Name_____ Class_____ Date_____

Science Fair

Guidelines and Due Dates

*This is a mandatory project that must be completed AT HOME. Students will be given SOME class time to work on the writing component of their projects, but must complete the investigation at home!
*A copy of this document can be found on contonascience.weebly.com on the "Resources page". The document is titled "Science Fair."
*(Your child will receive 5 bonus points on their project grade if this sheet is signed by you and handed in with the final project!)

Parent and Teacher Initials		Due Dates	Part of Project	Points Towards Final Grade
		601: 4/13 **602: 4/13** **603: 4/13** **604:4/13**	**Topic Proposal**: Students will hand in a brief summary of their experiments. (see attached form)	**15**
		601: 5/8 **602: 5/8** **603: 5/7** **604: 5/8** Note: if you need an extra week to work on collecting data please tell me in advance	**Rough Draft of Lab Report**: Title, Question, Background Information, Hypothesis, Materials, Procedure, Data table, and Background Research form must be included. Please make sure the Evaluation form is also attached.*The final draft of the lab report MUST be typed!	**15**
		601: 5/15 **602: 5/15** **603: 5/14** **604: 5/15**	**Final Draft of Lab Report**: Must be typed and include all parts of the report AND include a **minimum** of 3 trials of your experiment. Make sure your rough draft is included. (***The final draft of the lab report will be counted a second time as a separate grade.)***	**20**
		601: 5/18 **602: 5/18** **603: 5/18** **604: 5/18** Presentations will begin the week of 5/18. I will need time to decide who to take to expo on June 6th so these dates are not flexible.	**Presentation Board**: Students will complete a presentation board to visually show how they followed the scientific method. Start this AFTER you get your final draft back. (See attached format)	**20**
			Materials: Students will use materials used in their experiments as props during their presentations. Students are *NOT* to recreate their experiments during their presentations.	**5**
			Presentation: Students will speak about their projects in a 2-5 minute presentation. I will ask for volunteers first, and then we will go in alphabetical order.	**25**

**You may work alone, with a partner, or a group of no more than 4 people total.*

Total Points = 100

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Topic Proposal

- To help you choose a topic, go to http://www.sciencebuddies.org/
- Click on "Take Survey!" Button
- This will take you through a series of questions that will figure out what area of science you are interested in. You can choose ANY topic you want EXCEPT volcanoes, earthquakes, anything that explodes, or the Mentos experiment.
- The experiments on the website list the cost and difficulty level of each experiment.
- You may also use an experiment book found at the library or in a bookstore.
- You must consider how this topic is related to civics in our community/the world. For example, how can your research improve our community? Is this going to make our school/community/your home or building more environmentally friendly? Is it going to make our lives easier somehow?

(Continue on the back of the page if you need more room!)

1. How could your research be used to make changes in our community/world (CIVICS!)?

_____

_____

_____

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_____

2. What is the title of your experiment?

_____

3. List your Independent Variable (IV), Dependent Variable (DV), and Constant Variables (CVs).

IV:_____

DV:_____

CVs:_____

_____

4. What materials will you need? Make sure these materials are inexpensive and easy to find!

_____

_____

_____

5. What will your procedure be? (Briefly describe how you will collect your data and how long it will take.)

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Name_____ Class_____ Date_____

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6. List the new terms and concepts you will need to research to make sure your hypothesis is informed and your discussion is thorough.

_____

_____

_____

7. How will you keep track of your data? Sketch out a data table like the one below.

***Keep in mind-You MUST complete at least 3 trials of your experiment!!! Plan to have enough time to complete these trials before the Final Draft of the Lab Report is due!!!

Your data table would look like this:

Independent Variable:	Dependent Variable:		
	Trial 1	Trial 2	Trial 3
What is one of the levels of your IV?			
What is one of the levels of your IV?			
What is one of the levels of your IV?			

Name_____ Class_____ Date_____

Lab Report Format

Title: The effect of _____ on _____

Question: What is the effect of _____ on _____?

Background Information: Write 2-3 paragraphs explaining the major concepts involved in understanding your experiment BEFORE you started it. Save the information about what you learned AFTER completing the experiment for the discussion and conclusion.

Hypothesis: If_____ then_____ because….

Materials: List the materials you used.

Procedure: In a detailed list of sequential(in order) steps, describe how you collected your data. Make sure to account for the IV, DV, CV, and repeated trials. If you are using a Science Buddies experiment, DO NOT copy the procedure word for word.

Data: Diagrams, pictures, data tables, graphs, sample calculations, brief summary of findings.

Discussion: claim, evidence, scientific reasoning.

Conclusion: My data (supports/does not support) my hypothesis. Explain why and what it means. Also write questions for further research and experimentation.

Literature Cited: List the sources you used to help you do background research and write your discussion. (Fill out a BRO for each source you use and attach it to the back of your lab report before the evaluation form.) NOTE: On your presentation board, list your resources in alphabetical order.

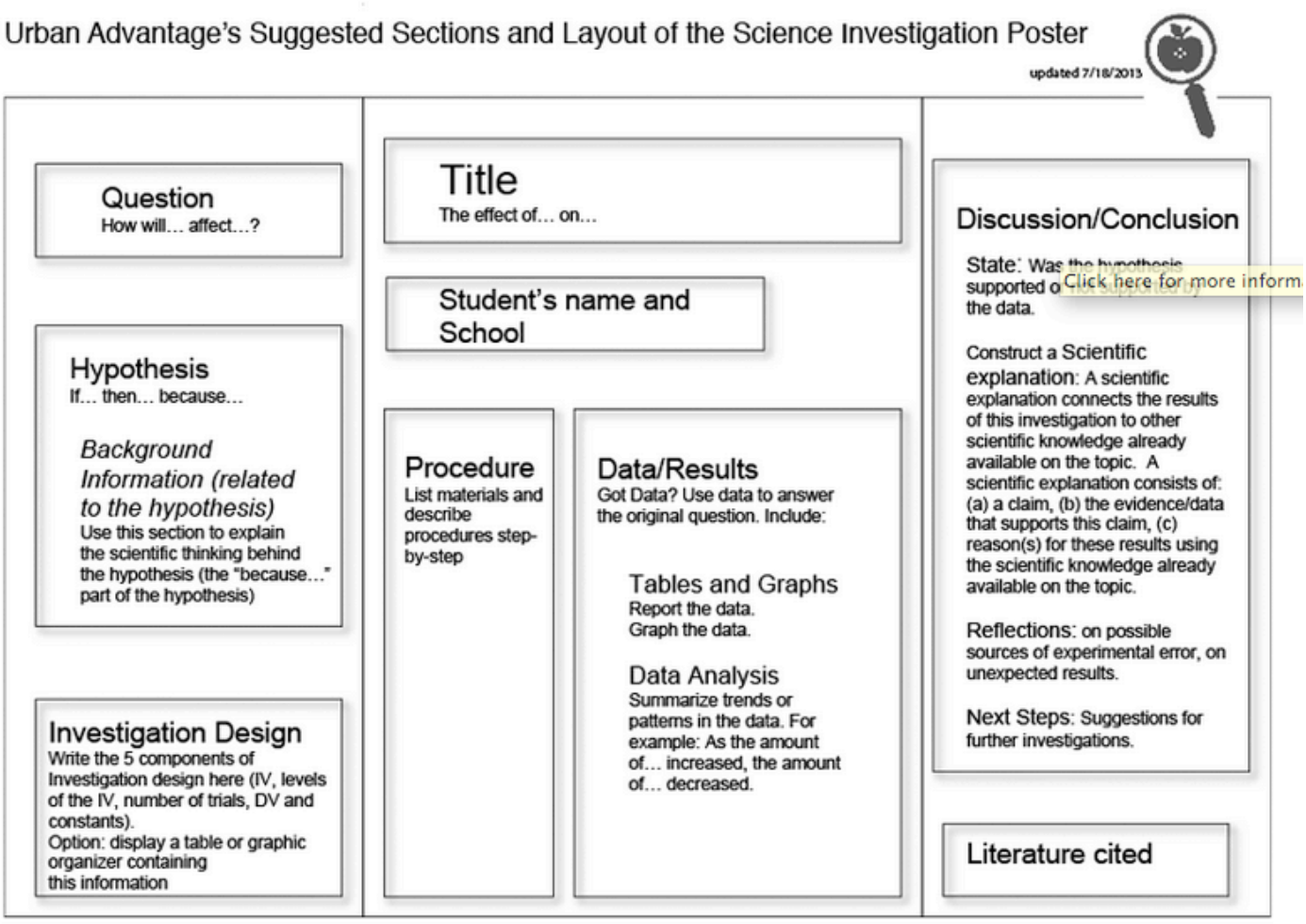
CIVICS: Write a reflection on how your project is related to civics. How will your research improve your community/world?

****SEE RESOURCES ON contonascience.weebly.com FOR A COPY OF THE LAB REPORT OUTLINES****

Name_____ Class_____ Date_____

Presentation Board

- A display board can be purchased at Staples for around $9.
- The display board has three sides so that it is free standing.
- Refer to the diagram below for a format for the display board. You can also "google" "sample science fair display board" for pictures of student samples.
- This board will be used a visual aid during presentations and will be displayed at the school science fair.
- IMPORTANT NOTE: The board will be easy to put together if the lab report is simply formatted into a larger font! (50-72+ is a good size) Cut and paste what you have already written. ***Do not have things hanging off the sides of the board-layer pages if you are running out of room.***
- Add color to make your board visually interesting, but do not make it too busy!
- Do not include any images or charts that you are not familiar with just to take up space!!
- The diagram below will be posted as a PDF below the science fair document in case you cannot read it in this document on your computer.
  http://www.urbanadvantagenyc.org/site_res_view_folder.aspx?id=5140c0ac-b27f-4332-ab37-4aaf87418482



Name_____ Class_____ Date_____

Materials

- In addition to the display board, each student should bring materials from the experiment to use as props during the presentation. Students **will not** be performing their experiments in front of the class.
- It is strongly recommended that students take pictures of the experiment as they are doing it. If pictures cannot be taken, the student should draw detailed diagrams.

Presentation

- The presentation should be 2-5 minutes long.
- During the presentation, the student should briefly introduce the topic of the experiment, summarize the procedure for the experiment, and summarize their discussion and conclusion.
- Everything needed to complete the presentation should be in the lab report and on the board. However, note cards may also be used as a presentation aide.
- **If ANY student is not acting respectfully during a classmate's presentation, that student will receive a 0 on their presentation and will automatically be disqualified from attending the UA Expo on June7.**

Rubrics

We will be using the Lab Report Rubric to assess our projects and a presentation rubric that will be handed out and reviewed shortly before presentations begin.

Please email me with any questions, comments or concerns!!

ms.contona@gmail.com

Extra help can be provided during lunch at a student's request on Tuesdays and some other days that will be shared with students when I am available.

Name_____ Class_____ Date_____

Background Research Organizer

Your research should provide you with answers to questions that are essential to understanding your topic. You should gather information from a minimum of **3** sources for this investigation.

IV=_____
DV=_____
Question: What is the effect of the IV on the DV?
Question:_____
_____

Source #1

Reference: Where did you find this information?
Direct Quote(s) from Source:
Paraphrase of Quote(s):
HOW does this relate to the topic you are researching? WHY is this important to your investigation?

*****Make sure that the information you are finding is relevant to your question!*****

Name_____ Class_____ Date_____

Question: _____

_____

Source #2

Reference: Where did you find this information?
Direct Quote(s) from Source:
Paraphrase of Quote(s):
HOW does this relate to the topic you are researching? WHY is this important to your investigation?

*****Make sure that the information you are finding is relevant to your question!*****

Name_____ Class_____ Date_____

Question: _____

_____

Source #3

Reference: Where did you find this information?
Direct Quote(s) from Source:
Paraphrase of Quote(s):
HOW does this relate to the topic you are researching? WHY is this important to your investigation?

*****Make sure that the information you are finding is relevant to your question!*****

Name_____ Class_____ Date_____

Presentation Evaluation Form

During the presentation, students should have materials present, speak clearly, make eye contact, and be knowledgeable about their topic.

Name: _____ Teacher: Ms. Contona

Title of Experiment: _____

Criteria	**Score**
Board is complete with all parts present.	0, 3, 5
Student is able to fully explain the scientific explanation for their results.	0, 5, 10
Student speaks clearly and not too quickly. He or she is easily heard in the back of the room. Student makes eye contact while he or she speaks and does not read directly off the board during the whole presentation.	0, 3, 5
Presentation board is colorful, neat, and attractive.	0, 3, 5
Materials are present for use as props for the presentation.	0, 5
Total points earned = Presentation grade-------->	_____

Teacher Comments: