursday, January 31, 2019 6:00 p.m.-7:30 p.m. Baldwin Intermediate Center


December 4, 2018

Dear Parents, Students, & Teachers:

On behalf of the PTO, I would like to invite you to participate in the 8th annual science fair on **Thursday, January 31, 2019**! Students will have the opportunity to prepare and display a science project, and there will be an open house in conjunction with a pancake supper that evening from 6:00-7:30 at the Intermediate Center for public viewing of all of the projects submitted. All proceeds from the pancake supper will benefit the science fair budget. During the school day of January 24, Hagerman the Magician will provide a science education assembly in the Commons of the Intermediate Center at 2:00 p.m. Families are welcome to attend!

**INTERMEDIATE CENTER PARTICIPANTS**:
For grades 3 through 5, we are providing students the elective and beyond-the-classroom opportunity to create a science fair project. Students are welcomed to partner up or even form small groups (no more than 5 people), but it is up to themselves and their parents if they want to participate and, if so, in what capacity. Entries for 3rd, 4th, or 5th grade students will be included in the "IC Individual/Small Group Project Division" of the science fair. Teachers of grades 3 through 5 have been asked to facilitate this event by distributing information from the

Science Fair Committee as necessary, and to be helpful where and when they can be. To reiterate, participation is optional and can be done outside of class for those who choose. Teachers of grades 3-5 are, of course, more than welcome to incorporate anything they wish into their classroom instruction, per their discretion. Certainly, student projects can be done at school, but this is up to each classroom teacher. In addition, if a 3rd, 4th, or 5th grade class or club (i.e., Robotics Team) would like to submit a group project led by the teacher, we would certainly welcome any of these groups to submit a non-competition class exhibit.

Entries may be one of the following types of projects, but ALL must follow the rubric of requirements provided. So, for example, if the student makes a model of a volcano, the student still needs to provide a hypothesis (which could be about how/why the volcano erupts), a conclusion about what has been discovered as a result of the constructing the model, etc.:

1.) **Experiment** - a display and an explanation of an experiment that follows the scientific method.
2.) **Invention** - a working model that solves a specific problem or makes a job easier to do. Inventions should test a variable and follow the scientific method.
3.) **Model** - something constructed which demonstrates a scientific principle, such as how something works; or a smaller object, built to scale, that represents in detail, a larger object. The scientific concept involved with the model should be explained through the display.

In addition, each project will be provided table space for the purposes of a display board to present the project, along with the information required to explain the project.

**EVALUATION PROCESS AND PRIZES:**
Judging will take place for IC projects during the school day on January 31st. A two-person judging panel will individually score each project. A third volunteer will then calculate the average of the two judges' scores, resulting in the final score for the project. Each project will receive a ribbon based on the following scoring categories:

| | |
|---|---|
| Purple ribbon | (40 – 50 points) |
| White ribbon | (0 – 39 points) |
| Lavender ribbon | (participation ribbon for PC students) |

Of all the purple level ribbons awarded among the IC Individual/Small Group Project Division, one grand champion purple project *for each grade level* will be determined based on the highest score. The winning name(s) will be engraved on the Science Fair Champions Plaque located in the Intermediate Center. The winner(s) will also receive a gift certificate good for the purchase of one trip to Science City!

Please remember that the student must have his/her name on the back of the project and not the front, and the student must not have any identifying pictures of themselves on the display board. *Points will be deducted* if this is not followed. Here is the scoring rubric that will be used:

# Baldwin Elementary Science Fair Evaluation

## Title_____

| | 0 | 1-2 | 3-4 | 5 | Total |
|---|---|---|---|---|---|
| **Problem/ Question** | No question shown | Question is very confusing | Almost! | Great question which should develop into a meaningful experiment | |
| **Hypothesis** | Hypothesis not shown | Hypothesis is very confusing | Almost! | Well thought out hypothesis | |
| **Materials** | No material list is shown | Material list is lacking completion | Most of the materials are listed | Material list is complete | |
| **Procedure** | Procedure is not shown | Procedure is lacking completion | Most of the procedure is included | Someone not familiar with this experiment could proceed with these instructions | |
| **Results** | No results are shown | Results are shown, but not complete | Almost complete, but still lacking | Results are complete. Graphs, charts, and/**or** pictures are included. | |
| **Conclusion** | Conclusion is not shown | Conclusion is shown, but lacking substance | Almost complete, but still lacking | Complete with ways the experiment might be improved next time, what you learned, and if hypothesis is correct. | |
| **Creativity of the question** | No question shown | Question is very confusing | This project has been done many times | What a great, new idea for a project!<br>OR if project done before, your spin shows creativity | |
| **Title** | No title shown | X | X | Title Included | |
| **Workmanship** | All of the following are lacking: organization, attractiveness, easy to read | Two of the following are lacking: organization, attractiveness easy to read | One of the following is lacking: organization, attractiveness, easy to read | Well organized, attractive,and easy to read | |
| **Mechanics** | More than 7 errors. | No more than 6 errors | No more than 3 errors | No spelling, capitalization, etc. errors | |

**INSTRUCTIONS FOR SETTING UP AND TAKING DOWN YOUR DISPLAY:**
Displays can be set up on Wednesday, January 30th, from 3:30 to 7:00 p.m. at the IC gym. IF YOU DROP OUT OF THE SCIENCE FAIR AFTER TURNING IN YOUR ENTRY FORM, PLEASE CONTACT ME AT 785-551-3170, just so I am not there waiting until 7:00 pm for a project that is not coming. Projects will need to be removed following the evening science fair open house. If you are unable to remove your project, it will be placed in the IC hallway for pick-up on Friday, February 1st. Any project not picked up by 2/1 will be discarded, unless specific arrangements have been made with IC staff.

**PROJECT ENTRY REGISTRATION FORM:**
For IC students, the individual/small group project registration form needs to be filled out and signed by a parent. Please limit ONE entry per project. So, if three students are working together, please just turn in one form versus three. *All entry forms are to be turned in to your school office no later than Friday, January 11th, 2019.*

SCIENCE FAIR REGISTRATION FORM FOR IC grade 3-5 STUDENTS
**(to be filled out by participating students and parents)**
Please return to IC school office by Friday, January 11, 2019

STUDENT NAME(S)_____
_____

TEACHER/GRADE_____

Title of project:_____

____My/Our project needs an electric outlet. ____My/Our project involves liquid.

Other project considerations/needs: _____

PARENT SIGNATURE _____

PHONE NUMBER_____EMAIL_____

**********

## ADDITIONAL INFORMATION

If you have any questions or need assistance regarding the science fair, please contact Cynthia Perez (cynthiaaperez1975@gmail.com or 785-551-3170). Please feel free to utilize this same contact info if you are interested in being involved with the Science Fair Committee and/or helping with the event. Lastly, below is an explanation of the scientific method, important terms, and a list of some great science web resources.

Sincerely,

Cynthia Perez, Science Fair Chairperson

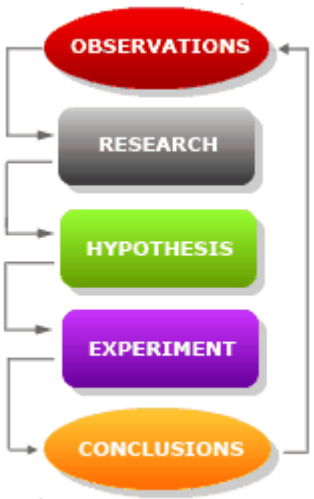
# Information about the Scientific Method

### Firstly: What is Science Again?

Science is a way of thinking and a way of gathering knowledge about the world that is both accurate and reliable. It is the quest to understand and improve our knowledge of the world around us, and **how** the things in it work; or **why** they work the way they do.

### Steps of the Scientific Method for Kids

Scientists use the scientific method to find answers to questions and to solve problems. Although there are many different versions of it in use today, you will find that what they are really based on is making observations, asking questions and looking for answers to questions through science experiments. In order to use the scientific method to find answers to your own questions, you will need to:




*Scientific method for kids*
*Reference:*
http://science-fair-projects-and-more.com/scientific-method-for-kids.html

Now, let's break it down further . . .

1. **Purpose/Question**- What do you want to learn? An example would be, "What doorknob in school has the most germs ?" or "Do girls have faster reflexes than boys?" or "Does the color of a light bulb affect the growth of grass seeds?"

2. **Research**- Find out as much as you can. Look for information in books, on the internet, and by talking with teachers to get the most information you can before you start experimenting.

3. **Hypothesis**- After doing your research, try to predict the answer to the problem. Another term for hypothesis is 'educated guess'. This is usually stated like " If I...(do something) then...(this will occur)" An example would be, "If I grow grass seeds under green light bulbs, then they will grow faster than plants growing under red light bulbs."
4. **Experiment**- The fun part! Design a test or procedure to find out if your hypothesis is correct. In our example, you would set up grass seeds under a green light bulb and seeds under a red light and observe each for a couple of weeks. You would also set up grass seeds under regular white light so that you can compare it with the others. If you are doing this for a science fair, you will probably have to write down exactly what you did for your experiment step by step.

5. **Analysis**- Record what happened during the experiment. Also known as 'data'.

6. **Conclusion**- Review the data and check to see if your hypothesis was correct. If the grass under the green light bulb grew faster, then you proved your hypothesis, if not, your hypothesis was wrong. It is not "bad" if your hypothesis was wrong, because you still discovered something!

A few other terms you may need to know:

Independent Variable: This is the part of your experiment that you will test (vary) to answer your hypothesis. In the example above, the independent variable would be the different colors of the light bulbs.

Dependent Variable: This is what occurs in response to the changing independent variable. In our example the Dependent Variable is how much the grass seeds grow.

Control: The control should be the part of the experiment where you do not include the Independent Variable. In our example, grass seed that is growing under the white (uncolored) bulb would be your control. The control lets you compare your results in the experiment.

ADDITIONAL RESOURCES:

https://www.sciencepioneers.org/science-fair
sciencebuddies.org
sciencebob.com
http://kssciencefair.org/
http://www.apples4theteacher.com/science.html
http://kids.usa.gov/science/index.shtml
http://alline.org/euro/escience.html