

Dear parents,

Your child will have the chance to solve his or her own science investigation this year by doing a Science Fair Project, a mandatory assignment for grades 4-5 as well as the 3rd grade Cambridge class. Other third grade students are encouraged to participate in the Science Fair, but it is optional. The project either has been, or will be, introduced in Science Lab.

Since your child has the chance to pick his or her own science project question, he or she will have the chance to experience the joy of discovery. <http://www.sciencebuddies.org/> is a great resource for helping your child choose a topic and go through each of the steps to complete the project. Science teachers will grade the projects and we will have judges determine the 1st, 2nd, and 3rd place projects for each grade, which will be displayed in the school foyer on our STEAM night on April 30th. Other projects will be displayed throughout the school.

Students will conduct background research to decide on a science topic of interest. Students will then compose a question, establish a procedure to answer the question, gather data, and write a conclusion to answer the question. They will also create tri-fold boards to display their projects and maintain project notes, observations, and data in a project notebook. The science project tri-fold board will be labeled with the following headings and include the following information:

1. Your board must have a project title – It is perfectly acceptable for the title of the project to be the question you are testing, but you may also come up with a clever title in non-question form.

2. “Research” – Do some research to help select your topic. Be sure to keep record of the web sites, articles, and books you read. Write a paragraph, in your own words, describing that you learned from your research and how that led you to your scientific research question.

4. “Resources” – Include a bibliography of your sources. The bibliography should contain at least three resources. These resources can include magazine or journal articles, books, or web sites. You may use this site to help create your bibliography: <http://www.easybib.com/guides/video-lesson-citations-for-beginners/>, or others you may find.

5. “Question” –All good science fair projects attempt to answer a scientific question. Be sure to include your question on the board either in a headed section or as the title of the project.

6. “Hypothesis” – After reading and thinking about possible answers to the question, write an educated guess in response to the question. Support the guess by stating the reasons why you believe in your answer.

7. “Variables” – Explain the independent variable you are testing. An independent variable is the one and only thing you change in your test. Every other aspect of your experiment and the three trials you conduct in it must be the same. No matter how hard you try to set up good trials, outside forces can impact the data you collect, so describe and explain what these forces are.

8. “Materials” – List the materials used.

9. “Procedure” – Describe the procedure used to perform the project. You may use photos and diagrams to clarify and explain your methods/procedures. Materials and procedures sections can be combined. Do not include pictures of your face or faces of other people.

10. “Data” – Data refers to the actual numbers or other information obtained in the project. Data may be presented in tables, charts, and/or graphs.

11. “Results” – The results should be in paragraph form, and they should explain the data. If you manipulate the data in any way, such as averaging a list of numbers, this should be included in the results. Be careful to save your opinions or statements based on inferences for the conclusions section of your project.

12. “Conclusion” – Compare the question with the data and results. What is the answer to the question? Explain why you state this answer. Then explain ways in which the project might be improved or introduce a new question that may have come up as a result of the project.

If you need help, contact Ms. Towler at [m.towler@cms.k12.nc.us](mailto:m.towler@cms.k12.nc.us), or your child’s Science teacher. You can also find help on Ms. Towler’s web site at http://mstowlersscience.weebly.com/.

Please cut on the dotted line and return the bottom portion of this page to your Science teacher by February 7th. Keep the rest to help you with your project.

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February 7th - Science Fair question due to Science teacher. April 6th - All projects due to Science teacher.

Rules that all participants must follow: 1. The project must not hurt people, animals, or their possessions. 2. Dangerous chemicals are not allowed. 3. No projects allowed involving growing bacteria, mold or other micro-organisms. 4. No type of flame is allowed at school. 5. Live animals cannot come to school. 6. Adult supervision is required if a task is considered unsafe, such as the use of a knife.

Name of Student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Science teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title of Project in Question Format: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I have read, understand and will adhere to the expectations, safety rules, and due dates of the science fair project.

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