

Science

Fair

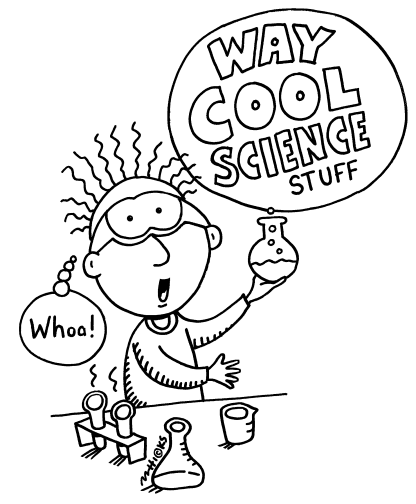
Handbook



Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Science Fair Schedule**

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| **Assignment** | **Due Date** |
| *6.2.4 Design an object, tool or process that minimizes or maximizes heat energy transfer. Identify criteria and constraints, develop a prototype for interactive testing, analyze data from testing and propose modifications for optimizing the design solution.*  *\**Design an experiment that follows the standard. Make sure that you document the process as you go.  Complete worksheet 1. | December 13, 2018 |
| Complete worksheet 2. | December 20, 2018 |
| Complete worksheet 3 & 4  (conduct your experiment!) | January 3, 2019 |
| Complete worksheet 5  & put board together. | January 7, 2019 |
| Present project to the class. | January 8, 2019 |



**Worksheet 1**

Choosing & Researching Your Project

**Question:** Your question should be about maximizing heat energy transfer or minimizing heat energy transfer. It should relate to your world, something you want to find the answer to.

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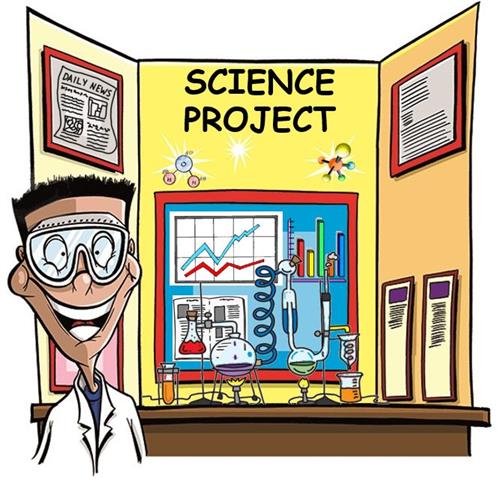
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Approved: \_\_\_\_\_\_\_\_\_\_

Not Approved: \_\_\_\_\_\_\_\_\_\_

**Materials:** What materials will you need to complete your project?

1. Tri-fold board



2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*\*Remember only your board and notebook will be brought to school.

**Research:** Find 2-3 sources that will help you understand your topic. Create a bibliography below for the resources:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Worksheet 2**

Research, Hypothesis, & Procedure

**Research:** What did you learn about your topic?

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**Hypothesis:** AFTER reading your research, what is your hypothesis (what do you predict will happen as you experiment?)

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**Procedure:** List the steps you will take and/or the supplies you will need to conduct your experiment:

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3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Worksheet 3**

Use a Graph to Gather Data

**Data:** What is your constant (the “thing” that is the same in each

test)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is your variable (the “thing” that is different in each test)?

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**Graph:** All data needs to be tracked on a graph. You may use the one below or create one of your own.

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**Worksheet 4a**

Understanding your Data

After you have finished experimenting, explain what you noticed.

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**Worksheet 4b**

Writing your Conclusion

Write a conclusion for your science fair project. Was your hypothesis correct? Why or why not? What did you learn?

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\*Presentation\*

Make sure that your tri-fold board includes a title and ALL



the information in this packet (typed). If your project is

sent on to the district science fair, you will need to make a

power point or google slide show. It just makes sense to

type all of your information the first time around, right??? **PLEASE PUT YOUR NAME ON THE BACK OF YOUR BOARD!**