January 30, 2017

Dear Students & Parents,

The Global Village Academy Science Fair Handbook contains information about rules, project guidelines, and other helpful items to assist in the science fair experience. Students will be required to complete specific assignments to help them in planning and conducting their experiments. The due dates are included in this document along with the planning documents that the students will be required to complete.

Parent cooperation in helping the student adhere to deadlines will help us do a better job of coordinating the fair. **PLEASE NOTE: This Science Fair is OPTIONAL, those students who choose to participate will be able to present to GVA students and staff on Thursday, March 23rd which will be SCIENCE DAY AT GVA! If your 3rd-8th grade student would like to do a Science Fair Project, please let Alicia Welch know no later than February 8th.**

**Science Goals**

- To promote science education at all grades by hands-on exploration of scientific principles through the preparation and presentation of science projects.
- To promote understanding of the scientific method of investigation.
- To promote the self-discipline necessary to accomplish the experiment, prepare a display, and write a summary within the given timeframe.
- To give the students a sense of pride and accomplishment derived from participation in the science fair.
- To stimulate and nourish a fond interest in science.
- To promote educational links among parents, community, and school.
- To foster a lifelong appreciation of scientific processes in preparation for life in an increasingly technological society.

**Rules:**

1. Students will be given NO classroom time to work on their individual project. The project work must be done at home under parental supervision.

   *Parent Participation:* Parents are encouraged to discuss the project with the student and provide assistance with research or preparation of the exhibit. Students should be encouraged to do as much as possible on their own. Students should do the manipulations and

measurements in the experiments and should make their own drawings and charts. Parents should advise their children about potential safety hazards.

2. Animal Experiments: All science fair experiments involving animals must be in keeping with the criteria established by the Animal Welfare Institute. If experiments are to be conducted on living subjects for science fair projects, then only lower orders of life may be used. Lower orders such as bacteria, fungi, protozoa, and insects can reveal an abundance of basic biological information. Vertebrate animals are not to be used for experiments for the science fair with the following exceptions:

   a. Observations of normal living patterns of wild animals in the free-living state or in zoological parks, gardens, or aquaria.

   b. Observations of normal living patterns of pets, fish, and domestic animals. No living vertebrate animal shall be displayed in exhibits.

   Only observational type studies may be used in science fair projects involving chicken embryos. If normal egg embryos are to be hatched, satisfactory humane considerations must be made for disposal of the chicks.

3. Experiments with bodily fluids are prohibited.

4. **All projects must include:**

   a. **Project display trifold**

   b. **Oral presentations to Science Fair judges**

   c. **Project summary/report– typed or neatly written.**

   d. **The following headings/labels MUST be included and written in the IMMERSION language. All other writing can be in English:**

**TITLE**

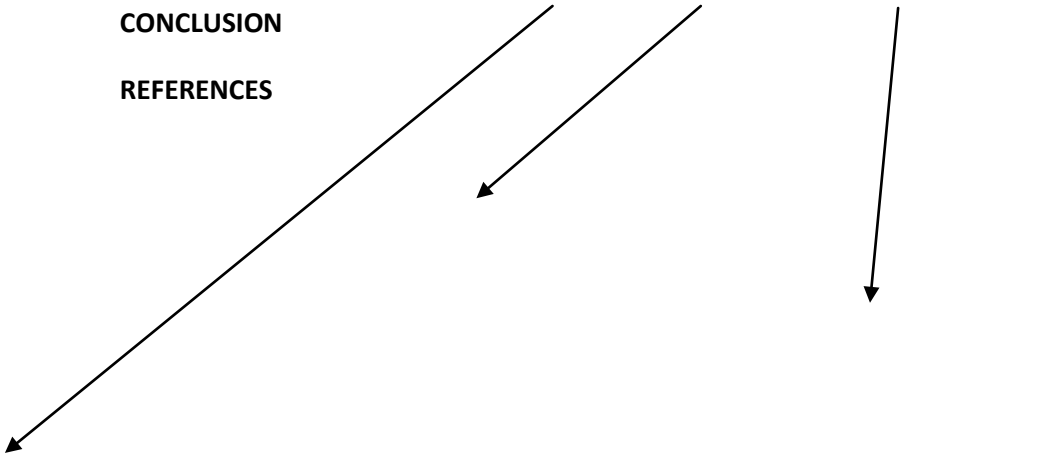
**HYPOTHESIS**

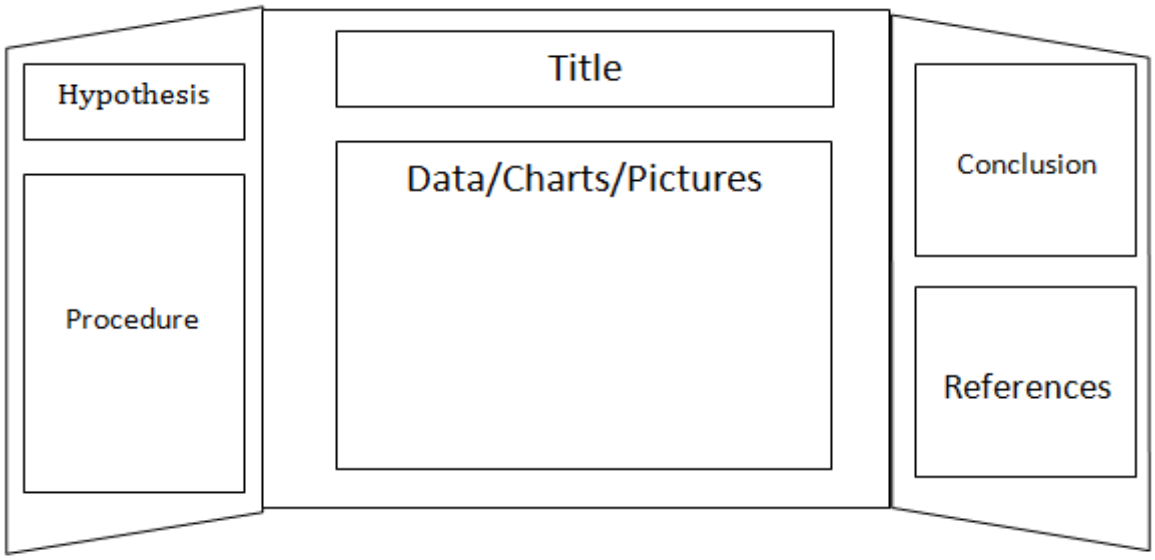
**PROCEDURE**

**CONCLUSION**

**REFERENCES**

ALL LABELS MUST BE IN IMMERSION LANGUAGE






5. The exhibit showing the results of the experiment may consist of the project itself, the equipment used, and/or pictures, drawings, charts, and diagrams. All exhibits must be durable and safe. Movable parts must be firmly attached. The actual display must be no larger than 30" deep (front to back) by 36" wide (side to side) and no higher than 5'.
6. No flame or dangerous materials will be allowed at the fair.
7. Electricity will NOT be available at the fair although may be used during research.
8. All exhibits must be removed at the conclusion of the fair on March 6th. Exhibits not removed will be discarded.

Please, NO VOLCANOES.

**Getting Started**

One of the hardest parts about doing science fair projects is getting started. Attached are a series of worksheets for the student to complete. Each will take you step by step through doing a science fair project

**The Scientific Method:**

In doing a science fair project, you need to keep the scientific method in mind. The scientific method is a great way of organizing yourself to do a project

1. Think of an Idea: The first thing that you will need to do is think of an idea for what you will try to explain or do in your experiment, or just something you may want to study. One way to get started is to adapt an existing experiment your own unique way.

2. Research your topic: Find out what is already known about the topic, and see what you can add to the general body of knowledge.

3. Plan your experiment: This section is also called the procedure. You make a game plan of when, where, how, what, and why.

4. Experiment: Party Time. This is where you get right down to the nitty gritty of doing the experiment, collecting data, rolling up the sleeves and diving right into the fun.

5. Collect & Record Data: This is all the information that you are seeking, including charts, data tables, illustrations and records of observations.

6. Come to a Conclusion: Compile the data that you have collected, evaluate the results, and come to a conclusion.


The following are the worksheets that you'll need to complete. These will help you do your project.

Global Village Academy Science Fair Packet
Handbook and Instructions


Student Name: _____

**Step One**

This is the first sheet to help you get started on your science fair project. A good science fair project has the following characteristics:

1. You must ask an original question.
2. That original question requires an experiment in order to provide an answer.

Your job is to think of three different questions that you want to ask and write them down in the spaces below. Some examples of questions that require experiments include:

1. Temperature and the amount of time it takes mealworms to change to beetles.
2. The effect of different concentrations of soapy water on seed germination.
3. Crystal size and the amount of sugar in the solution.

You are not writing a report, you are thinking of an idea that you want to experiment with, write up and present to your classmates and teacher.

**Idea 1**

_____

_____

_____

**Idea 2**

_____

_____

_____

**Idea 3**

_____

_____

_____

Student Name: _____

**Step Two**

This sheet is designed to give you some ideas on where to look for information on your topic. When you prepare your lab report you will want to include some background information about your topic. There are several sources of information that are available to you. Fill in as many of the blanks as you can.

**Books, Magazines, Newspapers, Journals**

_____

_____

_____

_____

_____

_____

**Films, Videos**

_____

_____

_____

_____

**Specialist, Professionals, Professors**

_____

_____

_____

_____

Student's Name: _____

**Step Three**

This sheet is designed to help you outline your experiment. If you need more space, add extra sheets of paper to finish your outline. When you are done with this sheet, turn it in on the due date. Your teacher will review it with you and you can begin collecting data.

**Materials (list everything that you will need, include quantities)**

_____

_____

_____

_____

_____

**Procedure (list what you are going to do in the order that you are going to do it)**

1.

2.

3.

4.

5.

6.

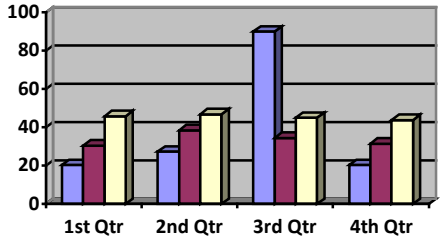
7.

**Collecting Data** – Check the methods that you are going to use and prepare a sample on another sheet of paper. See the next page for examples of data charts.

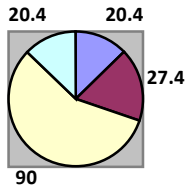
____ 1. Data Tables ____2. Bar Graphs
____3. Line Graphs ____4. Pie Graphs
____5. Illustrations ____6. Photographs

**Samples of Data Charts**

**BAR CHART**




**PIE GRAPH**

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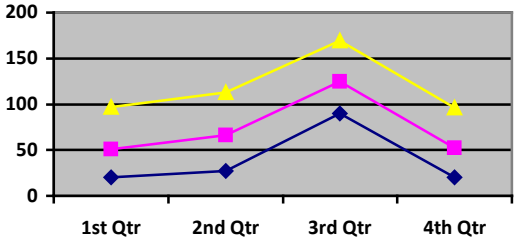
**LINE GRAPH**




| DATA TABLE | | | |
|---|---|---|---|
| # | Name | Time #1 | Time #2 |
| 1 | Blue Car | 1:15 | 1:35 |
| 2 | Red Car | 1:22 | 1:20 |
| 3 | Green Car | 2:05 | 1:45 |

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## IMPORTANT:

## On the back of your Science Fair project board be sure to include the following: