Grand Rapids Community College
Dr. Woolsey

Renewable Assignment: History of Science

Project Overview

Our goal is to take a step back and recognize that all of the information that we are in the process of learning and will learn came from the efforts of many individuals throughout history and many teams of scientists working together in more modern times.

You will be assigned an astronomer or ancient culture to research, and the list is focused on people who major history books may have forgotten. Our goal is to bring these scholars back into the fold and understand the way that scientific knowledge advances and changes over time.

Licensing

This project will bring into focus the way that knowledge is disseminated and shared. My goal is to provide you with a variety of options for how you want your work to be shared inside and outside of the classroom. We will have a brief discussion of Creative Commons licenses in class, and you can read all about the different licenses at this website: About The Licenses - Creative Commons.

An early deadline for this project will be to fill out a form determining the license you would like to use and the implications for the project format you will use. Please read the following section about format to determine the implications of your licensing decision. Any choice you make for your own work is the correct choice, all I will ask is that you provide a short explanation in that form to explain your decision. Once you submit your project, your license decision must be finalized. If you choose a format that is published publicly, the license you assign to it cannot be revoked (see this FAQ).

Format

Previous versions of this project have specified the format of a **one-page handout** that addresses the Key Science Questions in the following section. It takes critical thinking to narrow down to the most important information and only generate a single page, so it has been a key part of the project to follow the prescribed format. You will be given an example handout on Caroline Herschel on our learning management system; you can use it as a template or you can get more creative and start from scratch! Note: submitting a PDF will ensure it is formatted the way you expect it to be.

However, as we have seen other projects be far more open to creativity in the past, I want to work with students who would like to contribute directly to future learning for their peers by actively editing the LibreTexts textbook that we use in this class. The second main format for this project is to create a **paragraph of text** that will be added into the textbook that is accompanied by an **interactive learning object** (H5P, I will have a digital handout in the project folder to describe the options

available, which include timelines, a crossword puzzle, and more). The text and interactive learning object should address the key science questions in the following section.

Finally, if you have ideas for a different format that touches on all of the key science questions related to your assigned astronomer or ancient culture, talk with me so we can come to an agreement on a project that seems doable in the time allotted. I would prefer that these alternate formats have an open license in mind so that you can share your work with others. Such alternatives might be something like a short video that can be embedded in the LibreTexts textbook with your own narration and editing, or a Zine that can be uploaded to a shared Google Drive.

- If you choose **All Rights Reserved**, I will recommend specifically the one-page handout described above or an alternative creative project such as a video or Zine. Our LibreTexts textbook is openly licensed, and while I want you to be able to retain all rights to your work if desired, it means the textbook editing option is not compatible with the license you've selected.
    - If you decide to specify that the project is **Hidden**, then only you and I will see your handout/project. I will assign a grade to it using the provided rubric, and that will be the end of its use. This is similar to the way most assignments and projects work!
    - If you decide to specify that the project is **Public**, then I will plan to work with you to ensure that your name and copyright is on the handout/project somewhere and place it into a shared Google Drive that can be linked to from our LibreTexts textbook.
- If you choose **CC BY, CC BY-SA, or CC BY-SA-NC**:
    - One-page handout projects will be placed into a shared Google Drive that can be linked to from our LibreTexts textbook after ensuring your name and license appears on it.
    - The paragraph of text with an interactive can be added into the textbook after a secondary editing process. This will happen collaboratively after the grade is assigned using the rubric provided in the final section of this project information page.
    - Any alternative formats we can discuss together how best to include them for public viewing after the project grade is assigned for the course.
- If you choose **CC-0**, we will follow the steps for the attribution as described above, and I will work with you to decide whether you want the public-facing project to include your name or to remain anonymous.

All projects will have the opportunity to go through one peer review process during class time before the final deadline, to provide you with valuable feedback and brainstorming as we create something for an audience that exists beyond our class and beyond our semester! I want you to feel comfortable co-creating new knowledge and feel that your final project has inherent value that you are proud of.

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Key Science Questions

Biographical Details: For a single individual: Where does your scientist fit into our global history? List your assigned scientist's name, dates of birth (and death, if applicable) and some geographical information. For an ancient culture: what is the time range we are focusing on? Where were they located on Earth?

Contributions to Science: What are the most essential contributions your scientist or ancient culture made to our understanding beyond Earth (solar system, other stars, galaxy, universe, etc)? Try to focus specifically on contributions to astronomy, even if they did other things as well.

Textbook Connections: For a single individual: Where in the textbook do the specific astronomy topics or fields of study that your scientist is known for show up? This is your chance to explore the table of contents in the book a little more closely. *Note: most of the assigned scientists will not be mentioned by name in our textbook, but the science topics they are associated with should be there. Check for any mention of their name or people they are associated with that came up in your research, though!* For an ancient culture: how much of their knowledge has been properly attributed in the textbook? What has changed about their science understanding from their time of existence to modern day Western science that is covered in the textbook?

Sources: You will need to use external resources along with our course content. Do not just open one website and copy its information. Full credit will require at least three different text-based sources. Including images on your handout - of your scientist, their discoveries, etc - is highly recommended and should be also cited appropriately, but they do not count for the text-based sources. An additional note about images you include in your project: they will need to be consistent with the licensing you choose, and I can help you with any questions or concerns you have about this. It is very important that you cite all your sources (ask if you have questions on how to organize your references appropriately).

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Rubric

I will use the following rubric for most projects in this course. The descriptions indicate what I am looking for in five categories (Relevance, Originality, Accuracy, Depth, and Sources - ROADS). The first column lists the categories, and then the additional columns are descriptions for point values ranging from 1 point to 4 points. The total project is scored out of 20 points. Please contact me if you have any questions about the project or how I am grading it.

Category	1 point	2 points	3 points	4 points
Relevance	There are no clear connections to the way topics are covered in lecture and in the project.	There are few connections between how we approach topics in lecture and the project.	You connect some ideas to the lecture material and demonstrate main learning objectives.	You connect all key ideas directly to the lecture material and show proficiency of related course topics.
Originality	The project relies heavily on quotes and content from other sources.	The project lacks personality or creativity but the content is written in your own words.	Your personality or unique perspective is conveyed in parts of the project and/or you show some creativity.	Your personality or unique perspective is highlighted and/or your project shows exceptional creativity.
Accuracy	The science in your project has some significant errors or misconceptions.	The science in your project has no major errors and you answer most of the key science questions.	The science content in your project has no major errors and you answer all of the key science questions.	The science content in your project is free of all errors and you answer all of the key science questions.
Depth	You cover topics at a general surface level, with less depth than we see in the lecture material.	You cover topics at a surface level and provide scientific detail in only a few parts of your project.	You provide evidence for most statements and you go into the detailed science for a few focus points.	You provide background evidence for all statements and you go into the detailed science throughout.
Sources	You did not cite your sources in your completed project.	You use and list two resources that are reasonably vetted for objectivity and accuracy.	You use and list three resources that are reasonably vetted for objectivity and accuracy.	You actively use and clearly cite at least three reliable and reputable resources in the project.