

11/05/18

Dear Parents,

The time has arrived foryup you guessed it!!!.....Science Fair Projects. Each student in the 5th grade is required to complete a science project. The Science Fair for Pasquotank Elementary School will be January 18, 2019. The 1st-3rd place winners will represent Pasquotank Elementary at the District Science Fair on January 29, 2019. I know that sounds like a long time from now, but keep in mind all the holidays and workdays between now and then.

I have compiled a packet for each student with additional information regarding due dates and helpful tips. It is titled "Student Reference Packet". This packet needs to be kept in your child's science fair project folder and brought to school daily. Please be sure to keep this handy and be aware of the due dates for the different items. I will keep a checklist for each student and initial it once required items have been submitted. I'm hoping this checklist relieves some of the stress involved and keep the students focused and allow them a timeline, so they (and you) don't feel overwhelmed. The first assignment is due November 2018. All science projects must be turned in by January 14, 2019.

Thank you all for your help and support. Please feel free to contact me if you have any questions or concerns. I can be reached at jhathaway@ecpps.k12.nc.us

Sincerely,

Ms. Hathaway

Please sign and return this portion of the paper so I will know you and your child have had an opportunity to discuss the science project.

Parent Signature _____

Student Signature _____

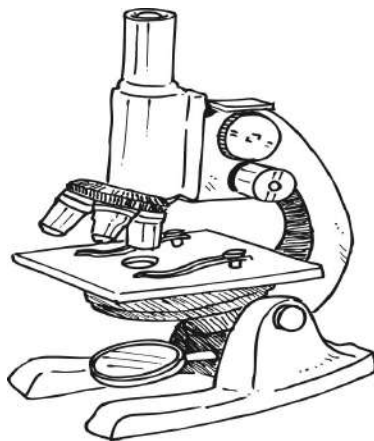
*****RETURN THIS SHEET SIGNED BUT KEEP THE REST OF THE PACKET *****

Pasquotank Elementary School

SCIENCE FAIR

Student Reference Packet

2018-2019



Science Fair Project Checklist/Due Dates

These dates are set so you don't get behind and keep up with each step of the project. Your project is not a model it needs to be able to be tested with results that are numerical data that you can report and chart on a graph.

Assignment to be completed	Due Date	Teacher Initials	Comments
Choose a topic that you find interesting	11-16-18		
Write your big question or state the problem	11-26-18		
Write a hypothesis or what you think will happen	11-30-18		
List materials needed for experiment (typed)	12-6-18		
Write step by step procedure that others can easily follow (<i>remember to repeat the process at least 3 times</i>) (Typed)	12-6-18		
Research your topic: a) Rough draft b) Final copy (typed)	12-6-18 12-13-18	_____ _____	_____
Conduct Experiment , collect and analyze data (<i>record your results as you conduct your experiment</i>)	No later than 1-3-19	N/A	I will check this when you turn in your final project for a grade
Draw a conclusion and organize the results of your experiment	1-7-19	N/A	I will check this when you turn in your final project for a grade
Make a binder (see guidelines)	1-10-19	N/A	I will check this when you turn in your final project for a grade
Make a backboard (see backboard guidelines)	1-11-19	N/A	I will check this when you turn in your final project for a grade
Prepare an oral presentation. (be prepared to answer any questions the judges may have).	1-18-19	N/A	You will present this to the judges the day of the project
Turn in all Science Fair	1-14-19	N/A	This will be your project that is turned in for a grade
School Science Fair	1-18-19		1st, 2nd. 3rd Go to District SF
ECPPS District Science Fair	1-29-19		1st, 2nd, 3rd place from School

Science Fair Calendar for 2018 - 2019

By Nov 16

Choose your topic

- Choose something you're really interested in researching. I've included a list ideas for you to use if you need some suggestions.
- Choose something that helps you find out something that could really help someone in your life.

Begin your research

- Use books, magazines, encyclopedias, the internet, interviews.
- If you do not have a computer at home, make arrangements to use a family friend's, go either to the public library, or Port Discover (by appt only) to complete your project.
- You must have at least 3 references on the subject.

Begin your experimenting using the Scientific Method as soon as possible

- Purchase your materials
- Record your procedures including variables
- Use metric measurements
- Keep a log or a diary of everything you do
- Take pictures of important steps in your experiment

By Dec 6

- Type and show your science teacher your list of materials, procedures and any other pages for your notebook that you have prepared.
- Remember that you should print two copies of everything --- one for your backboard and one for your notebook.

Turn in the first copy of your research paper, including bibliography of sources used.

- Type your paper using a size 14 font and one that is easy to read.
- Double space so that it will be easy to read and there will be room for your teacher to make corrections and/or comments
- Use spell check and grammar check
- All work must be in your own words (You may get suggestions and support from others, but ALL work should be your work)

Buy your backboard and a 1 inch binder if you haven't done so already. (Several stores sell these Walmart, CVS, Office Depot, Roses)

- Binder needs to have a clear cover so you can insert a cover page.

By Dec 13th

- Turn in a corrected/improved copy of your research paper Bring in the log you will be keeping while experimenting (not filled in yet with data until after experiment)
- Bring in the data (project idea and how you will be conducting the experiment) you have so far, for suggestions on making graphs/charts.

All graphs must either be bar or line graphs and must be done using the METRIC system

Note: (This is just for me to get a feel for what each student will be doing during their experiment and if it will be a fit for Science Fair project.)

By Jan 10th

- Experiment completed
- Data analyzed and all graphs/charts completed
- Turn in your corrected/improved research paper, IF you had improvements to make.
- Bring in a sketch or photo of your backboard (do not bring in the board yet) You may also email a picture of the board to: jhathaway@ecpps.k12.nc.us.

By Jan 14th

- Turn in everything to your science teacher
- Backboard with everything required on it
- Notebook with everything required in it

Please note that if your child is a bus rider, this can present some awkward and possibly obstructed seating on the bus. It is best to bring your child's board etc. either by dropping it off the afternoon before, or on the next day. I will work with the bus drivers that week to ensure that any child that has no other alternative than the bus, can place it somewhere where it won't get damaged or cause obstructions.

- ❑ **January 14** is the FINAL DUE DATE for all corrected parts Parts of the Science Project
!!!!
- ❑ **School Science Fair is January 18, 2018**
- ❑ **County Science Fair is January 26, 2018**
- ❑ **Regional Science Fair Feb 17th** (3 eligible winners from each school)

SCIENCE PROJECT STEPS

1. Choose a topic. Be sure it interests you. Don't pick one because you think it will be easy. Talk it over with your parents and when you have decided, inform your teacher, and do not ask to change your topic later. Get your Registration form from your teacher signed by your parent and turn it in.
2. State your purpose as a question. What is it that you want to find out by doing this project?
3. Research your problem. Look at any books/websites 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. Also, keep note of all information needed for citing your sources.
4. Form a hypothesis. What do you think is going to happen? Based on what you know or found out from step #3, what do you think the results of your experiments will be? After doing the experiments, it may turn out that your guess was wrong. It is okay if this happens.
5. Plan your project. How will you test your hypothesis? What experiments will you do? How will you measure the results? Where will you keep your information? Be sure to keep notes and write down everything you do and what happens.
6. Collect all your materials. Find a place to keep things where others won't bother them. Let other family members know what you are doing so they do not throw your materials away by mistake.
7. Conduct your experiments. Remember, the more times you do an experiment the more reliable and accurate the results will be. Do each experiment at least three times and get an average of the results for your graph. Use something to measure your experiments: a ruler or yardstick if you are measuring distance, a clock to measure time, etc. Check the measurements to be sure you are correct.
8. Record your data. As you do your experiments, you will want to write down what you saw or found out. Organize this information in an orderly manner. Put the date, time, and any other useful information. Write your measurements clearly.
9. Draw conclusions. What did you learn from your experiments? Have you proved or disproved your hypothesis? You made a guess about what you thought would happen. Now tell what really did happen. You don't lose points if your guess turned out to be wrong.
10. Prepare your titles, charts, graphs, drawings, and diagrams. Make them large enough to see, neat, and colorful.
11. Construct your science fair display. Get your cardboard display board from your teacher so you can show all your work and have your hands free to point to sections when you give your

presentation.

12. Prepare and practice your presentation. Be able to tell about what you used what you did in your experiments, and what you found out. Know it well enough that you don't have to read it from the display.

13. Plan a timeline so you don't leave everything until the last minute. If you need help, tell your parents and your teacher, the earlier the better.

14. Relax and Enjoy yourself. You will do a GREAT job!

SCIENCE FAIR RULES

Aw!, you mean there are rules? Of course there are, silly, this is made by adults!

1. Number one rule. . . think safety first before you start. Make sure you have recruited your adults to help you.

2. Never eat or drink during an experiment and always keep your work area clean.

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. Animals are not allowed to be used in experiments. Do not perform an experiment that will harm a person.

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.

8. Dispose waste properly.

9. Any project that involves animals, drugs, firearms, or explosives are NOT permitted.

10. Any project that breaks district policy, and/or local, state, or federal laws are 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 what websites you will be visiting, or have them help you search.

12. If there are dangerous aspects of your experiment, like using a sharp tool or experimenting with electricity, please have an adult help you or have them do the dangerous parts. That's what adults are for so use them correctly. (Besides, it makes them feel important!)

Science Fair Written Report

The written report is a summary of everything that you did to investigate your topic. The written report provides others with vital information on what your project is about as well as its effect on your understanding of the topic. Usually the written report is 2-3 pages in length. All information must be included in the written report. This report provides you with the opportunity to think about all the aspects of our project and share your ideas with others.

Reports should be neatly bounded in an attractive binder. It must be typewritten.

- Typed, double spaced. One inch margins, and 12 pt Times New Roman Font
- Remember to put headings/titles on graphs/charts/tables
- All photographs must have captions explaining their significance
- Before you hand in your report make sure to reread, revise, and rewrite
- Recheck your calculations, spelling, and grammar.

All written report for a science fair project should include:

- ✓ **Title Page:** The first page in the report should include the title of the project as well as the name and grade of the student.
- ✓ **Acknowledgment:** Here is where you thank everyone who helped to make your project successful (including Mom and Dad.) Everyone that you interviewed, including teachers, scientists, and other experts in the field should be mentioned here.
- ✓ **Table of Content:** This page provides the reader with a list of the different parts of the project and the page number on which each section can be found.
- ✓ **Statement of Purpose:** **State the purpose of the project in the form of a question.**
- ✓ **Hypothesis:** You must have a hypothesis before you complete the project. A hypothesis is an educated guess about what you think will occur as a result from completing your experiment.
- ✓ **Research:** This is the part of the report that contains all the background information that you collected about your topic. Any books or articles read from the internet/journal, authorities on the topic that you talked to, or outside materials collected should be summarized in this section. This section should be written in your own words and NOT copied from your resources.
- ✓ **Materials:** This is a list of all the materials and supplies used in the project. Quantities and amounts of each should also be indicated.
- ✓ **Procedure:** You will list and describe the steps you took to complete the project. Usually this is listed in a numbered sequence. This part shows the stages of the project so that another person can carry out the experiment.

✓ **Observations and Results:** In this section, you will tell what you learned from the project. It is also

IMPORTANT to include all graphs, charts, or other visual data (pictures) that helps to show your results.

✓ **Conclusion:** This is a brief statement explaining why your project turned out the way it did. You should explain why the events you observed occurred. Using the word “because” is a good way to turn an observation into a conclusion. The conclusion should tell whether the hypothesis was proven or not proven. Also give the reason(s) why you chose to learn more about the subject. You could also add what you know now that you didn’t know before you completed your project.

✓ **Reference Page:** The bibliography should list all the printed materials the student used to carry out the project. Items should be listed in alphabetical order in a standard format. These website are a great place to go to find the proper way of writing a bibliography.

<http://www.bibme.org/> , <http://www.easybib.com> or <http://www.knightcite.com> Also <http://www.lcyte.com> lets you “tag” information from Internet sources as you research.

Science Fair Websites

1. California State Science Fair: Read about this science fair which has been going on since 1952! You can learn how to enter, get help with your own project, or see a directory of past projects. <http://www.usc.edu/CSSF/>

2. Cyber Fair: See sample fair projects, look through other student's examples, and see the steps involved in judging projects. <http://www.isd77.k12.mn.us/resources/cf/welcome.html>

3. Experimental Science Projects: Outlines steps in preparing a project (complete with an ideas list), and

suggests the best ways to prepare one at different grade levels

<http://www.isd77.k12.mn.us/resources/cf/SciProjIntro.html>

4. Science Buddies: Use the topic selection wizard to help you figure out what science projects interest you most. Once you have a topic, get help doing research, setting up the experiments, and completing them. <http://www.sciencebuddies.org/>

5. Science Fair Central: Includes cool project ideas, a science fair handbook, reviews of students' experiments, and more from Discovery Channel School.

<http://school.discovery.com/sciencefaircentral/>

6. Science Fair Project Resource Guide: Samples, ideas, magazines, resources, and more. Includes a list of sites that explain the Scientific Method.

<http://www.ipl.org/div/kidspace/projectguide/>

7. Scientific Method: Describes the five steps of the Scientific Method that are helpful when creating a science fair project. Includes examples of wording and sample projects to explain certain steps.

<http://school.discoveryeducation.com/sciencefaircentral/Getting-Started/Investigation.html>

8. Super Science Fair Projects: Guide to projects, topics, experiments, and tips for successfully completing a science project, including the six steps of the Scientific Method.

<http://www.super-science-fair-projects.com/>

9. What Makes a Good Science Fair Project?: Short guide written by a group of experienced judges for the California State Science Fair.

http://www.usc.edu/CSSF/Resources/Good_Project.html

Your Science Fair Oral Presentation

A lot of kids are scared of speaking in public or to a teacher/judge. Just imagine they are a fellow scientist who just wants you to share what you learned.

Relax, smile, and have fun. Remember, you are the expert and you had fun doing the project. But if you are a little nervous, we listed some things that you need to do during the presentation.

Helpful Hints:

- o Look sharp, feel sharp, and you will be sharp. Dress nice that day, be polite, and speak clearly. You will show that you have confidence. Don't forget to look at your audience.

- o Introduce yourself. Point to the title of your display. Tell your audience why you chose to study this.

- o State your problem that you studied (your question.) Tell them about your hypothesis (what you thought might happen.)

- o Talk about what you learned while researching your topic.

- o Talk about the sources (books, websites, and interviews) that helped you understand your topic.
- o Tell about your project and explain the steps you took to conduct your experiment. Be sure to mention all the materials involved and point out the pictures that you may have taken.
- o If it applies, be sure to show them that you tested your experiment at least 3 times.
- o Show them all of the cool graphic organizers that you made, like your tables and charts. Remember to point out the labeled parts of your graph or table to show that you know what it represents.
- o Be sure to explain what your data means. Make sure you can read your graphs and tables. Let them know if you were surprised by the results, or if you know what would happen because you studied about it.
- o Make sure you sound like an expert on your topic. Always use the appropriate vocabulary especially by using words from the Scientific Method, like: Problem, Hypothesis, Procedure, Results, and Conclusions.

PROJECT SUMMARY WORKSHEET

This needs to be shared with Ms. Hathaway in a Google Doc

Name: _____ **Due Date:** _____ **Topic:** _____

Question (Statement of Purpose) (Written as a Question)

Hypothesis: If....., then I think

Materials I will need:

Procedures: (Detailed Steps):

Resource #1

You must have 3 Resources

Resource:

Type of Resource: _____

Website: http://_____

Author: _____

Title: _____

Publishing Company: _____

Location of the Publishing Company: _____

Date of Publication: _____

Information found in your own words: (Must be at least one paragraph summary.)

Resource #2

You must have 3 Resources

Resource:

Type of Resource: _____

Website: http://_____

Author: _____

Title: _____

Publishing Company: _____

Location of the Publishing Company: _____

Date of Publication: _____

Information found in your own words: (Must be at least one paragraph summary.)

Resource #3

You must have 3 Resources

Resource:

Type of Resource: _____

Website: http://_____

Author: _____

Title: _____

Publishing Company: _____

Location of the Publishing Company: _____

Date of Publication: _____

Information found in your own words: (Must be at least one paragraph summary.)