

# Scientific Inquiry Mission Folder Score Range - 101-200

## **Team Collaboration**

How was your team formed? Was your team assigned or did you choose to work with each other? Our team was assigned by our teacher

Provide a detailed description of each team member's responsibilities and jobs during your work on the Mission Folder.

Student 1 is the researcher, Student 2 is the helper, Student 3 and Student 4 did the experiment.

Did your team face any problems working together? If so, how did you solve them? If not, why do you think you were able to work together so well?

We didn't know what project to do at first but then Student 1 thought about putting mentos with different types of soda, and thats how we got the idea of compering different sodas.

What were some possible advantages to working together as a team on this project? How would working as individuals have made this project more difficult?

The experiment would take longer if each os us worked alone.

## **Use of Scientific Inquiry**

What problem in your community will your team be investigating through scientific inquiry using scientific practices? Specifically, based on this problem, what question will you be trying to answer? Our team is going to get three bottles each. Student 3=Sprite, Student 4=Fanta, Student 1=Coke, Student 2=Pepsi. We are going to drop mentos in by, 5, 8, then 10 mentos. Everyone in our team is going to measure and take notes. Our team is trying to find out Which Soda will explode the highest.

Research your problem. You must learn more about the problem you are trying to solve and also what testing has already been done. Find AT LEAST 10 different resources and list them here. They should include books, periodicals (magazines, journals, etc.), websites, experts, and any other resources you can think of. Be specific when listing them, and do not list your search engine (Google, etc.) as a resource.

WWW. Education.com. WWW.sciencenuddies.org. WWW. sciencebob.Com. WWW.Winter.k12.wi.us. WWW. all science fair-projects.com. WWW.weareteachers.com. WWW.kiwico.com. www.pinterest.com



What did you find out about your problem that you didn't know before? What kinds of experiments have been done by other people before you? Be sure to put this in your OWN words, do not just copy And paste information. Also, be sure to cite your sources.

You can't make soda explode with Mentos again after it was done once. some people have talked to plants to see if it would help the plant grow.

Based on the question you are trying to answer, and your research, what is your team's hypothesis for this investigation? Be sure to include the independent and dependent variables and how they are related along with evidence of your research.

our group thinks the coke will explode the highest. the independent variable is the amount of mentos and the dependent variable is how high the soda explodes. if there were no different amounts of mentos there would only be one trial, then there would be how way to prove that the amount of mentos effects how high the soda explodes.

#### Identify the independent and dependent variables in your investigation.

the independent variable is the amount of mentos and the dependent variable is how high the soda explodes

#### What are the constants in your investigation?

the control group is the metos .the mentos will see how the other bottles will do with different amounts of mentos.

Will your investigation have a control group? If so, describe the control group. If not, why not? the control group is thementos.the mentos will see how the otherbottles will do with different amounts of mentos.

List all of the materials you used in your experiment. Be sure to include all physical materials as well as any technology or website used to collect data (not websites you used in your research). our team used coke,fanta,sprite,pepsi,and,phones

Explain your experimental process. Be sure to list all of the steps and ALL SAFETY PRECAUTIONS for your experiment. Remember to write it so someone else could follow the steps and recreate your experiment.

step 1:get bottles of the same soda.(same size), step 2: goggles.(opcional) step 3:get or make tube to drop mentos in soda, step 4: backaway photograph away from experiment area.

Present the data you collected from your experiment. Be sure to include all of the data you collected from your observations and measurements. Use of graphs and charts is HIGHLY encouraged. Explain how your data supports or refutes your hypothesis.

pepsi: 4 mentos 36 inches, 8 mentos 47 inches, 10 mentos 56 inches. coca cola:1 mentos 19 inches, 5 mentos 45 inches, 8 mentos 58 inches. fanta:14 .Sprite:18



What are your potential sources of error? Remember, this doesn't mean "Did everything work?", all tests have potential sources of error, so make sure you understand what that means. Explain how these sources of error could have affected your results.

Student 1 almost bought a smaller bottle that could have effect the experiment.

What conclusions can you draw based on the data you gathered during your experiment(s)? Be sure to include data and how it relates to the experiment(s) and the original question. Your conclusion should be related to your original problem and your experiment, include the data you collected, and discuss if your hypothesis was supported or refuted by your experiment.

our prediction was wrong we thought coke was going higher but in conclusion pepsi went higher.

## **Benefit to the Community**

Explain how investigating the problem your team chose will help the community. Be sure to include the impacts your research will have on individuals, businesses, organizations, and the environment in your community (if any). Make it very clear why solving this problem would help your community. Our team is informing people about how the mentos in soda experiment works. Now people won't stress and waste time trying to figure out if the explosion will happen again

### **Abstract**

no