CURRY COLLEGE

General Education ePortfolio Assignment

COURSE INFORMATION

INSTRUCTOR NAME	COURSE NAME
Stephanie Walker	The Sciences: Drugs & Disease
COURSE NUMBER	**SECTION**
SCI-1010	1
SEMESTER	**YEAR**
Spring	2019

GEN ED REQUIREMENT(S) SATISFIED BY COURSE

Upon successful completion of the course, students will be able to:

- Identify the distinct perspective of the discipline, including what it looks at and the descriptive and explanatory power that it offers.
- Present a theoretical and/or historical overview of the discipline.
- Articulate the role of the course within the context of the liberal arts.

An examination of how scientists address questions about life, matter, and the nature of the universe. Emphasis is placed on "How do we know?" and "Why does it matter?": the methods by which scientists achieve understanding, and the perspectives on the contemporary world that this understanding provides.

In this section of SCI 1010, we will focus on the chemistry and biology of drugs and disease. The course will begin with basic concepts of chemistry and biochemistry, with an emphasis on understanding the structure and bonding of drug molecules and the different ways drugs interact with biological molecules. With this background, we will cover the chemistry and biology of several types of common pharmaceuticals, including historical and sociological aspects of their use. At the conclusion of the course, we will discuss drug discovery and development and modern genetic approaches to therapies.

Description of the Assignment

Over several weeks, students worked in small groups to design and carry out experiments using an antimicrobial screening assay. Students identified a goal and posed a hypothesis, designed and conducted experiments, analyzed data, created figures/tables to represent results, and wrote a formal lab report (with draft and revision) describing the work.

Expectations of the Assignment

Schedule:

Week 1: Discussion and experimental design using guided worksheets/instructor feedback

Week 2: Conduct experiments

Week 3: Discussion and presentation of results using guided worksheets/instructor feedback; discuss future experiments

Week 4: Discussion of scientific writing & outline of lab reports

Due Dates:

Week 1: Screening for antimicrobial activity worksheet (Week 1 Experimental Design)

Week 3: Results worksheet

Week 4: Lab report outline

Friday 4/19: Draft of lab report

Monday 4/29: Final draft of lab report & upload to Digication

General Education Learning Outcomes Assessed with this Assignment

A. Intellectual Development and Active Learning

1. Critical reasoning and judgment

    Demonstrate ability to evaluate information, solve problems, and make informed choices

    Evaluate qualitative and quantitative evidence

    Reason in circumstances of ambiguity and unpredictability

2. Intellectual engagement, inquiry, and life-long discovery

    Recognize the value of learning as a life-long search for meaning and enrichment

    Demonstrate continued inquiry and exploration to discover, deepen, or expand interests

B. Meaningful Communication

1. Written, oral, visual, and non-verbal

    Demonstrate ability to convey meaning clearly and with appropriate sense of context and audience in a variety of formats

2. Collaboration and Teamwork

Interact effectively in groups and in personal and professional relationships