

## Math 499 □ History of Mathematics □ Spring 2014

### Project on Ethnomathematics

Use the Ethnomathematics Curriculum Textbook2013 has a guideline and example. This is the level of expectations I have. You can access the textbook from my website at:

<http://math.hawaii.edu/~mchyba/documents/syllabus/Math499/Ethnomath/EthnomathematicsCurriculumTextbook2013.pdf>

The final product will be typed and you will turn in a pdf file.

#### 1. TITLE

Find a good title that is appealing for the reader and that contains hints about what you will present. Remember it is a title and not a sentence.

#### 2. PART 1: INTRODUCTION AND HISTORY

In this section, you introduce the problem and the cultural/historical context. This is not the place where you introduce the mathematics in terms of formula but you can talk about the sort of mathematics that will be involved (geometry, calculus, algebra etc...). Please cite your sources as well. You can also cite quotes from well-known people for instance. This part should be minimum 4 paragraphs, with one paragraph being 4-5 sentences.

#### 3. PART 2: GOAL OF YOUR PRESENTATION

Here you describe the objectives of the presentation. Below are examples:

1. Objective: Identify the cultural importance of kalo in Hawaiian history.

2. Objective: Explain the Creation Myth and tie the concepts of Ohana and Haloa back to kalo.
3. Objective: Explain how language, traditions, rituals, customs, and technology are elements of culture.
4. Objective: Explain how identifying diagraphs, testing for equivalent ratios in a table, graphing points, and relationships between quantities is related to ukuleles sounds.
5. Explain how geometric concepts in modeling situations apply to taro cultivation.

You should have at least 3 objectives well detailed, one of them has to be linked to mathematics. This means that not only you list them but you also explain each of them with three to four sentences. I suggest you had pictures at this level to enhance your project.

#### 4. PART 3: METHODOLOGY

In section Part 2, you should have explained what are the questions that you are trying to solve. The part 3 is dedicated to work out the details. For instance do you have initial data that you will work with? If yes introduce them at this stage. If you will use concepts such as derivatives or integrals for instance define them (briefly) here. State mathematically the question you want to solve. Then work out the mathematical details. Include graphs if it is relevant to your problem. This is the main section of your project.

#### 5. CONCLUSION

This section is not to summarize what you have done in the previous section, it is about making some conclusion based on the results that you have. Do you think the model you used gave good results? Do you think you should change some of the assumptions you have made? Are there any questions that you have not treated that would be interesting and related to your presentation?

## 6. REFERENCES

Please list all the references you found about the subject. You can use some link but I expect at least 2 articles/books to be listed here. Wikipedia is not considered by me as a reference. Make sure you check that your reference is solid (link to a national museum, the a governmental agency and else depending on your subject).

## 7. DEADLINES

- March 18, 2014. The first 3 sections are due.
- April 1, 2014 (sorry it is not a joke...). A very good draft of the complete project is due for review so I can give you feedback for improvements.
- April 8, 2014. Final project is due. There will be no extension.