

# **Lansing Elementary Area Science Fair**



***February 1, 2020***

***At***

***W.C. Reavis Elementary School***

***17121 Roy Street***

# Science Fair 2020

Dear Students, Parents and Guardians:

This year the District 158 Science Fair is scheduled for Saturday, February 1 and will be held at W.C. Reavis Elementary School. The attached packet includes information that will guide your child in creating a Science Fair project. The topic should be age appropriate, interesting, demonstrate that they have learned something from their experience and most of all had fun.

Please find attached:

1. Science Project requirements for all grade levels
2. Science Fair entry form, **DUE January 17, 2020**
3. Plans for your project
4. A sample display board
5. Science experiment form
6. Science Fair rules
7. Guidelines for judging exhibits
8. Sample forms you may want to use

At the Science Fair, each participant will present their project once to a team of two (2) judges. Judging is based on grade specific criteria. All participants receive an award of either Outstanding, First, or Second place.

If you have any questions, please feel free to contact your child's school office. We are looking forward to a great year at the Science Fair!

Respectfully,

Mr. Kostopoulos, Principal

W.C. Reavis Elementary School

(708) 474-8523

# KINDERGARTEN and 1<sup>st</sup> GRADE

## VISUAL DISPLAY

Your project needs:

- Experiment (repeated 3 times with results listed)
- Title
- Drawing(s) or picture(s) appropriate to your experiment placed on a 3-sided self-standing display board. Follow the sample attached toward the back of the packet.

## RESEARCH PAPER

Your report should include:

- Cover (with title)
- Background information - 3 to 5 sentences.
- Completed "Science Experiment Worksheet"
- Bibliography - one website or book

## ORAL PRESENTATION

You should be able to answer the following questions:

- What were you trying to find out?
- What did you think would happen?
- What materials did you need?
- What steps did you need to follow?
- What changes took place?
- What did you learn?

## 2<sup>nd</sup> and 3<sup>rd</sup> GRADE

### VISUAL DISPLAY

Your project needs:

- Experiment (repeated 3 times with results listed)
- Three-sided and self-standing display
- Follow example attached toward the back of the packet.
- Demonstration of your experiment

### RESEARCH PAPER

Your report should include:

- Cover (with title)
- Background information (5-10 sentences on topic)
- Completed "Science Experiment Worksheet"

### ORAL PRESENTATION (2 to 3 minutes)

You should be able to explain the following:

- Background information of your topic
- What were you trying to find out?
- What did you think would happen?
- What materials did you need?
- What steps did you need to follow?
- What changes took place?
- What did you learn from this experiment that you did not know before?
- Delivery shows that you rehearsed your presentation

## 4<sup>th</sup> and 5<sup>th</sup> GRADE

### VISUAL DISPLAY

Your project needs:

- Experiment (repeated 3 times with results listed)
- Three-sided and self-standing display
- Follow example attached toward the back of the packet.
- Demonstration of your experiment

### RESEARCH PAPER

Your report should include:

- **Cover**
- **Title Page** – You will put the title of your project in the center of the page, several inches from the top. Place your name, school, and grade in the lower right-hand corner.
- **Table of Contents** – List the sections of your paper and the page numbers where they begin. You will have to wait until you write or type your final version to properly place the page numbers.
- **Purpose and Hypothesis** – The purpose that you have already composed is the same purpose used here. It should be three sentences or less after which you may include any hypothesis you have as to the outcome of the experiment.
- **Acknowledgements** – In one or more sentences, say "thank you" to those people who have helped you with your project. You should include those who gave you guidance, materials, and the use of facilities or equipment.
- **Background information on your topic** – This section of your paper is your report to the readers of the work and research conducted by others in the past that relates to your topic and facts that help introduce the readers to the topic. Your explanation should be at least one page.
- **Materials and Procedures** – List the materials that you used. Then explain step-by-step what you did in your experimentation. If drawings will make it clearer, draw them on separate pages and include them in this section. Explain any materials that you constructed in detail.

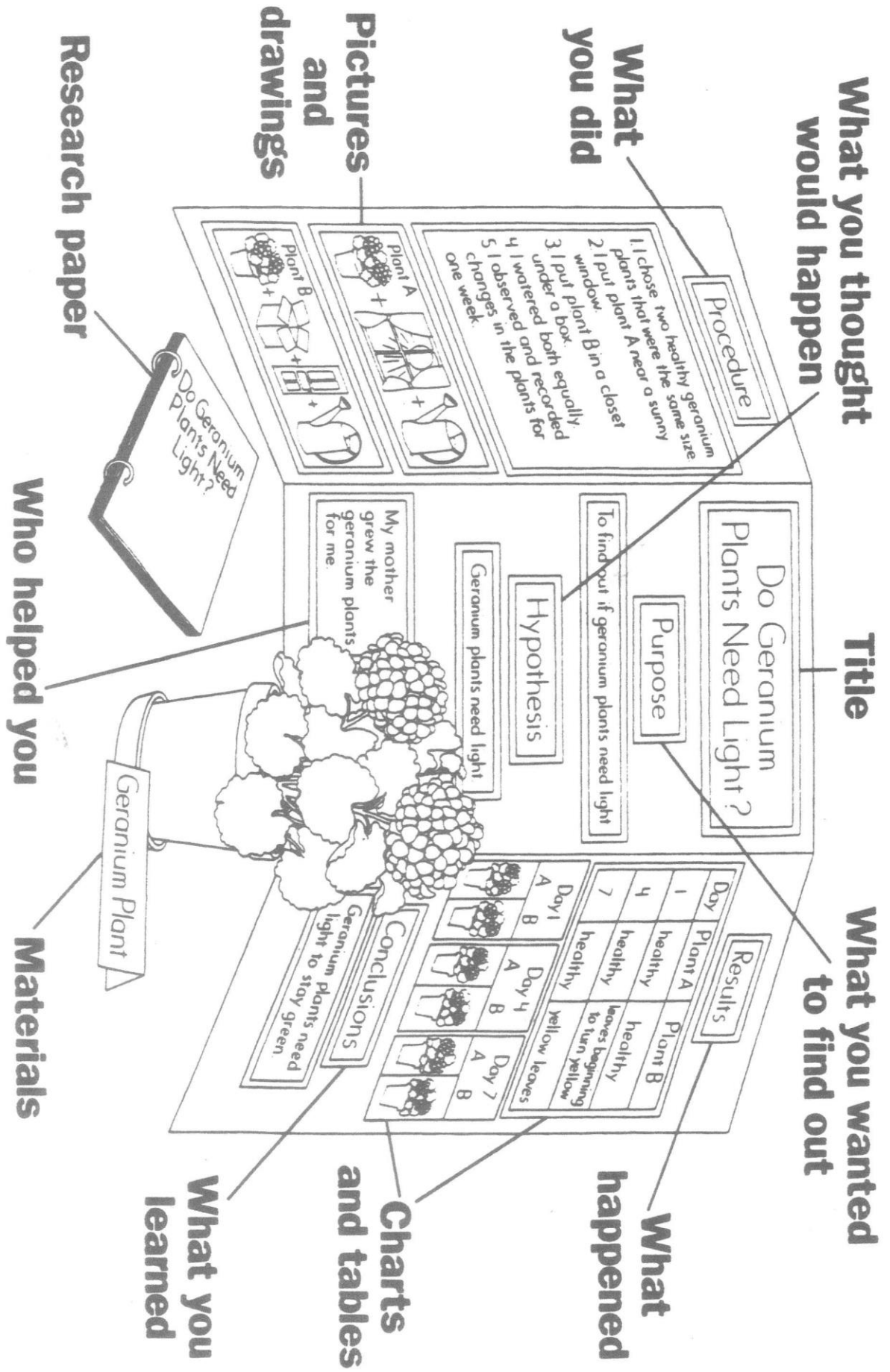
- **Results** – **\*Must show at least 3 trials of your experiment.** The results section of your paper is organized into graphs, charts, tables, or a day-to-day log. Make sure that you label your graphs or charts so that the reader can understand them. Refer back to the sample graphs.
- **Conclusions** – This section is your evaluation and interpretation of your results. Look over your graphs, charts, tables or daily log and then write what you think the data shows or seems to indicate. You may include your opinions. Do not be afraid to admit where you might have made mistakes. Negative results are not bad. If you did not prove your hypothesis, then say so.
- **Bibliography** – This is a list of books, articles, pamphlets, and other sources that you used for researching your topic and writing your paper. This should contain at least 3 sources. See below for samples.
- **Appropriately ordered and labeled sections**

### ORAL PRESENTATION (3 to 4 minutes)

You should be able to explain the following:

- Background information of your topic
- What were you trying to find out?
- What did you think would happen?
- What materials did you need?
- What steps did you need to follow?
- What changes took place?
- What did you learn from this experiment that you did not know before?
- Explanation of visual aides
- Explanation of experiment along with accuracy of experiment
- The knowledge you gained from your experiment
- Delivery shows that you rehearsed your presentation.

# Displaying a Science Fair Project



## PROJECT IDEAS

Science Fair topics can take you as far as your imagination will allow. Be creative! Some areas of study include: Natural Sciences, Biological Sciences, Zoology, Physics, Astronomy, Consumer Science, Microbiology, Earth Science, Botany, Chemistry, and Behavioral Sciences. To get you started, here are some possible research questions. You can find other topics at the library or on the Internet. A good place to start is [www.sciencebuddies.com](http://www.sciencebuddies.com)

1. How much salt does it take to float an egg?
2. What kind of juice cleans pennies best?
3. Which dish soap makes the most bubbles?
4. Do watches keep the same time?
5. How can you measure the strength of a magnet?
6. Do roots of a plant always grow downward?
7. Can you tell what something is just by touching it?
8. How long will it take a drop of food dye to color a glass of still water?
9. Does a bath use more or less water than a shower?
10. Can you tell where sound comes from when you are blindfolded?
11. Can plants grow without soil?
12. Does warm water freeze faster than cool water?
13. Do different types of apples have the same number of seeds?
14. Do bigger seeds produce bigger plants?
15. Which materials absorb the most water?
16. Do wheels reduce friction?
17. What holds two boards together better - a nail or a screw?
18. Will bananas brown faster on the counter or in the refrigerator?
19. Does temperature affect the growth of plants?
20. Chaos vs. the double slit theory: Which affects probability?
21. Does a ball roll farther on grass or dirt?
22. Do all objects fall to the ground at the same speed?
23. Do kids in my class have the same fingerprints?
24. Can things be identified just by their smell?
25. How do trees age?



# GETTING STARTED

A science fair project is your attempt to answer a scientific question that is interesting to you. You will follow the same methods of professional scientists.

**Finding a Topic:** Be creative! "Think out of the box" when searching for that perfect topic!

**Research:** Good scientists research their topics before conducting their experiments. You can use the Internet or a variety of science resources at the library. The Lansing Library's Youth Services staff is eagerly waiting to assist you.

**Supplies:** You will need a three-sided, self-standing display board (Office Max, Staples, Michael's, etc. The Lansing Library also have a few for sale). You are allowed a 3' x 3' foot area at the fair. Also, you will need supplies and equipment related to your experiment.

**Paperwork and Deadlines:** You must fill out the "Student Entry Form" and have your parent/guardian sign the "Student Permission and Release Form" Give this form to your teacher **no later than Friday, January 17, 2020.** NO LATE ENTRIES WILL BE ACCEPTED. NO EXCEPTIONS.

For grades First through Fourth, a research paper is due on the day of the fair (go to the "grade requirements" section for details). For Fifth Graders, your teacher will set your paper deadline. **Remember to bring your research paper to the Science Fair.**

For grades K-4, fill out the "Science Experiment Worksheet" and attach it to your research paper when applicable. This worksheet will help you organize your project.

**Final Hints:** Start early! Science projects are a lot of fun but it does take some time to research your topic, conduct your experiments, write your research paper, and reach meaningful conclusions.

# SCIENCE EXPERIMENT WORKSHEET

NAME: \_\_\_\_\_ GRADE: \_\_\_\_\_

QUESTION: \_\_\_\_\_

WHAT I THINK WILL HAPPEN (HYPOTHESIS): \_\_\_\_\_

---

---

---

---

I WILL USE (EQUIPMENT): \_\_\_\_\_

---

---

---

WHAT I PLAN TO DO (PROCEDURES): \_\_\_\_\_

---

---

---

---

WHAT HAPPENED (RESULTS): \_\_\_\_\_

---

---

---

---

WHAT I FOUND OUT (CONCLUSION): \_\_\_\_\_

---

---

---

---

# EXHIBIT RULES

PLEASE READ CAREFULLY! YOU ARE REQUIRED TO ABIDE BY THIS INFORMATION.

1. You may enter only one exhibit. A table is provided.
2. Your exhibit must be confined to 3 feet wide (side by side) by 3 feet deep (front to back). Charts, graphs, pictures, etc... used with the exhibit must be self-supporting. Taping objects to the walls is NOT permitted.
3. Your exhibit must be durable and safe. All moveable parts must be attached firmly.
4. Please indicate if you need electricity on your "Student Entry Form" Exhibitors requiring 120-volt power must provide their own extension cords and switches (UL approved).
5. NO LIVE ANIMALS OR INSECTS are allowed to be part of your display at the Science Fair.
6. You can set up your exhibit on the Friday January 31<sup>st</sup> between 3:15 p.m. and 5 p.m. or the Saturday of the Science Fair between 8:30 a.m. and 9:00 a.m. in the gym at Reavis Elementary School. 17121 Roy Street.
7. On the day of the Science Fair, DO NOT arrive at the school before 8:30 a.m. You will be entering the building through Door #1.
8. Judging will begin at 9:15 a.m.
9. Only judges and student exhibitors are permitted in the exhibit area during judging. You will be asked to leave the gym after your project has been judged. Please return to your exhibit at 12:00 p.m. for the public viewing. The awards ceremony begins at 12:30 p.m.
10. The projects are judged on scientific worth, accuracy of information, originality, presentation effectiveness, thoroughness, difficulty and comprehension.
11. Please remove projects from the gym immediately after the awards ceremony.
12. PARENTS: A parent or guardian must stay at the fair in the lounge area until their child is judged and dismissed. Please make sure your child can reach you at all times. Please make sure they know your cell phone number.
13. The decisions of the judges are final. REJUDGINGS WILL NOT BE CONSIDERED.
14. Thank you in advance to you and your parents/guardians for your participation and cooperation. Good Luck!!!

# GUIDELINES FOR JUDGING EXHIBITS

The following questions should be considered as you do your science project. However, keep in mind this is only a guideline.

1. Scientific Approach
  - a.) Has student posed a specific question?
  - b.) Has a scientific method, experimentation and recording results, been used?
  - c.) Did the student draw a conclusion based on observations and data?
  - d.) Has the student acquired scientific knowledge by doing this project?
2. Thoroughness
  - a.) How completely has the problem been investigated?
  - b.) How well did the student plan the project?
  - c.) Does the project do what it intended to do?
3. Originality
  - a.) Has material been gathered from various sources and reorganized according to the student's own thinking?
  - b.) Has the student used a creative approach?
4. Knowledge Gained
  - a.) Did the student profit educationally by doing this project?
  - b.) Considering the age and experience of the student, does the project make use of his/her abilities?
  - c.) Does the student understand the research and how it relates to the results?
5. Oral Presentation
  - a.) Can the student explain the hypothesis and the procedures used?
  - b.) Can the student speak fluently with good eye contact?
  - c.) Can the student explain all visual aids?
6. Display
  - a.) Is the display neat, attractive and colorful?
  - b.) Are graphs and data tables clearly labeled?
  - c.) Is display 3 sided and self-supporting?
  - d.) Does the display include charts, graphs and pictures?
7. Written Report (when applicable)
  - a.) Does the report include cover page and bibliography?
  - b.) Is the background information thorough?
  - c.) Are materials and procedures listed?

**PLEASE RETURN TO YOUR TEACHER  
BY JANUARY 17, 2020**

**SCIENCE FAIR STUDENT ENTRY FORM**

**FEBRUARY 1, 2020**

*Please print the following information:*

Student's Name: \_\_\_\_\_ Age: \_\_\_\_\_

Teacher: \_\_\_\_\_ Grade: \_\_\_\_\_

Project Title: \_\_\_\_\_

Project Description: \_\_\_\_\_

Project Classification (circle one of the following)

- |               |                    |                  |
|---------------|--------------------|------------------|
| Electricity   | Botany             | Human Biology    |
| Earth Science | Zoology            | Microbiology     |
| Physics       | Astronomy          | General Biology  |
| Chemistry     | Behavioral Science | Consumer Science |

List Project Resources (reference materials, books, adult resources, etc.).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Will you need an electrical outlet? (circle one)      Yes      No

**STUDENT PERMISSION AND RELEASE FORM DISTRICT #158**

I hereby give permission for \_\_\_\_\_ to participate in the School District 158 Science Fair. I agree to not hold School District 158 responsible for any accidents or injuries resulting from participation in the School District 158 Science Fair.

Parent's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

