

Dear Families,

During this first cycle your child will engage in a community observation math project of his or her own choice, which we will call “Community Walk” or CW. Your child has copy of the guidelines in his/her CW folder (or entry log). Your student is expected to complete a self-guided math project this quarter in the form of an observational experiment that can be quite data heavy as they observe change in their community and relate it back to our theme this cycle. Much of the work will take place at home or by walking around the student’s neighborhood community.

It is important for you to be involved in this area of their math study for your child’s success and safety. The students have been told to think about their safety first when doing these observations in the community by being aware of their surroundings. Please, do not allow the students to go anywhere that could be considered dangerous for this project.

Also, you may be needed as a subject, chauffer, or supervisor for these observations. I appreciate the roles that you will play. Observation, investigation, and problem solving are usually topics discussed in the science class, but a lot of the data compiling and data analysis is done in the math class. As such, the student’s project packet will be their guide to this project to help them through their observations without needing additional science knowledge. The reflection questions that follow the student’s observations and journal entries will help them take the scientific method into the world around them!

CW grading is based on (a) the thoroughness of records kept in the log, (b) time spent doing the activity, (c) your signatures, and (d) the mathematical analysis of their data and presentation of their findings. Students also receive a grade for presenting their project to the class.

By Thursday, September 7th, please discuss with your child the choice of their topic and make a final decision to begin observations.

With the amount of detail that this project follows, it could be easily adapted into a science fair project, but this type of extension would not be necessary for this project. Math outside the classroom can be a fun experience for you and your child. Thank you again for your help this quarter!

Sincerely,

Mr. Dave
801- 827 - 0150
dmconkey@mariamontessoriacademy.org

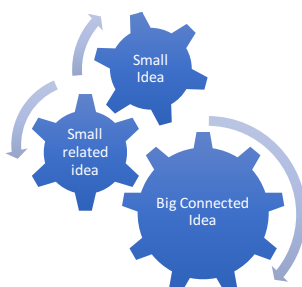
Ms. Kat
801- 827 - 0150
klowe@mariamontessoriacademy.org

CW: Community Walk

Name: _____

Background and Guidelines

CW stands for “Community Walk”. It is a real-world math observation project that is carried out by you. I will provide you with a guide to your mathematical analysis of your data, but you must take the initiative to plan, complete, and document your efforts and data. To find inspiration, take a walk around your neighborhood. If you’re still struggling with a topic, the first pages of the project packet have a page to help you brainstorm.



Safety

Please observe all local laws and property boundaries during your community walk. Be aware of your surroundings as you are walking. Avoid doing this walk at night time or in places that it is hard to see pedestrians.



CW Folder

1. Use a 3-prong folder with pockets. Write “Community Walk”, your name, and “Math 7” on the front in a high contrast marker.
2. In the center section, put this handout followed by the CW forms and work.
3. Each time you complete more work on your project, fill in your log sheet and have an adult sign it. Log your time when you do your community walks, not when calculating or data logging.

Academic Standards Addressed

7.RP.1-3: Analyze proportional relationships and use them to solve real-world and mathematical problems.

How to complete the Community Walk Project
<i>For an A (between 90 and 100 points) you will need to complete the following guidelines:</i>
Summary: Makes observations of a neighborhood and document the observations with quantitative or qualitative data to find direct and indirect proportionality in our natural environment through the point of view of change occurring around us.
Components: <ul style="list-style-type: none"> <input type="checkbox"/> Identify an event or object that you can observe changing or not changing in your community or environment. <input type="checkbox"/> Decide if you are going to collect quantitative or qualitative data. <input type="checkbox"/> Collect and record your data (6 entries minimum) <input type="checkbox"/> Journal about your data collection and your observations of your community (This is independent of the reflection questions). <input type="checkbox"/> Analyze your findings using charts and graphs <input type="checkbox"/> Final reflection on your findings <input type="checkbox"/> State the proportionality relationship your event or topic has shown. (Direct, Indirect, Neither) <input type="checkbox"/> Display data on a tri-fold <input type="checkbox"/> Present data to the class
Grading: <ul style="list-style-type: none"> <input type="checkbox"/> Work must be on time for credit <input type="checkbox"/> Time logged for community walk observations (This is doing the observations, not the writing entries, data calculating, or presentation making) <input type="checkbox"/> Observation journals need to be typed for board <input type="checkbox"/> Data needs to be presented on board. <ul style="list-style-type: none"> <input type="checkbox"/> Pictures if Qualitative <input type="checkbox"/> Chart or Graph if Quantitative <input type="checkbox"/> Logs are completed and signed <input type="checkbox"/> Observation logs and notes should be checked in on progress days and turned in on final due date. <input type="checkbox"/> If sources used, Bibliography should be in APA format.

Teacher Check-In Dates

Tasks to be Completed	Check-In Date
Step 1 – 3 in Packet (2 Observations Total)	Friday, September 15 th , 2017
Step 4 in Packet (4 Observations Total)	Thursday, September, 21 st , 2017
Step 5 in Packet (6 Observations Total)	Friday, September 29 th , 2017
Step 6 & Step 7 (Final Analysis & Summary)	Wednesday, October 11 th , 2017
Display for Presentation	Friday, October 13 th , 2017
Class Presentation	Tuesday, October 17 th , 2017

Brainstorm Page

Answer the questions below:

Identify two changes that you see in your community.

How do you know that these objects or events are changing? Do you know where you can observe these occurrences safely in your community?

Why do you think these objects are changing? Is there a pattern to their change?

Alternative Brainstorm

Go on a practice community walk.

A community walk for this project will be defined as a normal paced 20-minute walk around your local neighborhood. The walk should be silent in order to make sure to collect data on all the observations around you in the community environment.

Identify at least two things that you observed changing on your community walk.

How can these events or changes be documented?

Do you know why they are changing?

What do you think is the purpose of the objects or events changing?

Is there a pattern to the way the objects or events are changing?
If there is no pattern, how do you know there is no pattern?

What events occurred on your walk that you are curious about?

Was there anything that happened have confused you or you would like to know more about?

Data Types

Quantitative vs Qualitative

There are two types of data that can be collected. There is quantitative which is number based and there is qualitative which is image based.

Definition:

Quantitative Data: *Data* expressing a certain quantity, amount or range.

Examples: 2 *in*, 3 *cm* , 5 *ft*, 6°C, *lightyears*, etc.

Qualitative Data: *Data* that approximates or characterizes but does not measure the attributes, characteristics, properties, etc., of a thing or phenomenon.

Examples: hot, cold, red, blue, heavy

What type of Data will you collect?

- Quantitative
 - Can I count the occurrences of the event?
 - Is it something that can be measured?
- Qualitative
 - Can I describe the occurrences without using numbers?
 - Is it something that is abstract or non-concrete?

My Choice of Data: _____

Topic Selection Page

Return a copy to Mr. Dave and Ms. Kat.

Observation Topic: _____

Data Type: _____

Back-up Observation Topic: _____

Data Type: _____

Parent Signature: _____ Date: _____

Teacher Approval: _____ Date: _____

Teacher Comments: