



**[DRAFT]**  
**GE-AIMS Assessment**  
**Fall 2016 to Spring 2017**

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CSUB GE-AIMS Assessment Coordinator  
Summer 2017

## TABLE OF CONTENTS

### **PART I - BACKGROUND**

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1.1 – GE PROGRAM LEARNING OBJECTIVES	3
1.2 - GE FIVE YEAR ASSESSMENT PLAN	4
1.3 – FALL 2016 ASSESSMENT OVERVIEW	5-6

### **PART II – 2016-2017 ASSESSMENT**

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2.1 - ASSESSMENT INSTRUMENTS	7-10
2.2 - ASSESSMENT FINDINGS	
AREA B	
SCIENCE LITERACY CONCEPT INVENTORY	11
ASSESSMENT PLAN	12
FREQUENCY TABLES	13-40
CROSS TABULATIONS	41-49
SLCLI INVENTORY EXPLAINED	50-53
AREA C, D, AI/AH	54-59

### **PART III – STUDENT SATISFACTION SURVEY**

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3.1 – STUDENT SATISFACTION SURVEY	60-84
3.2 – MOVING FORWARD: FALL 2017 TO SPRING 2018	85

## CSUB General Education Program Learning Outcomes<sup>1</sup>

**Goal 1.** Students will attain competency in the skills that are foundational to a liberal arts education.

**Outcome 1A.** Students will present information using well-developed oral communication skills.

**Outcome 1B.** Students will present information using well-developed written communication skills.

**Outcome 1C.** Students will evaluate information using well-developed critical thinking skills.

**Outcome 1D.** Students will use quantitative information to draw reasonable conclusions.

**Outcome 1E.** Students will locate relevant information from credible sources.

**Goal 2.** Students will develop a well-rounded knowledge base across a broad range of disciplines.

**Outcome 2A.** Students will apply the principles, concepts, and methods of the natural sciences, arts and humanities, and social and behavioral sciences.

**Outcome 2B.** Students will integrate the principles, concepts, and methods of the natural sciences, arts and humanities, and social and behavioral sciences.

**Goal 3.** Students will develop the grounds for engaged citizenship.

**Outcome 3A.** Students will employ strategies for self-knowledge and lifelong learning.

**Outcome 3B.** Students will explain key historical events and institutions of the United States.

**Outcome 3C.** Students will identify the many bases of human diversity.

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<sup>1</sup> approved by GECCo on February 6, 2015.

## Five-Year Assessment Plan

PLO	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1A. Oral Communication	X (Senior Sem)					X (CAP)
1B. Written Communication	X (GWAR)			X (AI-H & GWAR)		
1C. Critical Thinking	X (Theme 2 & 3)				X (AI-G, UD C & D)	
1D. Quantitative Reasoning	X (Theme 1)				X (UD B)	
1E. Information Literacy			X (FYS & CAP)			
2A. Disciplinary Knowledge		X (Areas B, C, D)				
2B. Interdisc. Knowledge						X (CAP)
3A. Self-knowledge			X (SELF)			
3B. US History and Institutions		X (AI-G & AI-H)				
3C. Human Diversity				X (JYDR)		

Current Year Assessment

## General Assessment Overview

### **Direct Assessment of Student Artifacts**

Student Learning Outcomes (SLOs) are assessed directly using a common assignment in designated courses to generate student artifacts. Common assignments are not designed to teach the outcome, but rather to evaluate how well students meet the outcome after being introduced to the course material. All assessments were conducted during either Fall 2016 or Spring 2017 and were graded by the appropriate faculty workgroup during the Spring 2017.

### **Indirect Assessment of Student Artifacts**

Indirect assessments were used in this cycle to measure student perceptions of the CSUB General Education program. During the Fall 2016, several members of the GECCO committee asked for a student survey administered to upper-division students in General Education courses. Since this was the first year of the new GE-AIMS program, the survey would serve as a baseline for future assessments.

### **Assessment Scoring**

Student artifacts were collected by the GE Assessment Coordinator in the Fall of 2016. Additional assessments were collected in Spring 2017. Student artifacts were scored by faculty workgroups during the Spring 2017 semester. Each artifact was blindly scored by two faculty scorers.

### **Faculty Workgroups, 2016-17**

### **Faculty Participating in Spring 2017, Assessment Scoring**

Area B	Area C	Area D	AI/AH
Robert Stark, SCI	Rebecca Weller, ART	Rhonda Dugan, SOCl	Jenny Andreotti, HIST
Brian Pitts, SCI	Emerson Case, ENGL	Anne Duran, PSYC	Chandra Commuri, PPA
Alyssa Kaess, SCI	Carol Dell'Amico, ENGL	Luis Vega, PSYC	Ivy Cargile, PLSI
Krishna Prasai, SCI	Senem Saner, PHIL	Michael Ault, PLSI	Gitika Commuri, PLSI

## Faculty Participating in Fall Data Collection

Area B	Area C	Area D	AI/AH
Robert Stark, SCI	Rebecca Weller, ART	Patrick O'Neill, ANTH	Alicia Rodriguez, HIST
Brian Pitts, SCI	Mary Slaughter, COMM	Hager El Hadidi, ANTH	Kate Mulry, HIST
Alyssa Kaess, SCI	Nate Olson, PHIL	Jason Matson, BA	Jenny Andreotti, HIST
Krishna Prasai, SCI	Tim Vivian, RS	Abbas Grammy, ECON	Kathleen Freeland, HIST
		Luis Vega, PSYC	Fred Plane, PPA
		Anne Duran, PSYC	Michael Ault, PLSI

## **Assessment Instrument: Area B**

**Goal 2.** Students will develop a well-rounded knowledge base across a broad range of disciplines.

**Outcome 2A.** Students will apply the principles, concepts, and methods of the natural sciences, arts and humanities, and social and behavioral sciences.

**Measurement:** Faculty members teaching upper-division Area B courses in Fall 2016 and Spring 2017 will be asked to participate in this assessment study by asking students in their courses to complete a brief online Science Literacy Concept Inventory. The draft Inventory can be viewed at <http://tinyurl.com/Bakersfieldtest>. Each section will have its own URL. If faculty members wish to offer credit to students for participating, a list of student ID numbers will be provided.

Draft

## Assessment Instrument: Area C

**Goal 2.** Students will develop a well-rounded knowledge base across a broad range of disciplines.

**Outcome 2A.** Students will apply the principles, concepts, and methods of the natural sciences, arts and humanities, and social and behavioral sciences.

**Measurement:** Faculty members teaching upper-division Area C courses will be asked to participate in this assessment study by asking students in their courses to address the following prompt in a short (500 word) response:

**Prompt:** Analyze [text] using [one of the principles, concepts, and/or methods studied in this course].

Participating faculty members may choose which text and principle/concept/method to embed into the prompt. Examples include the following:

- Analyze Cindy Sherman's *Untitled Film Still #21* using feminist theory.
- Analyze the ethics of the Apple versus the FBI case using utilitarian reasoning.

Faculty members may participate in different ways, depending on what best fits their course plans:

**Option 1:** Include the assessment prompt in a graded exam or quiz, and make copies of the responses before they are graded and with student names removed.

**Option 2:** Include the assessment prompt as an ungraded, in-class writing assignment without student names.



## **Assessment Instrument: Area D**

**Goal 2.** Students will develop a well-rounded knowledge base across a broad range of disciplines.

**Outcome 2A.** Students will apply the principles, concepts, and methods of the natural sciences, arts and humanities, and social and behavioral sciences.

**Measurement:** Faculty members teaching upper-division Area D courses will be asked to participate in this assessment study by asking students in their courses to address the following prompt in a short (500 word) response:

**Prompt:** You are in the middle of a discussion with some friends who have never studied [discipline]. They ask you how the social and behavioral sciences can help them understand social issues. Since you have taken [course], you are confident in answering them. Using [one of the principles, concepts, and/or methods studied in this course] explain how [discipline] contributes to your understanding of [social issue].

Participating faculty members may choose which social issue and principle/concept/method to embed into the prompt. Examples include the following:

Faculty members should ask students to address the prompt in a take-home writing assignment. Please make copies of the responses before they are graded (if at all) and with student names removed.

## **Assessment Instrument: Area AI/AH**

**Goal 3:** Students will develop the grounds for engaged citizenship.

**Outcome 3B:** Students will explain key historical events and institutions of the United States.

**Measurement:** Faculty members teaching AI History courses (HIST 1218 and HIST 1228) and AI Government courses (PLSI 1018 and PPA 2008) will be asked to participate in this assessment study by asking students in their courses to address one of the following prompts in a short (500 word) response:

**Prompt 1:** Explain how [historical event] led to the establishment of [political institution].

**Prompt 2:** Explain how [political institution] was altered by [historical event].

Participating faculty members may choose which prompt to use, and which historical event and political institution they wish to have students write about. Suggested event-institution pairings include, but are not limited to, the following:

- Explain how the US Civil War led to the establishment of the 13th, 14th, and 15th Amendments.
- Explain the Woman Suffrage Movement (1848-1920) was affected by World War I.
- Explain how the Civil Rights Movement (1954-1968) contributed to the passage of the Civil Rights Act of 1968.
- Explain how the attacks of September 11, 2001 led to the passage of the US PATRIOT Act by the United States Congress.

Faculty members may participate in different ways, depending on what best fits their course plans:

**Option 1:** Include the assessment prompt in a graded exam or quiz, and make copies of the responses before they are graded and with student names removed.

**Option 2:** Include the assessment prompt as an ungraded, in-class writing assignment without student names.

## **Area B Assessment Findings**

### **Science Literacy Concept Inventory (SLCI)**

CSUB GE Students, Fall 2016

- I. Assessment Plan**
- II. Frequency Tables: pp. 2-30.**
- III. Cross Tabulations Table: pp. 31-39.**
  - a. Gender,**
  - b. First Generation,**
  - c. Science Major,**
  - d. Education Level.**
- IV. Appendix: Description of Science Inventory – pp. 40-43.**

# I. General Education Program Assessment Plan, AY 2016-2017 Area B

**Goal 2.** Students will develop a well-rounded knowledge base across a broad range of disciplines.

**Outcome 2A.** Students will apply the principles, concepts, and methods of the natural sciences, arts and humanities, and social and behavioral sciences.

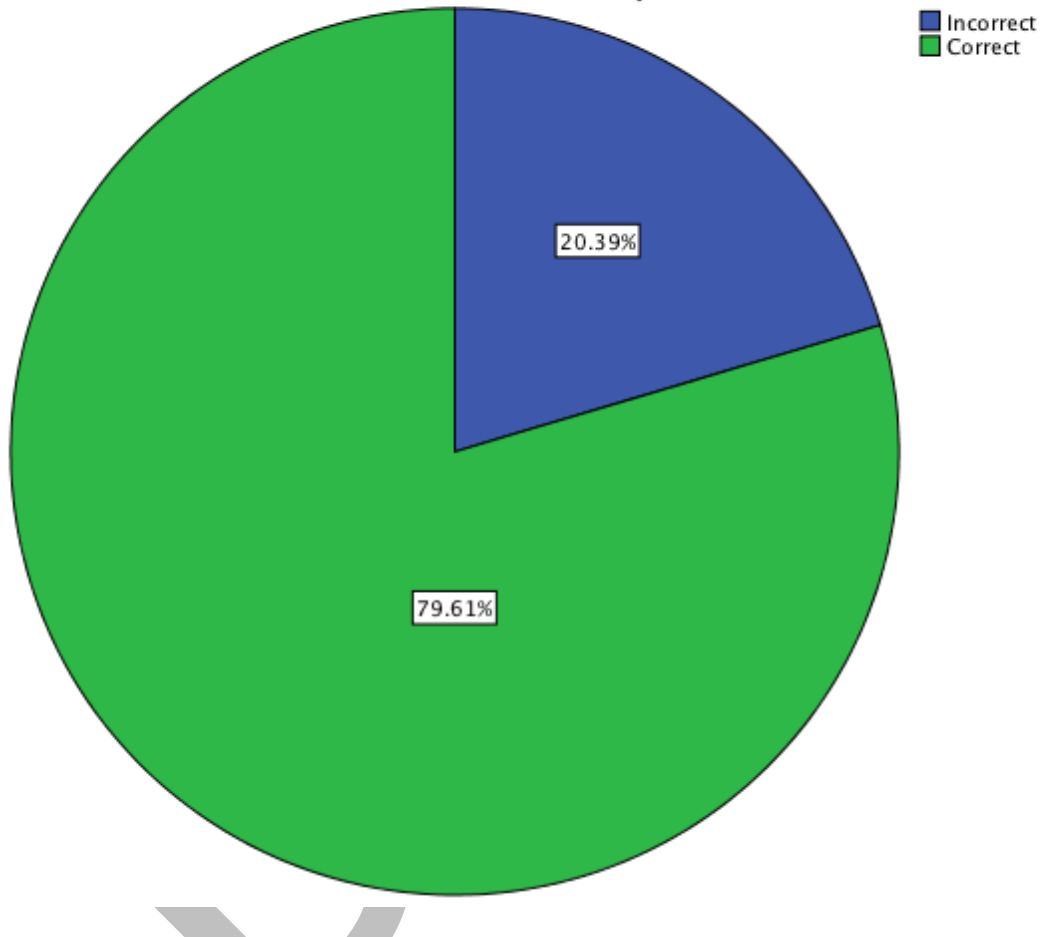
**Measurement:** Faculty members teaching upper-division Area B courses in Fall 2016 and Spring 2017 will be asked to participate in this assessment study by asking students in their courses to complete a brief online Science Literacy Concept Inventory. The draft Inventory can be viewed at <http://tinyurl.com/Bakersfieldtest>. Each section will have its own URL. If faculty members wish to offer credit to students for participating, a list of student ID numbers will be provided.

## **Participating Courses**

SCI 3019  
SCI 3319  
SCI 3329  
SCI 3609

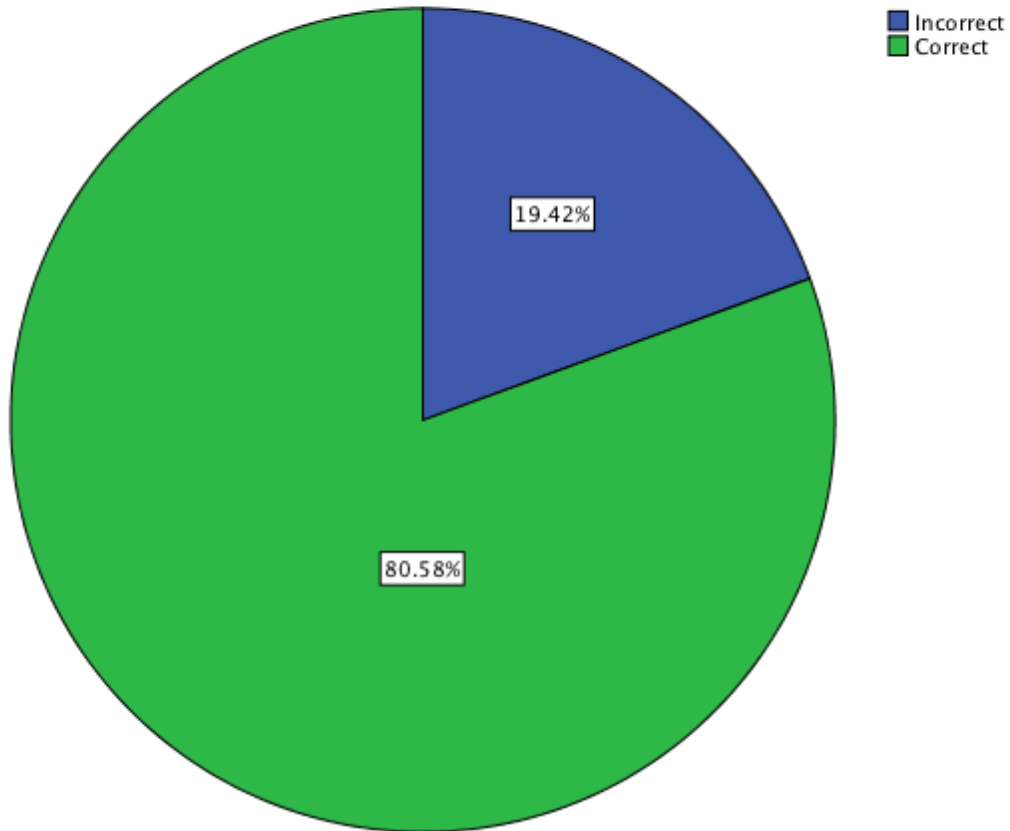
# SLCI Frequency Tables

1. Which of the following statements presents a hypothesis that science can now easily resolve?



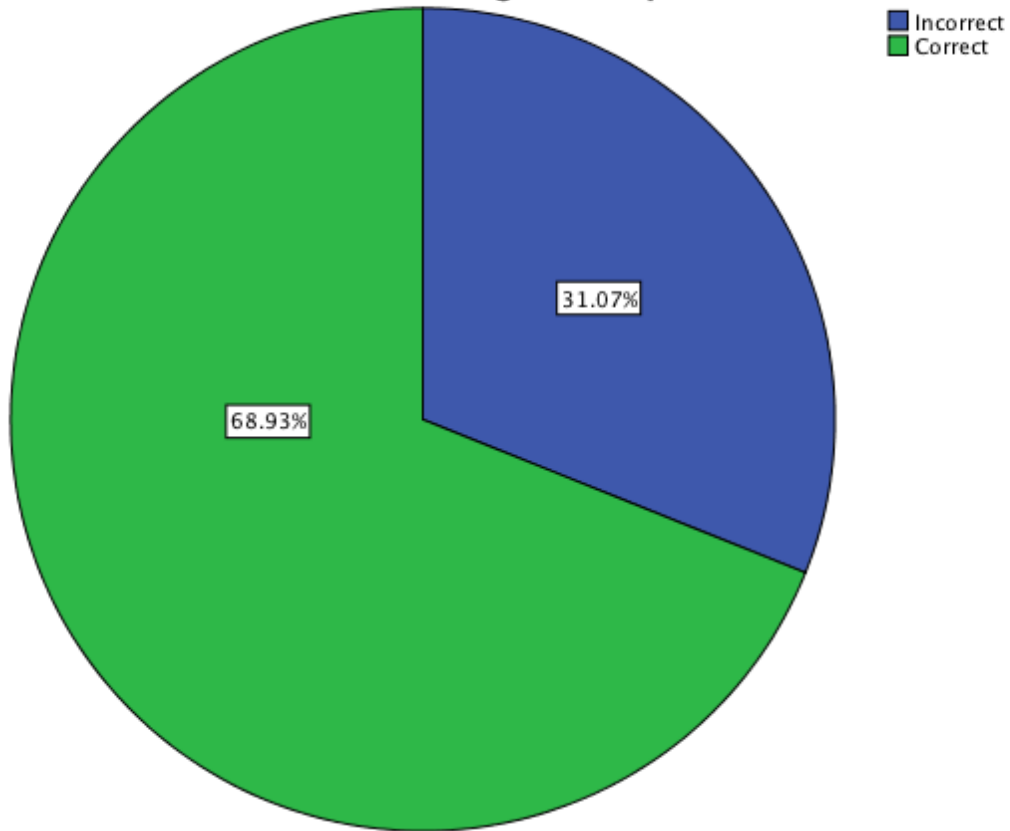
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	21	20.4	20.4	20.4
	Correct	82	79.6	79.6	100.0
	Total	103	100.0	100.0	

2. American climate scientists know that global warming produces a rise in sea level due to the melting of ice in the polar regions. Which of the following actions represents an appropriate ethical response by these scientists?



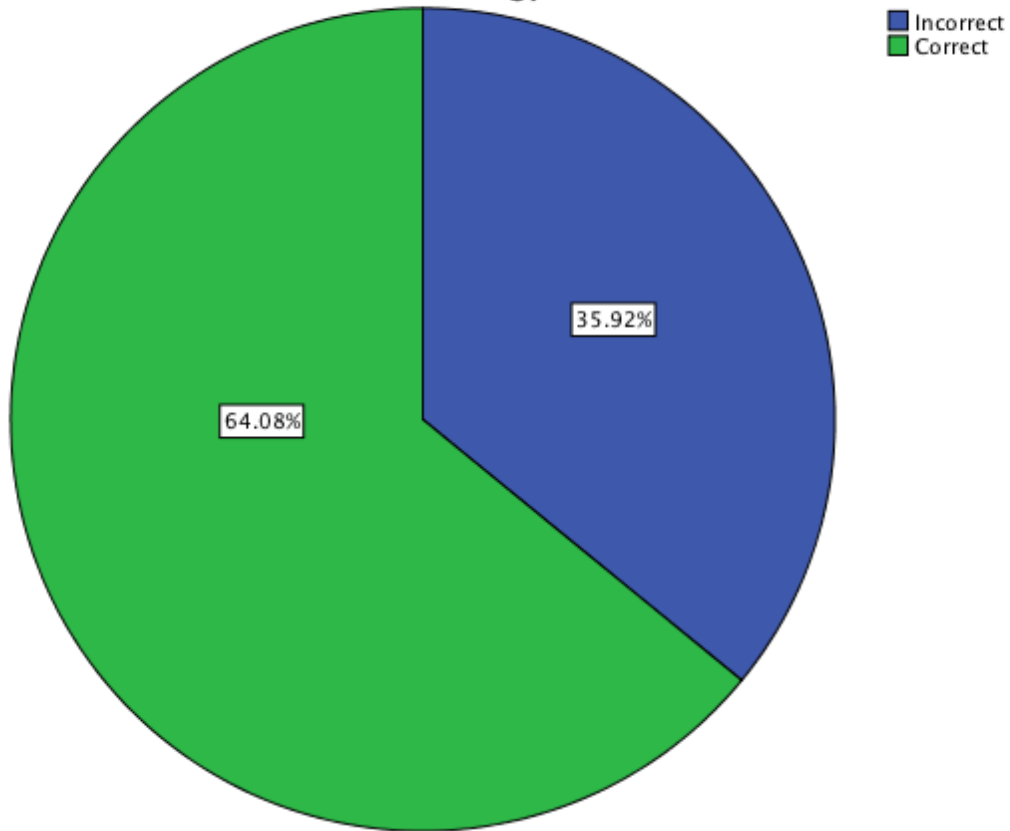
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	20	19.4	19.4	19.4
	Correct	83	80.6	80.6	100.0
	Total	103	100.0	100.0	

3. For thousands of years, nearly everybody believed that the Sun traveled around the Earth. More recently, people believe that the Earth travels around the Sun. Which of the following reasons best explains the rejection of the longest-accepted idea?



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	32	31.1	31.1	31.1
	Correct	71	68.9	68.9	100.0
Total		103	100.0	100.0	

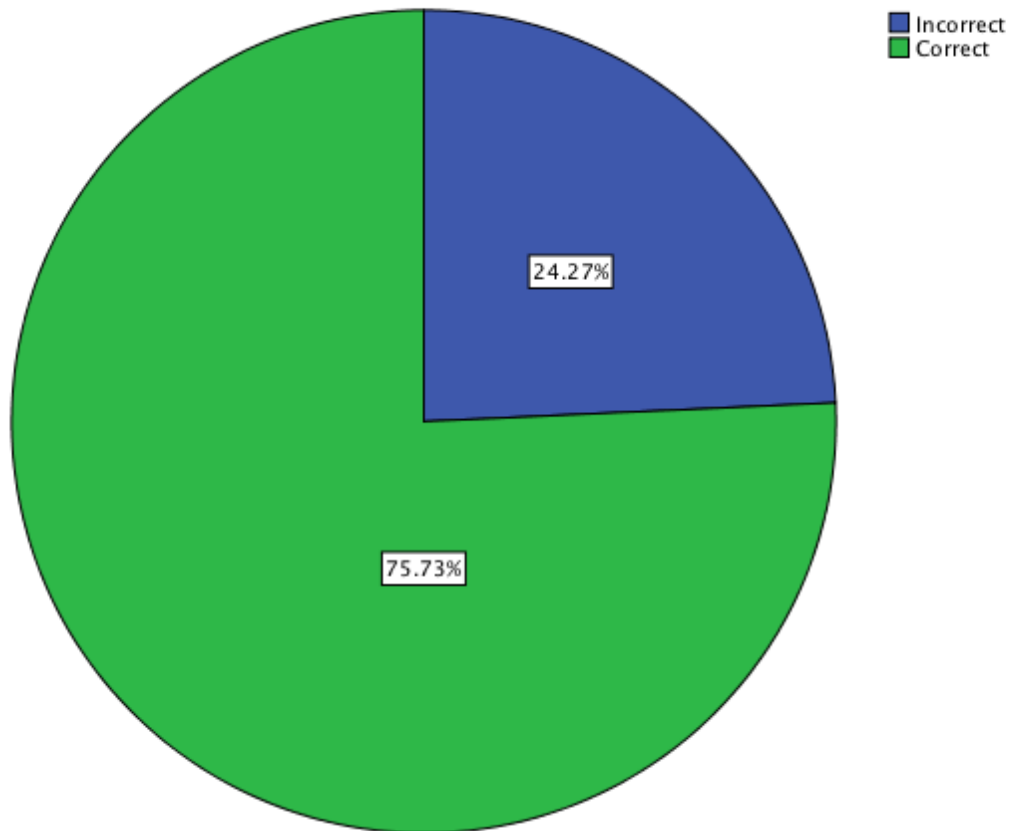
4. Scientists deduced that color is the eye's interpretation of different wavelengths of visible light. They learned that red light carries less energy and has the longer wavelengths in comparison with violet light that carries more energy and has shorter



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	37	35.9	35.9	35.9
	Correct	66	64.1	64.1	100.0
	Total	103	100.0	100.0	

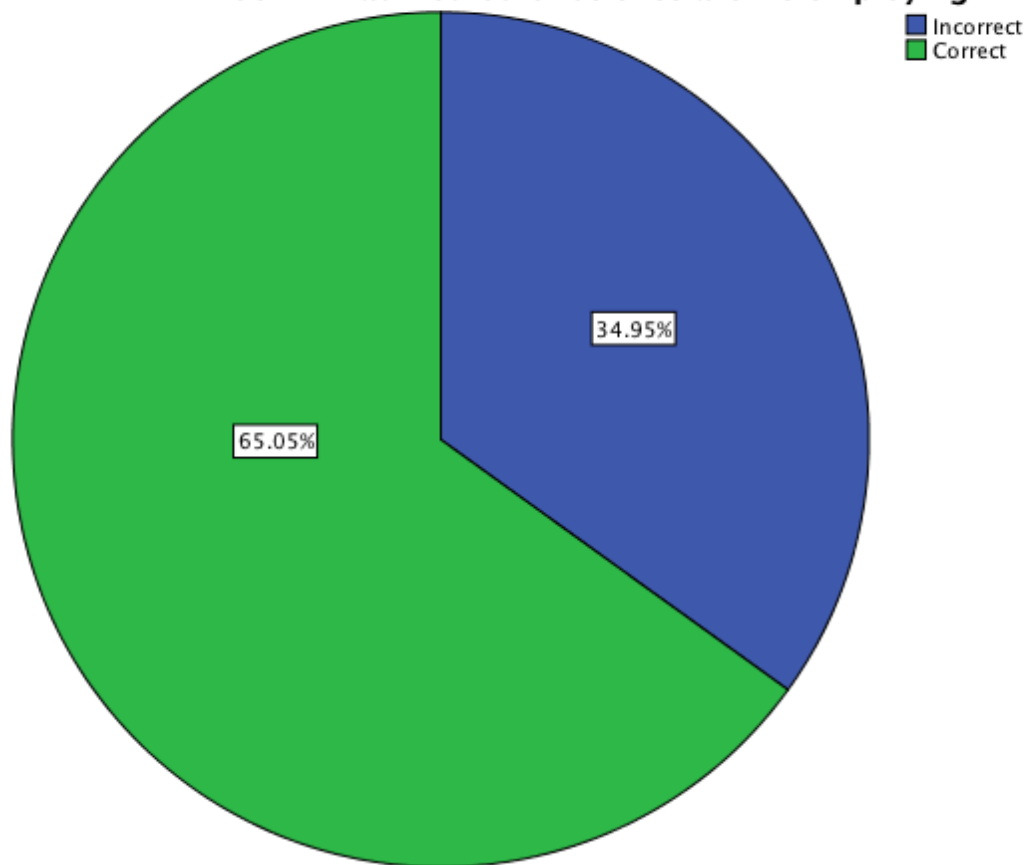


5. Many people claim that magnets worn as bracelets have the power to combat aches and pains. Of the following, which constitutes the best method through which to gather the evidence needed to judge whether the claims are valid?



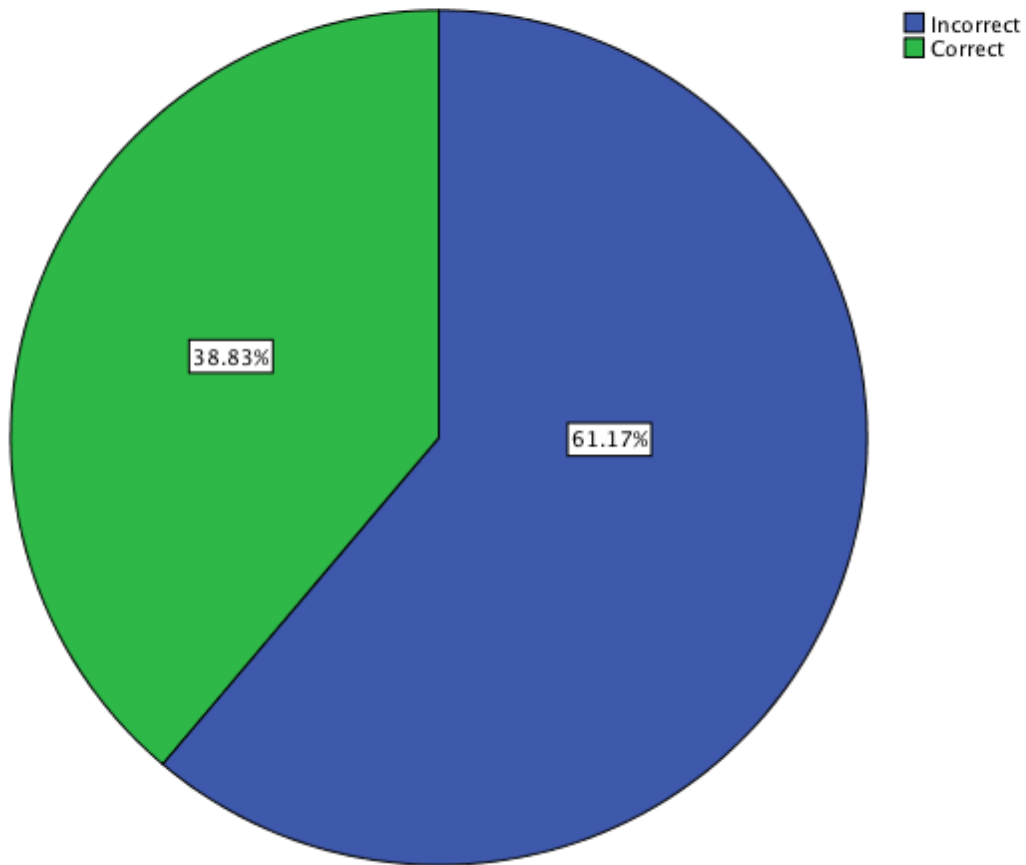
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	25	24.3	24.3	24.3
	Correct	78	75.7	75.7	100.0
	Total	103	100.0	100.0	

6. To help us to understand the lunar phases, we have set up a basketball, a baseball, and a golf ball to represent respectively the Sun, Earth and the moon. What method of science are we employing?



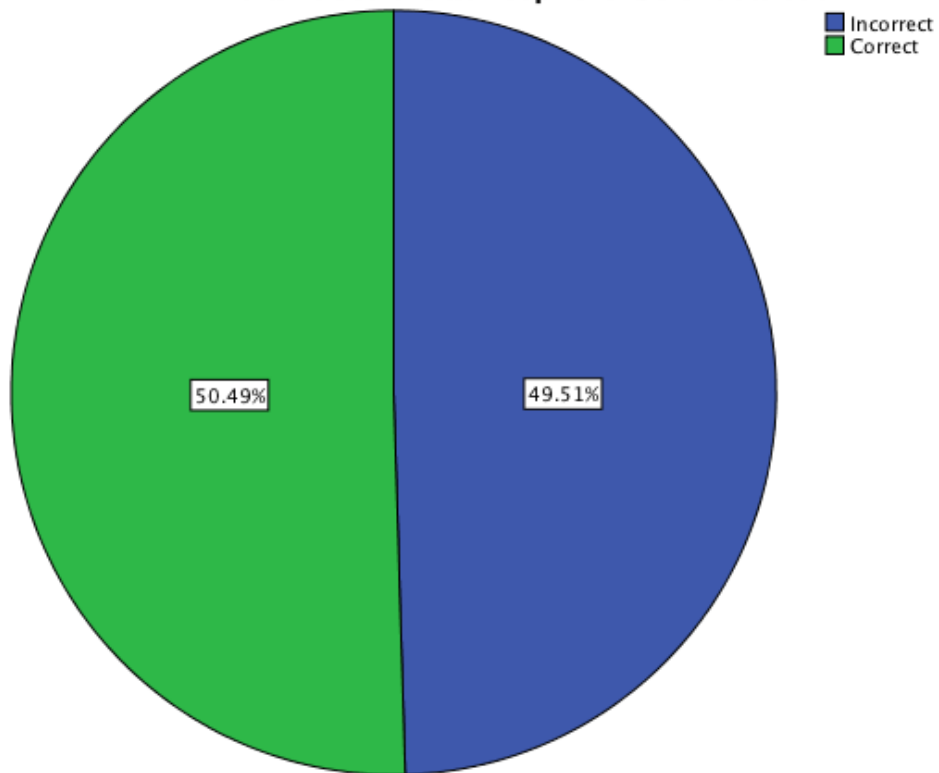
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	36	35.0	35.0	35.0
	Correct	67	65.0	65.0	100.0
	Total	103	100.0	100.0	

7. Which of the recent newspaper article titles likely does NOT require some scientific knowledge to comprehend and appreciate the significance of the article?



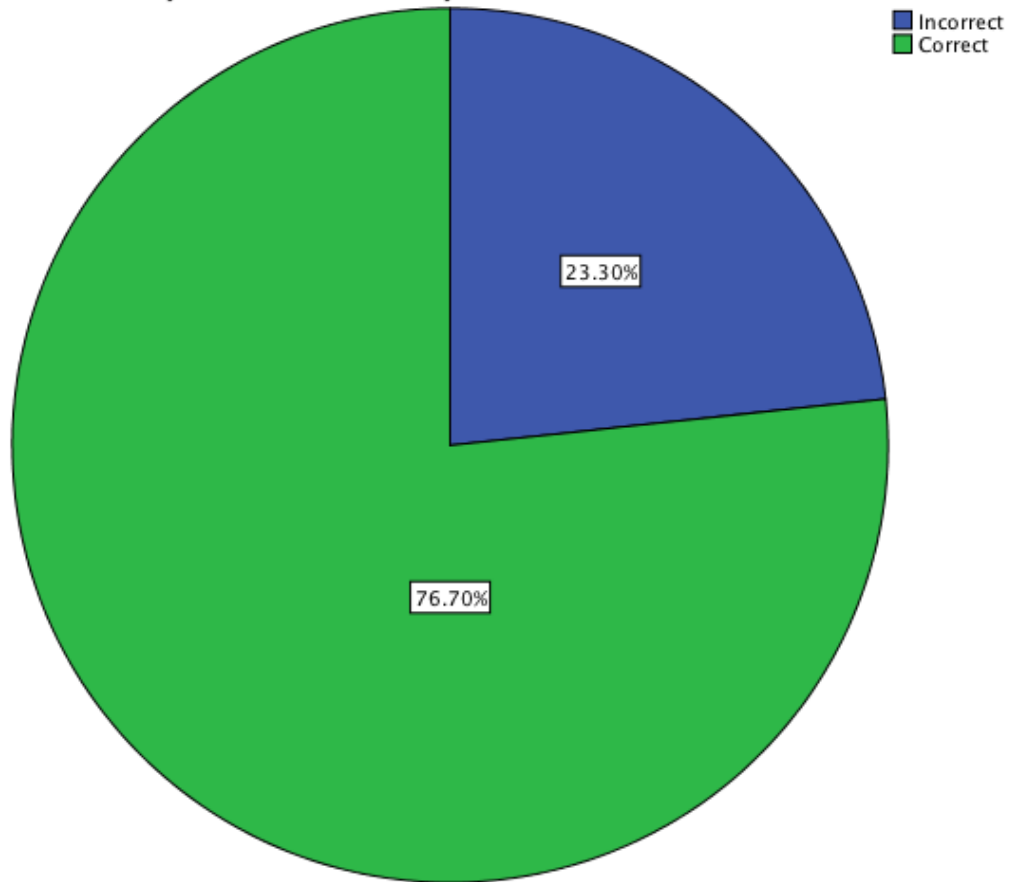
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	63	61.2	61.2	61.2
	Correct	40	38.8	38.8	100.0
	Total	103	100.0	100.0	

8. Radon is a naturally occurring radioactive gas found in trace amounts in the atmosphere. Some soils and rocks are rich sources of radon, and houses built on them have greater amounts of radon in their indoor air than does the atmosphere. Scientists sus



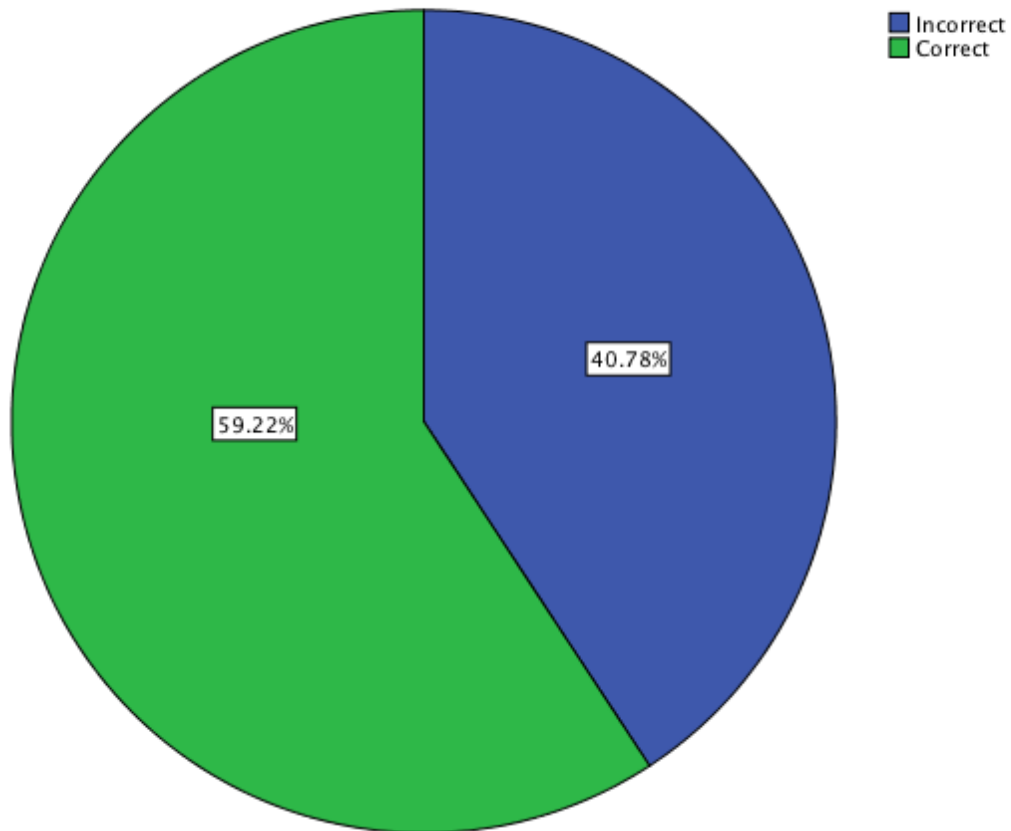
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	51	49.5	49.5	49.5
	Correct	52	50.5	50.5	100.0
	Total	103	100.0	100.0	

### 9. Why is Darwin's theory of evolution considered a scientific theory?



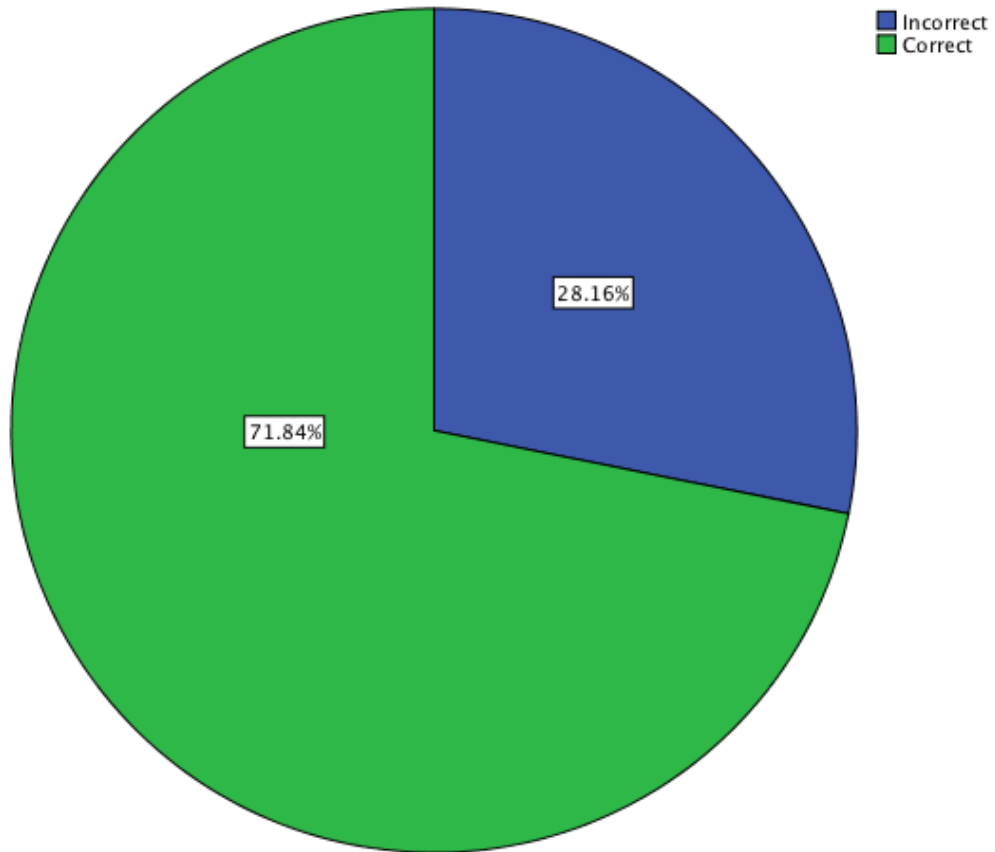
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	24	23.3	23.3	23.3
	Correct	79	76.7	76.7	100.0
	Total	103	100.0	100.0	

10. A professor has a class consisting of students who are doing independent study on the chemistry of lake sediments. Each student analyzed the sediment for four (4) chemical elements. The four elements are different for each student. Each student is wri



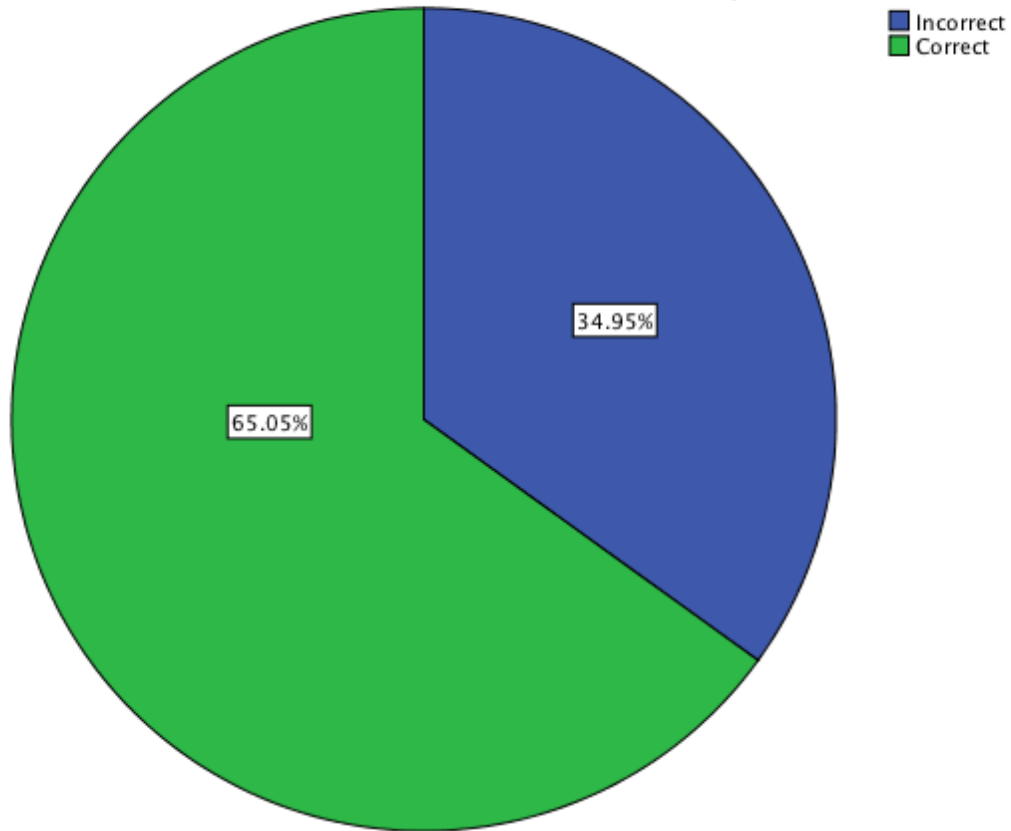
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	42	40.8	40.8	40.8
	Correct	61	59.2	59.2	100.0
	Total	103	100.0	100.0	

11. Which of the following best explains why doubt is an important aspect of science?



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	29	28.2	28.2	28.2
	Correct	74	71.8	71.8	100.0
	Total	103	100.0	100.0	

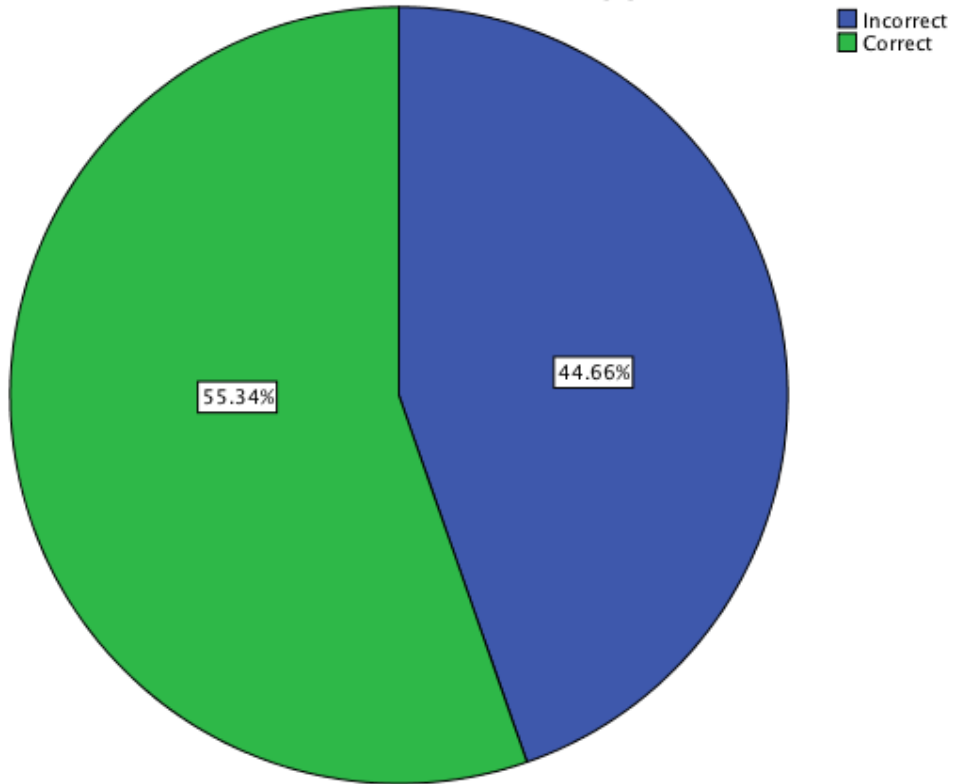
12. Climate change attributed to human causes is a topic fraught with controversy. Some voices state that the best science confirms that humans are so altering our climate that a major irreversible climate change will occur within the near future, unless



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	36	35.0	35.0	35.0
	Correct	67	65.0	65.0	100.0
	Total	103	100.0	100.0	

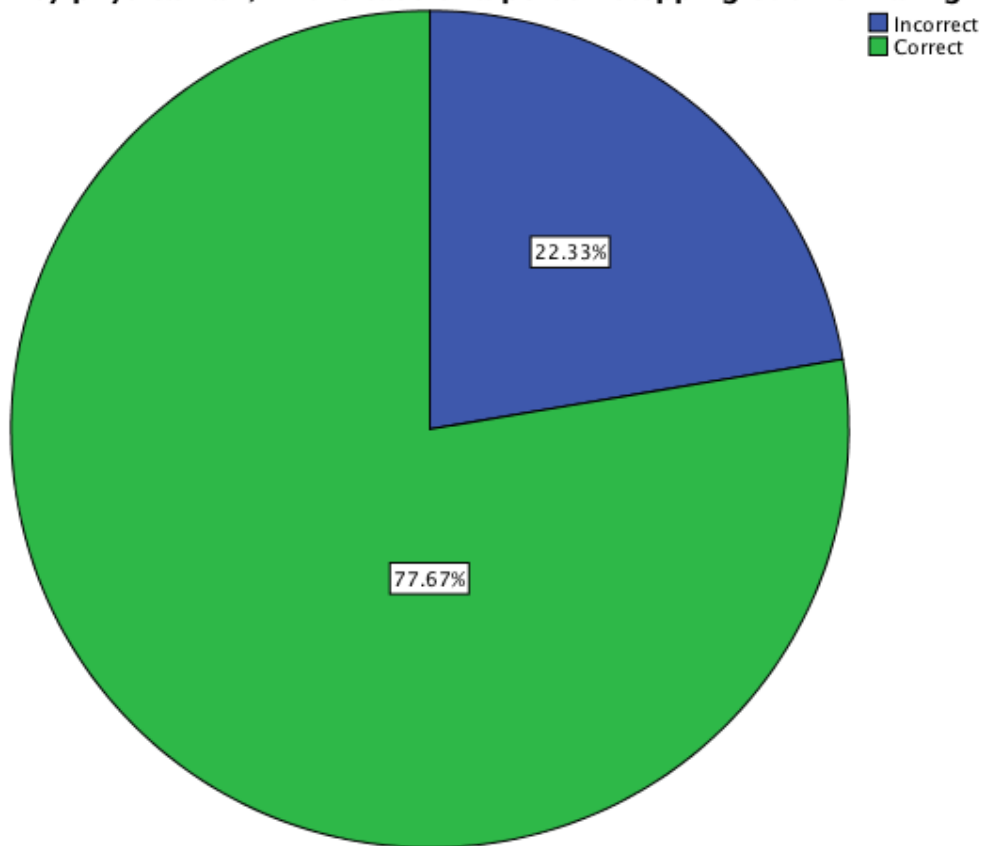


13. You are a scientist who has recently read an article on an experiment that produced an important new discovery in your field of study. An editor of a journal asks you to review a second article submitted for publication in which a university professor



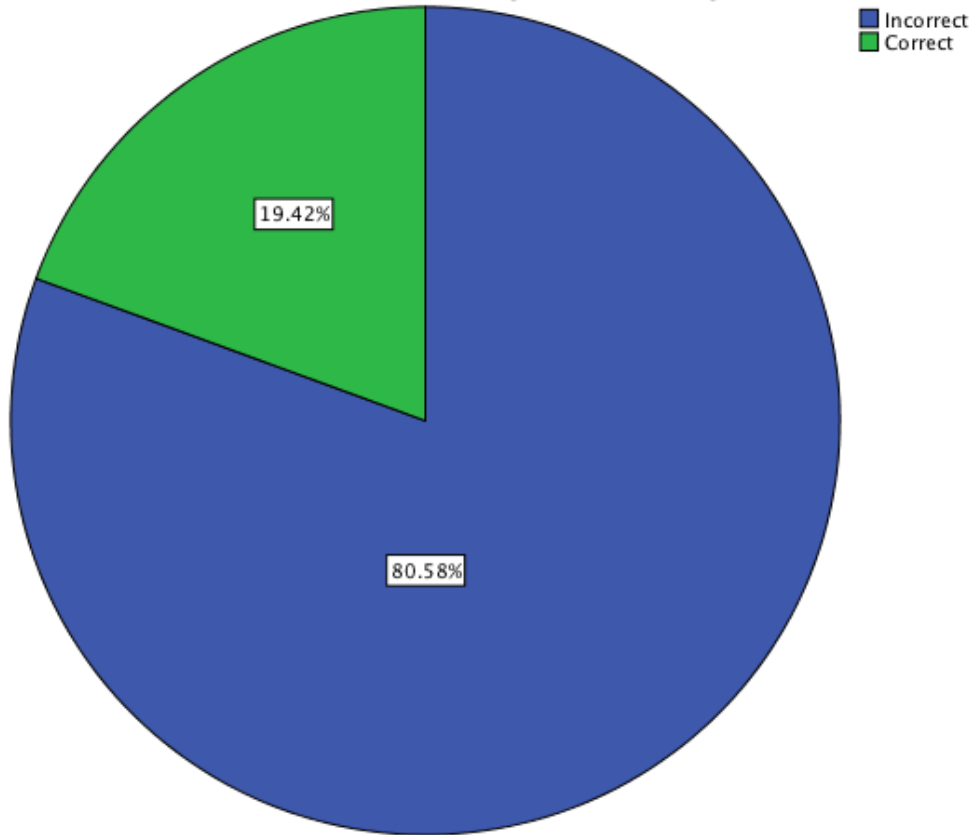
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	46	44.7	44.7	44.7
	Correct	57	55.3	55.3	100.0
	Total	103	100.0	100.0	

14. Which of the following best describes our familiar world as governed by physical law, in the case of a person stepping out from a high window?



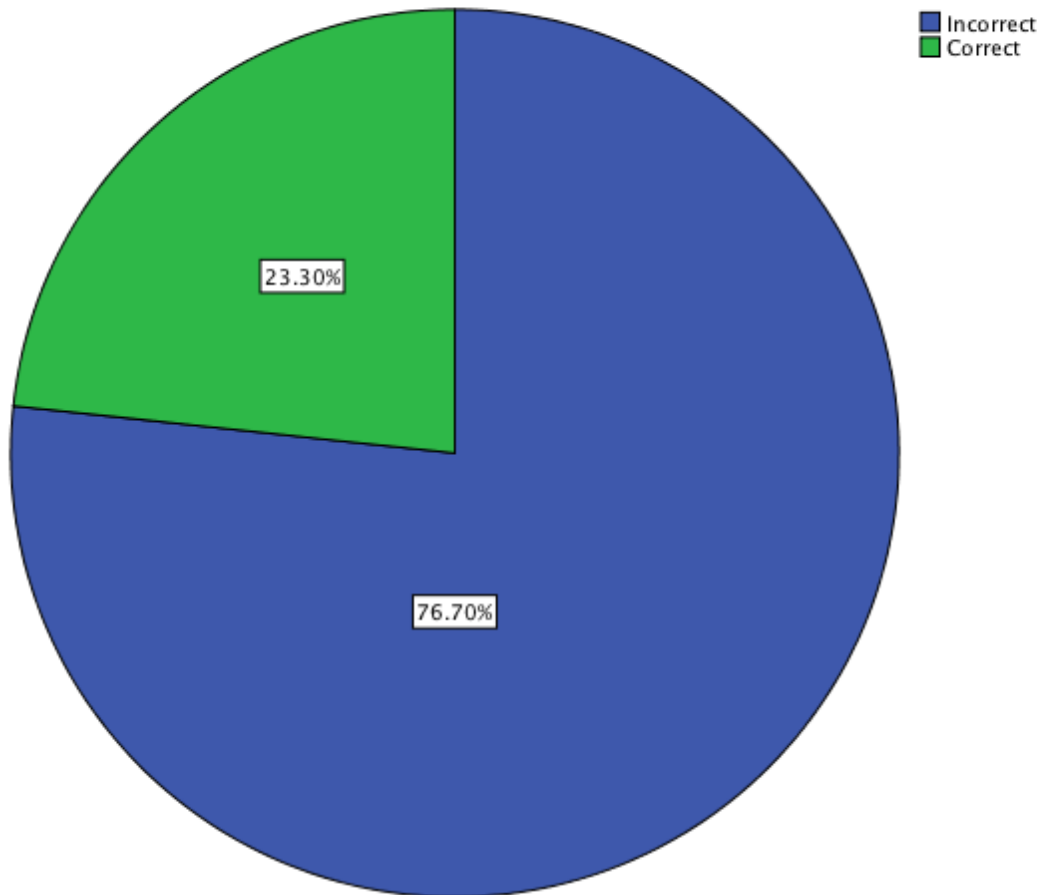
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	23	22.3	22.3	22.3
	Correct	80	77.7	77.7	100.0
	Total	103	100.0	100.0	

15. Which item in the following list constitutes the best example of technological knowledge?



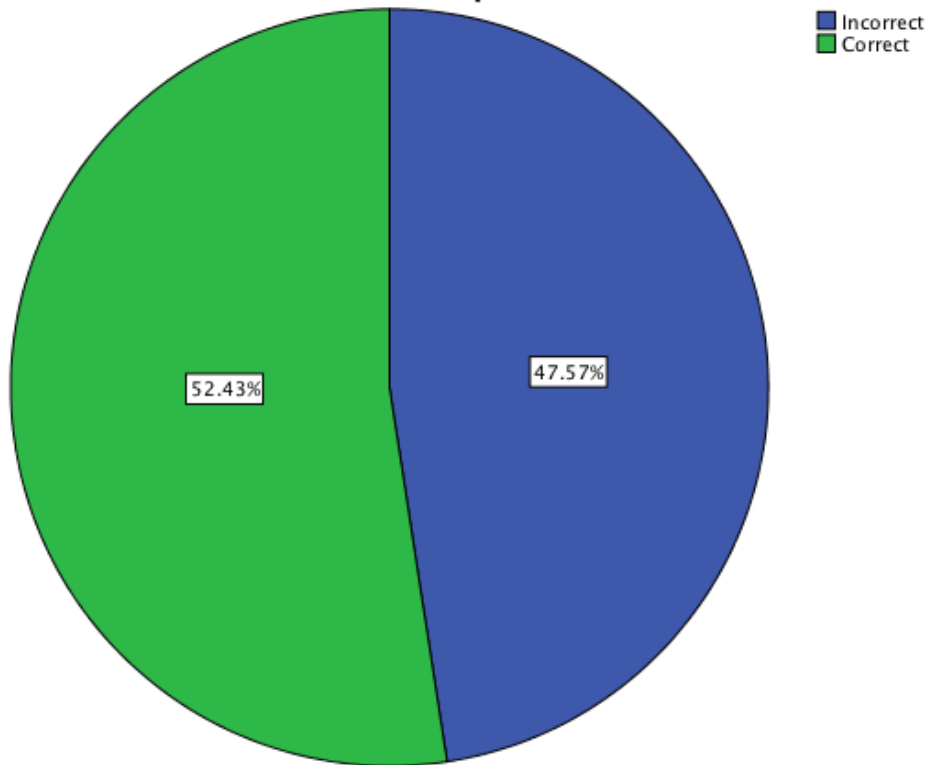
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	83	80.6	80.6	80.6
	Correct	20	19.4	19.4	100.0
	Total	103	100.0	100.0	

16. Which of the following is NOT an example of the use of modeling science?



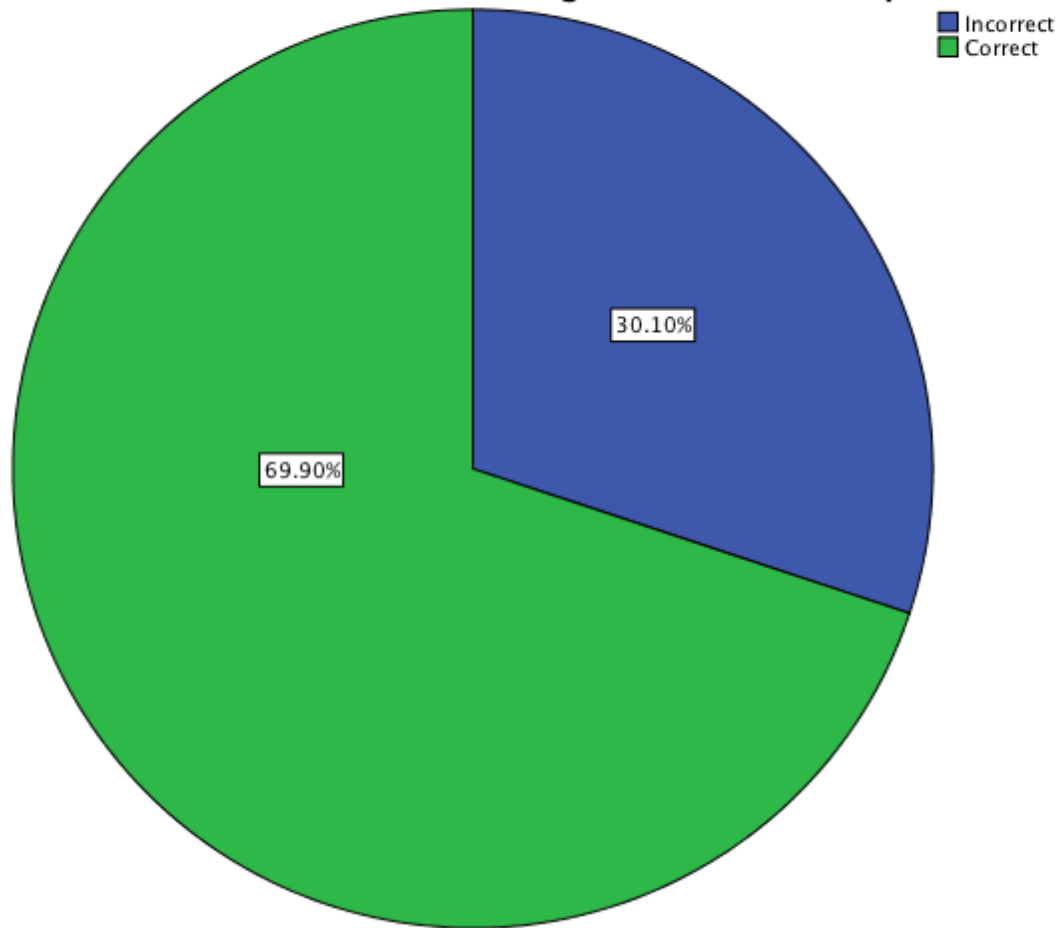
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	79	76.7	76.7	76.7
	Correct	24	23.3	23.3	100.0
	Total	103	100.0	100.0	

17. A researcher conducted a study to test whether an herbal medicine increases memory. Trials were conducted using 30 male participants in their 40s. Fifteen were given a placebo, and fifteen were given the herbal medicine. Participants did not know which



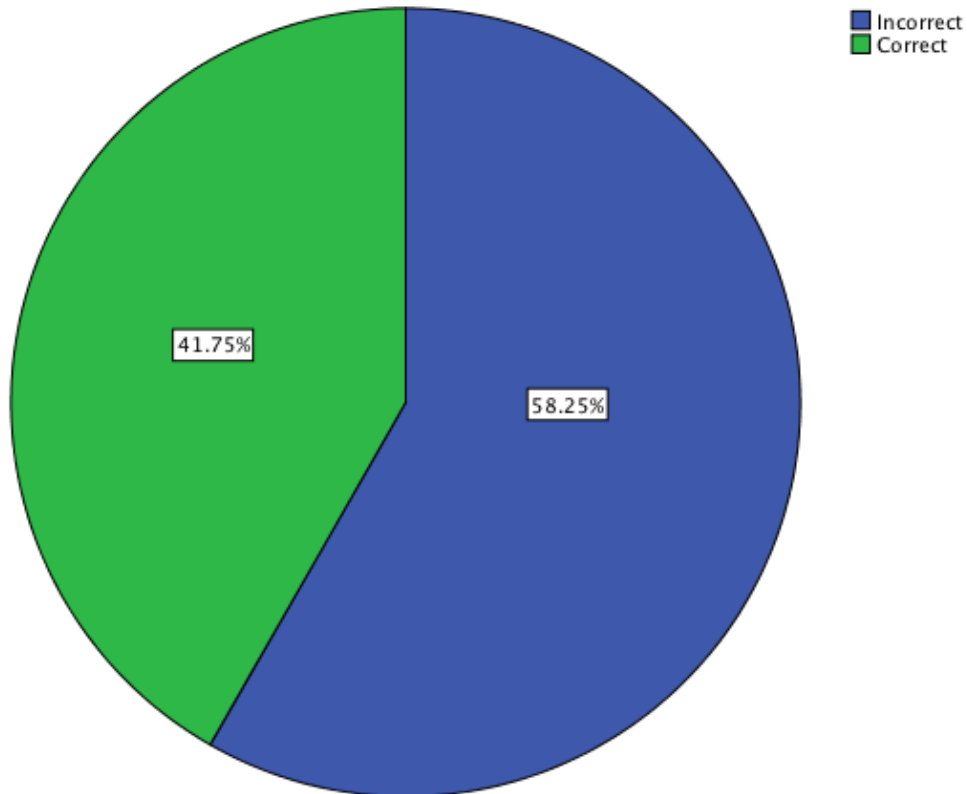
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	49	47.6	47.6	47.6
	Correct	54	52.4	52.4	100.0
	Total	103	100.0	100.0	

18. Which of the following constitutes a theory of science?



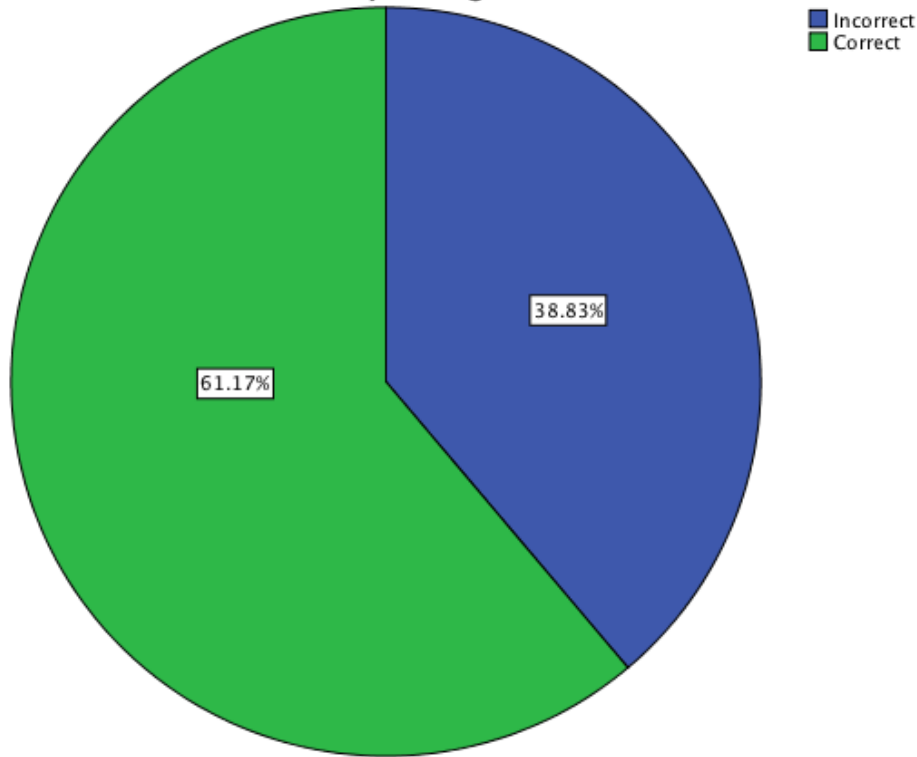
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	31	30.1	30.1	30.1
	Correct	72	69.9	69.9	100.0
	Total	103	100.0	100.0	

19. A scientist studies a virus that causes a mild disease in mice. She discovers how a genetic modification of the virus converts it into a virus deadly to mice, and realizes that a similar process could create a deadly human virus. Can the scientist con



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	60	58.3	58.3	58.3
	Correct	43	41.7	41.7	100.0
	Total	103	100.0	100.0	

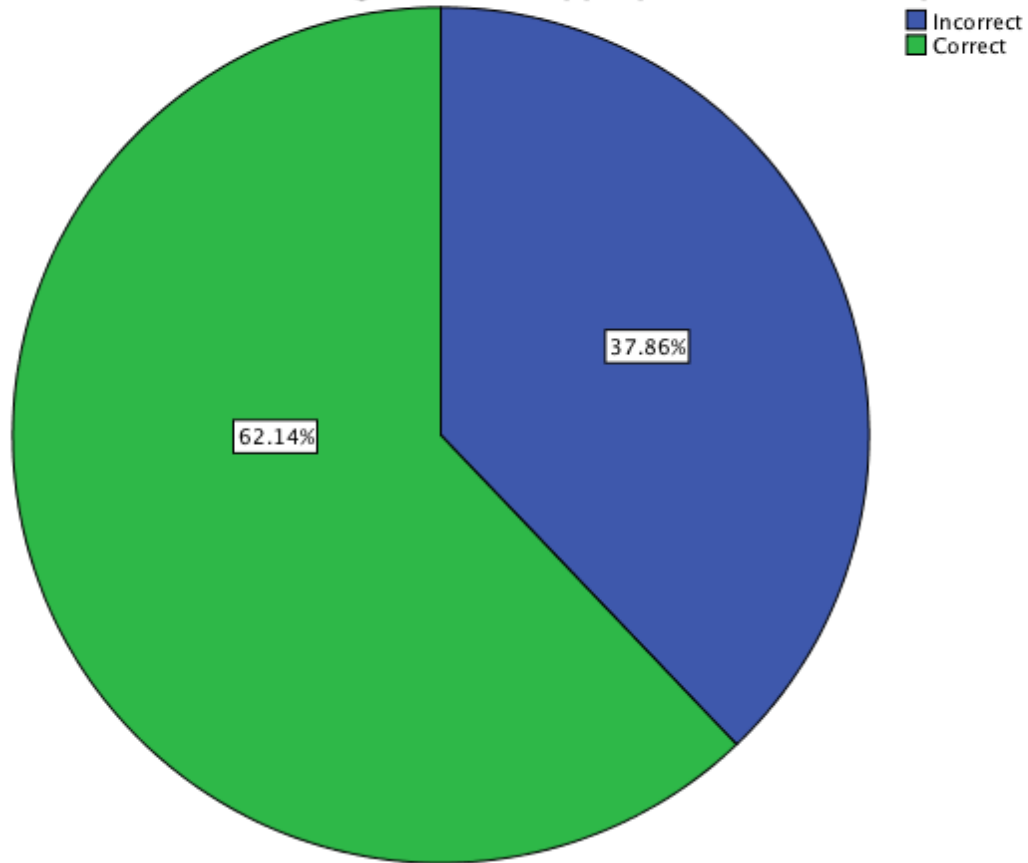
20. Earth's formation was initially estimated to have occurred 6,000 years ago. Later, scientists found evidence that the formation occurred 100 million years ago. Current evidence indicates that Earth formed about 4.6 billion years ago. What should scientists conclude about the initial estimate?



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	40	38.8	38.8	38.8
	Correct	63	61.2	61.2	100.0
	Total	103	100.0	100.0	

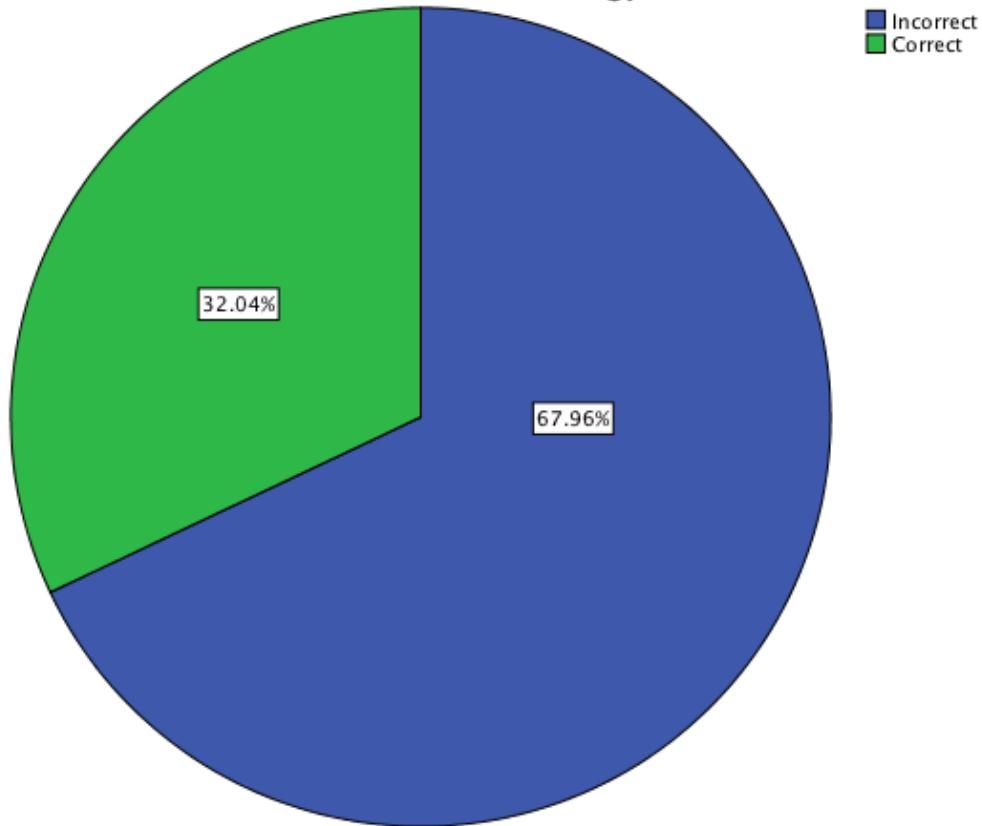


21. Peer-review occurs when several experts critique a submitted paper, suggest revisions, and judge it as worthy or not worthy of publication. Which of the following is NOT an appropriate function of peer review?



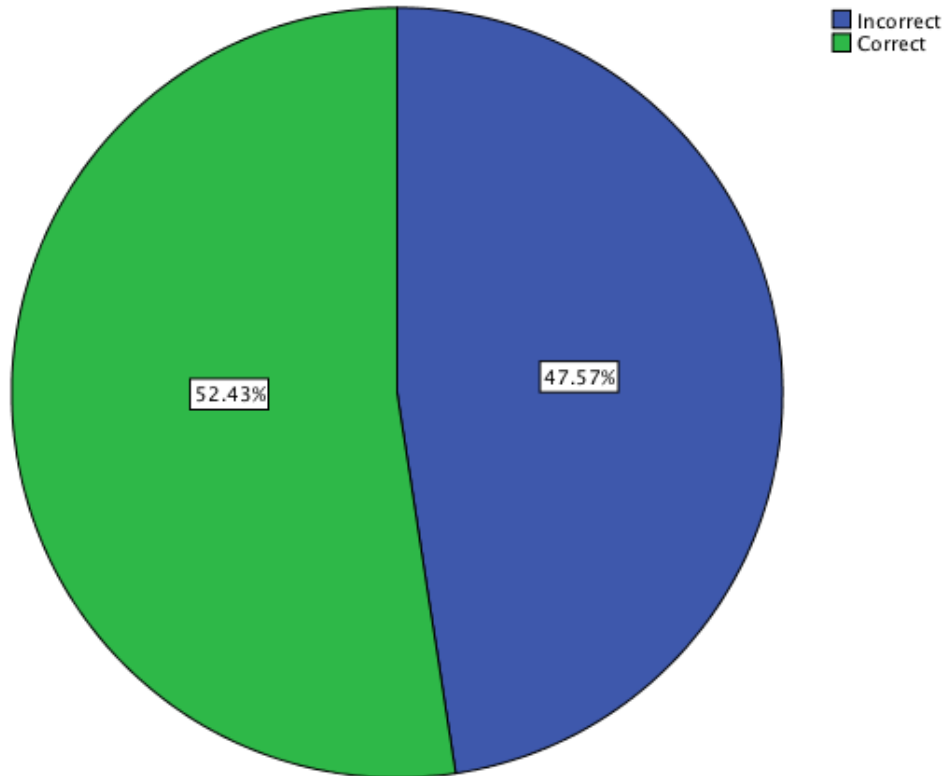
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	39	37.9	37.9	37.9
	Correct	64	62.1	62.1	100.0
	Total	103	100.0	100.0	

22. Science and technology increasingly complement each other. Which example most strongly illustrates how science generates better technology?



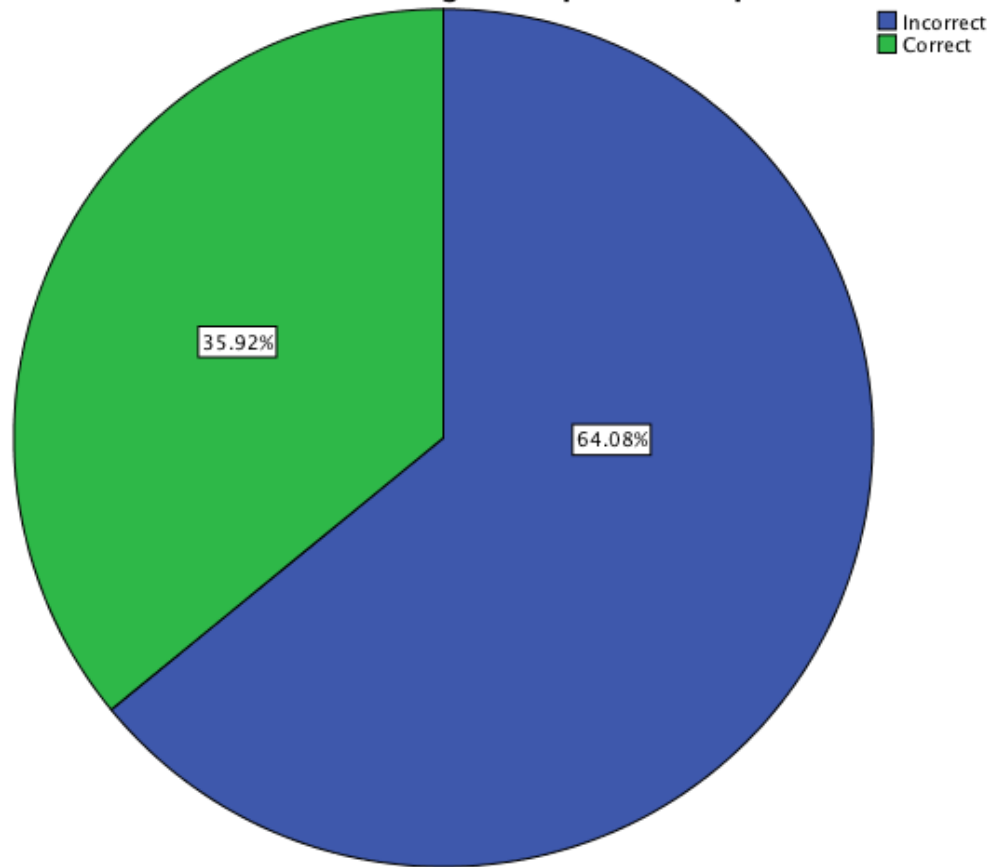
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	70	68.0	68.0	68.0
	Correct	33	32.0	32.0	100.0
	Total	103	100.0	100.0	

23. Theories that explain the nature of matter began by considering every substance as unique. Other explanations stated that all substances arise through unique combinations of earth, fire, air, and water. Later theory determined that all material consists



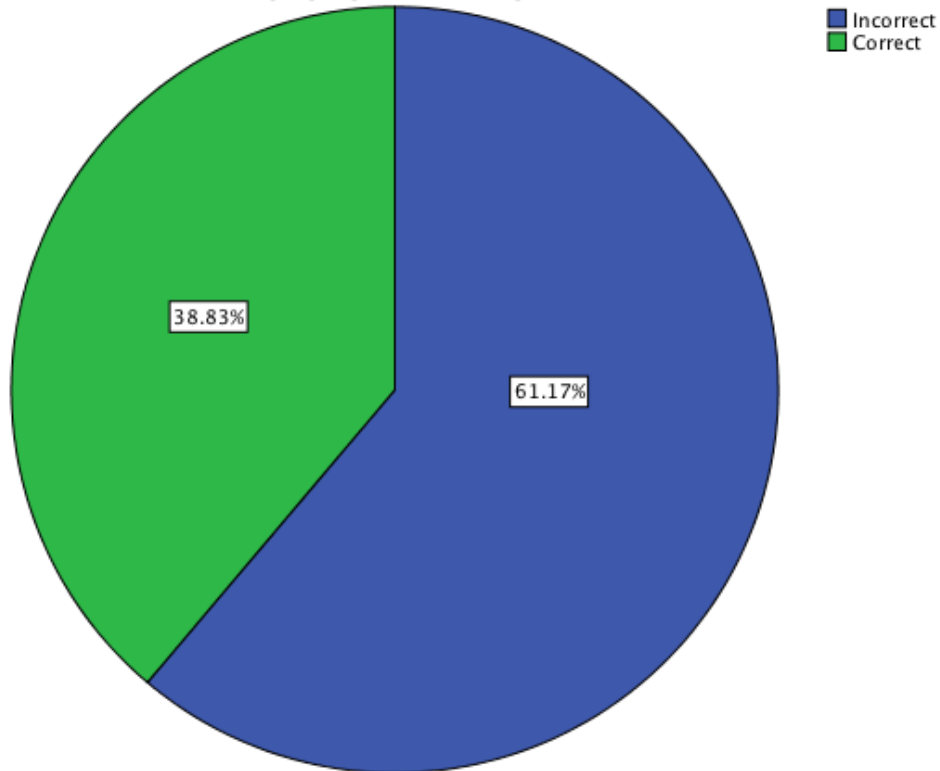
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	49	47.6	47.6	47.6
	Correct	54	52.4	52.4	100.0
	Total	103	100.0	100.0	

24. Which of the following assumptions is important to all of science?



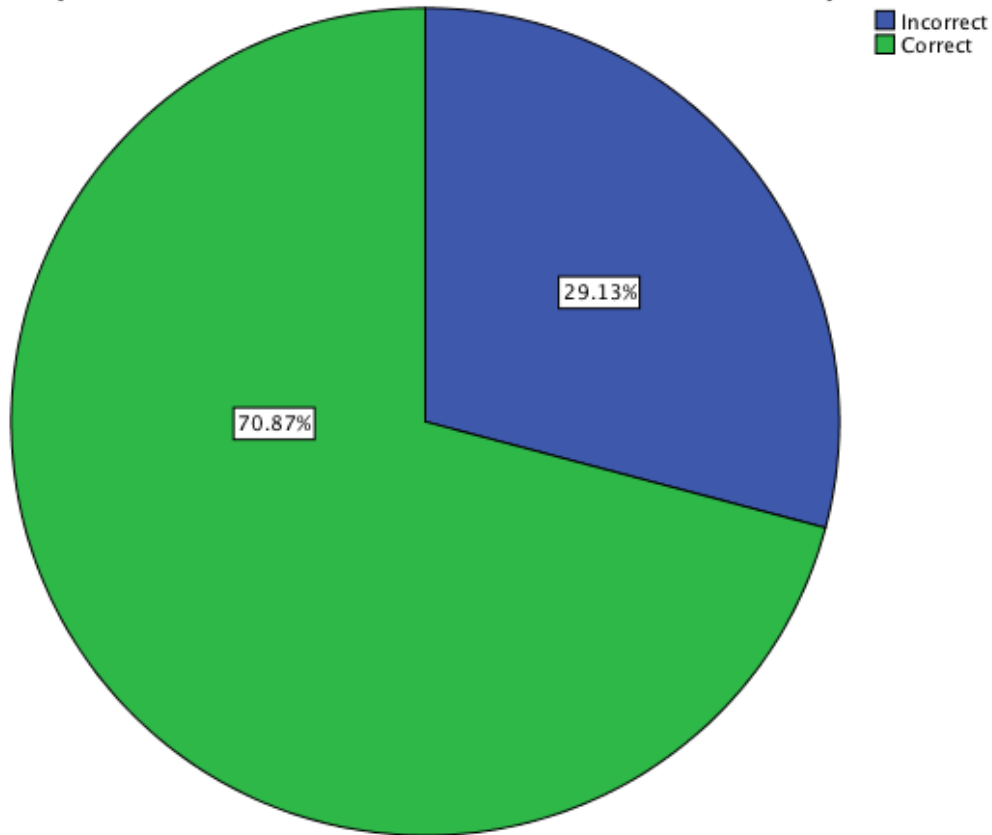
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	66	64.1	64.1	64.1
	Correct	37	35.9	35.9	100.0
	Total	103	100.0	100.0	

25. Two teams tried to establish the recommended daily requirements for a vitamin. Team A used controlled experiments on human subjects to determine the minimum vitamin intake needed to prevent nutritional deficiency symptoms. They recommended that amount



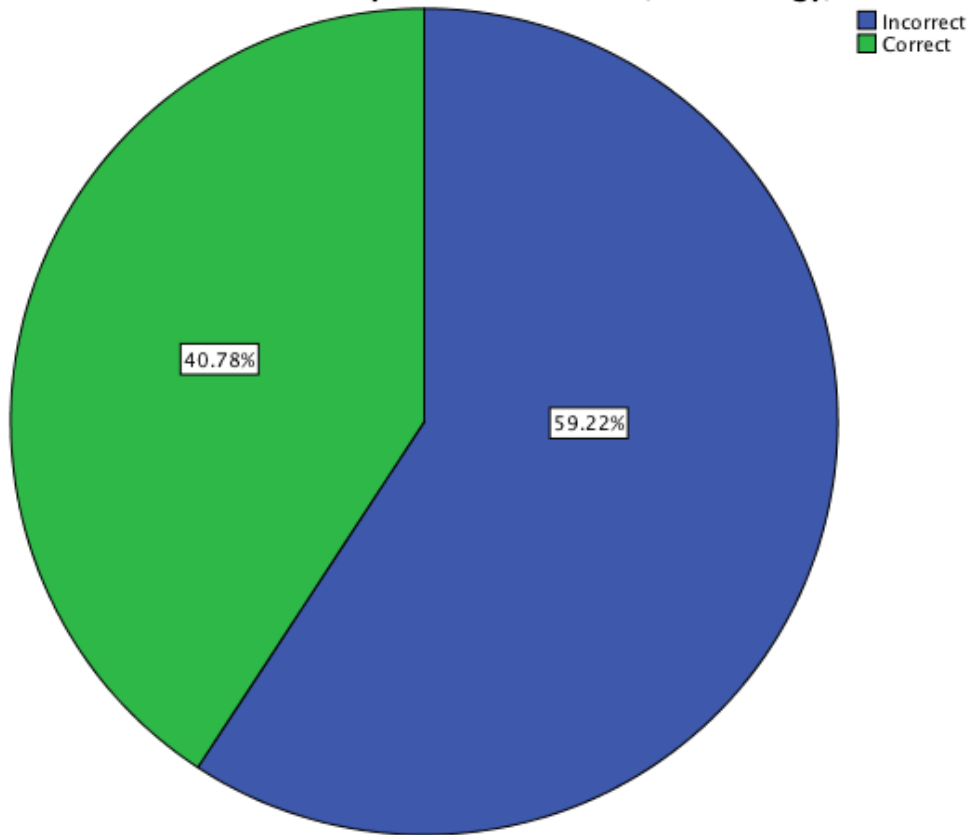
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	63	61.2	61.2	61.2
	Correct	40	38.8	38.8	100.0
	Total	103	100.0	100.0	

26. In the 1970's, a group reported a major discovery of an exciting phenomenon in a peer-reviewed journal. Today, textbooks state that the phenomenon does not exist. What is the most likely reason for this?



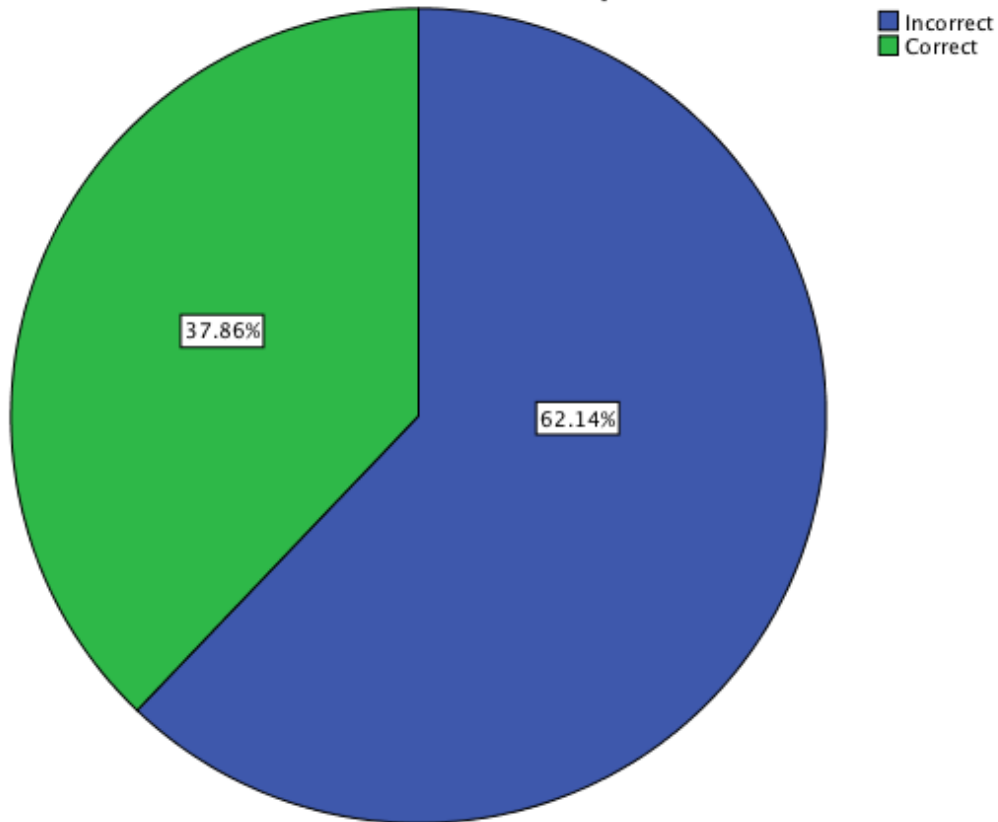
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	30	29.1	29.1	29.1
	Correct	73	70.9	70.9	100.0
	Total	103	100.0	100.0	

27. Science and technology are easily confused. Which of the statements below correctly describes science, technology, or both?



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	61	59.2	59.2	59.2
	Correct	42	40.8	40.8	100.0
	Total	103	100.0	100.0	

28. Science assumes that the physical universe is governed by laws that we can understand. Scientists cannot test this assumption. They believe the assumption is valid simply because they are not able to verify violations of the assumption. Which of the



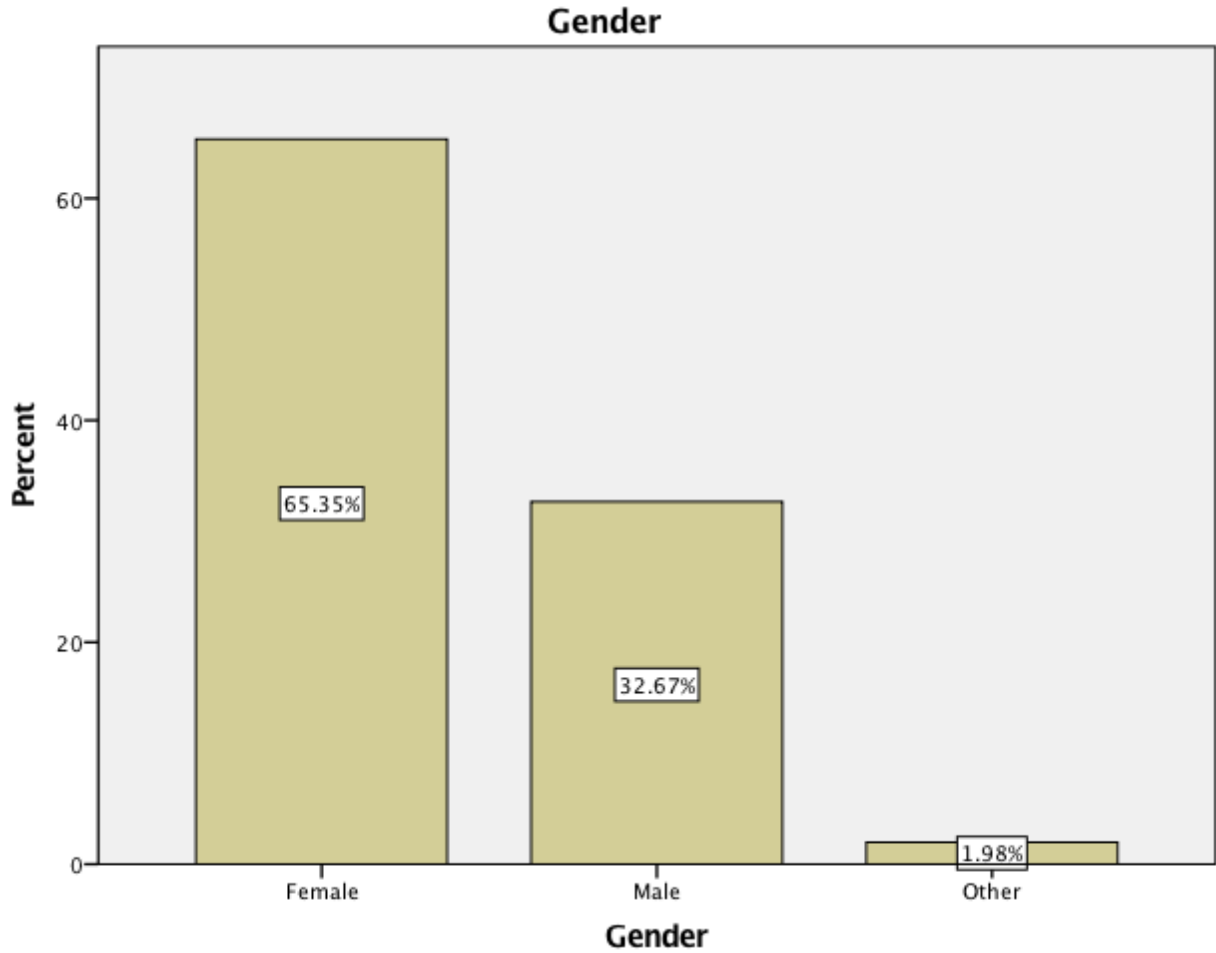
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	64	62.1	62.1	62.1
	Correct	39	37.9	37.9	100.0
	Total	103	100.0	100.0	



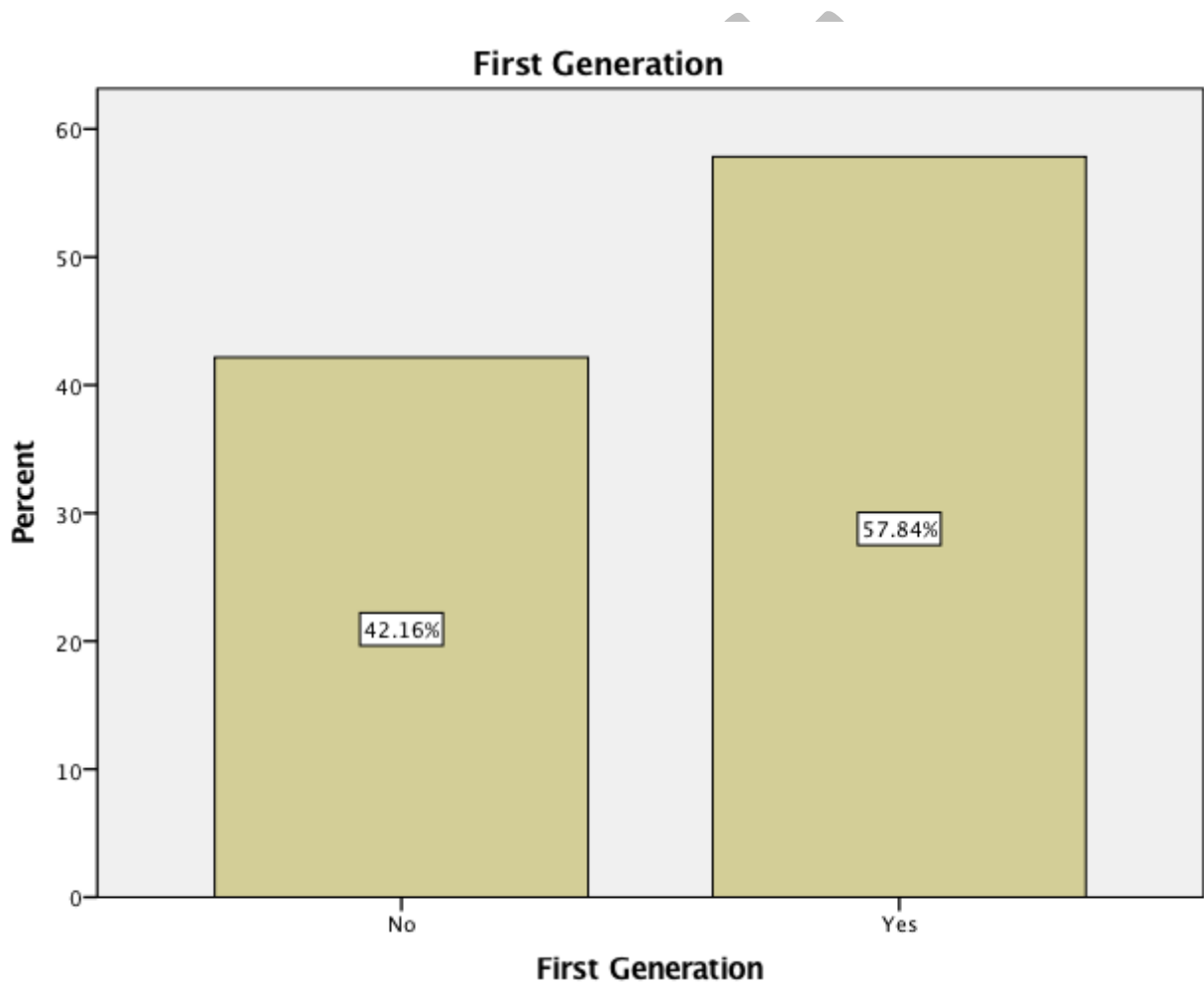
# **Descriptive Statistics and Cross-tabulations**

Draft

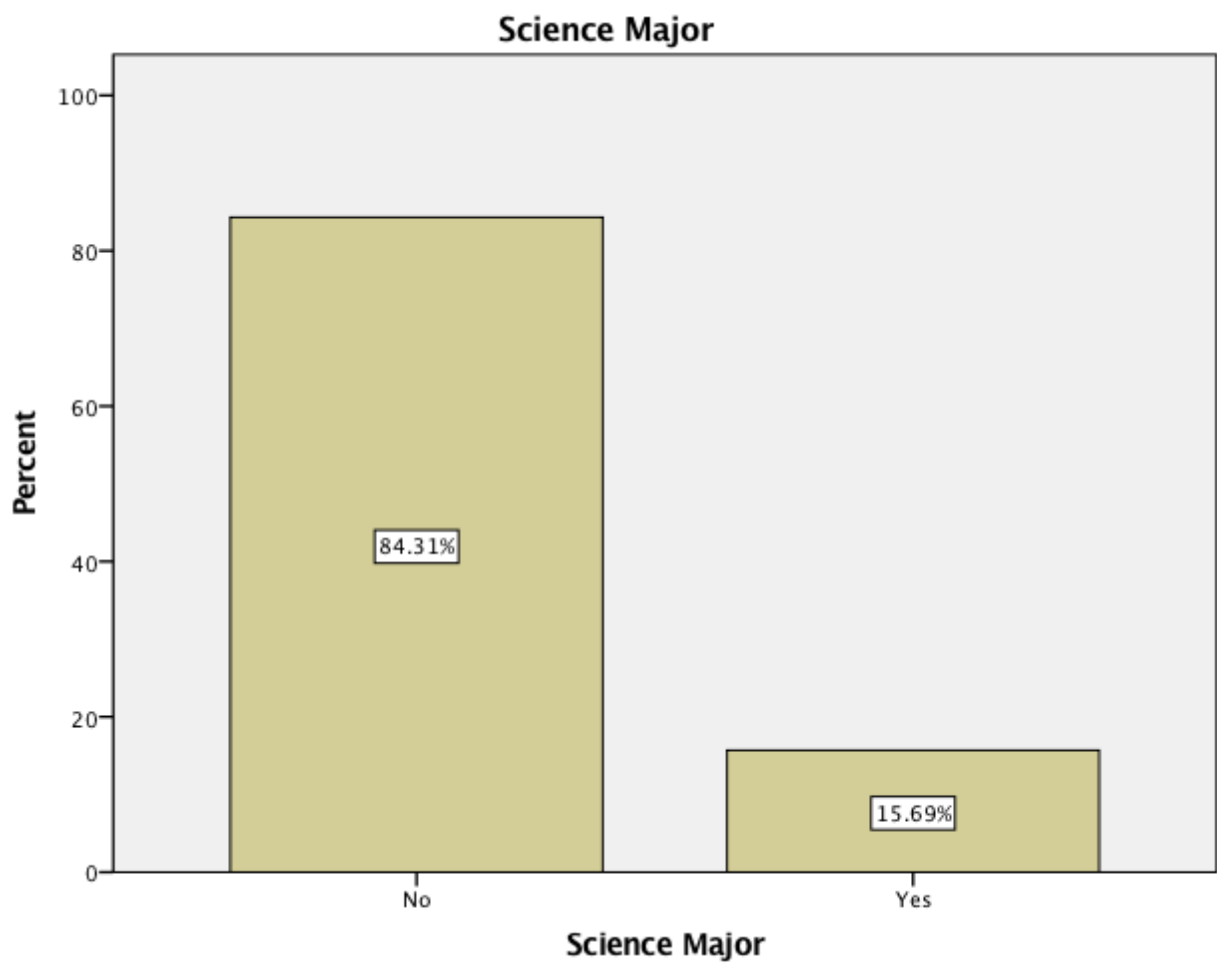
# Responses by Gender



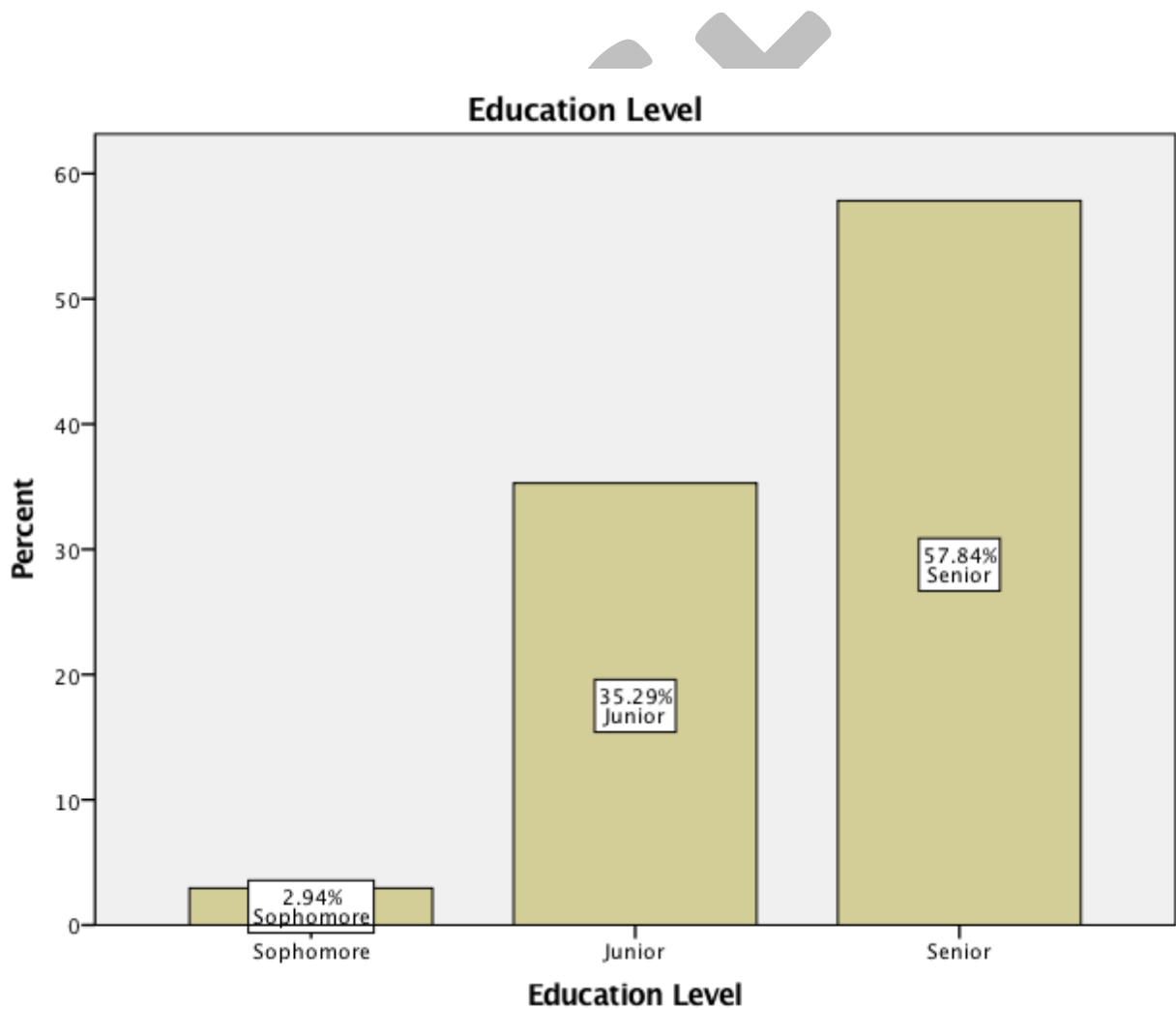
## Responses by First Generation



## Responses by Science Majors



## Responses by Education Level



Science Literacy Concept Inventory (SLCI)										
Percent Correct by Demographic										
Question	Sex			First Generation		Science Major		Education Level		
	Female N=66	Male N=33	Other N=2	Non-first Gen N=43	First Gen N=59	Science Major N=16	Non-Science Major N=86	Soph N=3	Junior N=36	Senior N=59
1. Which of the following statements presents a hypothesis that science can now easily resolve?	83%	76%	100%	79%	81%	83%	69%	33%	81%	81%
2. American climate scientists know that global warming produces a rise in sea level due to the melting of ice in the polar regions. Which of the following actions represents an appropriate ethical response by these scientists?	86%	73%	100%	74%	86%	83%	75%	33%	86%	81%
3. For thousands of years, nearly everybody believed that the Sun traveled around the Earth. More recently, people believe that the Earth travels around the Sun. Which of the following reasons best explains the rejection of the longest-accepted idea?	71%	67%	100%	63%	75%	70%	69%	33%	69%	71%
4. Scientists deduced that color is the eye's interpretation of different wavelengths of visible light. They learned that red light carries less energy and has the longer wavelengths in comparison with violet light that carries more energy and has shorter wavelengths. Later, scientists discover that waveforms exist that have longer wavelengths than red light and shorter wavelengths than blue light, but they are invisible to the human eye. Which of the following statements best describes how the above knowledge might develop into a theory?	65%	64%	50%	63%	66%	64%	69%	33%	72%	61%
5. Many people claim that magnets worn as bracelets have the power to combat aches and pains. Of the following, which constitutes the best method through which to gather the evidence needed to judge whether the claims are valid?	80%	64%	100%	70%	80%	76%	75%	100%	78%	73%
6. To help us to understand the lunar phases, we have set up a basketball, a baseball, and a golf ball to represent respectively the Sun, Earth and the moon. What method of science are we employing?	59%	79%	50%	75%	59%	65%	69%	100%	58%	70%
7. Which of the recent newspaper article titles likely does NOT require some scientific knowledge to comprehend and appreciate the significance of the article?	38%	42%	50%	47%	34%	41%	31%	0%	42%	37%
8. Radon is a naturally occurring radioactive gas found in trace amounts in the atmosphere. Some soils and rocks are rich sources of radon, and houses built on them have greater amounts of radon in their indoor air than does the atmosphere. Scientists suspect that this indoor radon can produce lung cancer. They expose laboratory animals to elevated concentrations of radon, and these animals contract lung cancer at rates higher than animals not exposed to the radon. From these experiments, the scientists predict that about 20,000 people a year in the United States will contract lung cancer from breathing indoor radon. However, field investigations have failed to show that residents in homes with high indoor radon have more lung cancer than those who live in homes with low indoor radon. What hypothesis has been confirmed?	49%	52%	50%	47%	53%	49%	56%	33%	47%	53%
9. Why is Darwin's theory of evolution considered a scientific theory?	83%	64%	100%	79%	76%	79%	69%	68%	78%	80%

Science Literacy Concept Inventory (SLCI)										
Percent Correct by Demographic										
	Sex		First Generation			Science Major		Education Level		
10. A professor has a class consisting of students who are doing independent study on the chemistry of lake sediments. Each student analyzed the sediment for four (4) chemical elements. The four elements are different for each student. Each student is writing a report in the format used by a single journal. The professor places students into groups of four and asks that the four do peer reviews of one another's reports before submission. The students use a scoring rubric in which they rate three categories as (a) insufficient, (b) meeting acceptable standards or (c) exceeding expectations. The three categories are (1) grammar, spelling and use of active voice; (2) adequacy of literature research and (3) procedures and results. What is the most valuable science literacy outcome likely from this assignment?	53%	73%	50%	61%	59%	59%	63%	67%	61%	58%
11. Which of the following best explains why doubt is an important aspect of science?	76%	67%	50%	74%	71%	72%	75%	100%	86%	64%
12. Climate change attributed to human causes is a topic fraught with controversy. Some voices state that the best science confirms that humans are so altering our climate that a major irreversible climate change will occur within the near future, unless serious steps are taken to prevent it. Other voices claim that the best science confirms that climate changes are natural, gradual, and take thousands of years to occur. They state that making climate change into a political global issue simply provides a rationale to create a single world government. Is it important that citizens understand the science behind these arguments?	71%	55%	50%	63%	68%	67%	56%	67%	75%	61%
13. You are a scientist who has recently read an article on an experiment that produced an important new discovery in your field of study. An editor of a journal asks you to review a second article submitted for publication in which a university professor replicates the first groundbreaking experiment. The professors' results agree with those of the author of the first article. Should you recommend publication?	55%	55%	100%	51%	59%	57%	50%	67%	61%	53%

Science Literacy Concept Inventory (SLCI)										
Percent Correct by Demographic										
	Sex		First Generation			Science Major		Education Level		
14. Which of the following best describes our familiar world as governed by physical law, in the case of a person stepping out from a high window?	83%	67%	100%	81%	76%	81%	63%	100%	83%	75%
15. Which item in the following list constitutes the best example of technological knowledge?	15%	27%	50%	21%	19%	20%	19%	33%	17%	22%
16. Which of the following is NOT an example of the use of modeling in science?	21%	21%	50%	28%	19%	19%	44%	66%	19%	24%
17. A researcher conducted a study to test whether an herbal medicine increases memory. Trials were conducted using 30 male participants in their 40s. Fifteen were given a placebo, and fifteen were given the herbal medicine. Participants did not know which group they were in. The data showed that 20% of the males in the experimental group reported an increase in memory, and 40% in the placebo group reported an increase in memory. What statement below most accurately describes the hypothesis tested and the test result?	55%	49%	50%	56%	51%	56%	38%	67%	42%	58%
18. Which of the following constitutes a theory of science?	74%	64%	100%	67%	73%	73%	56%	67%	69%	71%
19. A scientist studies a virus that causes a mild disease in mice. She discovers how a genetic modification of the virus converts it into a virus deadly to mice, and realizes that a similar process could create a deadly human virus. Can the scientist continue this work and remain ethical?	41%	46%	0%	44%	41%	43%	38%	67%	39%	41%
20. Earth's formation was initially estimated to have occurred 6,000 years ago. Later, scientists found evidence that the formation occurred 100 million years ago. Current evidence indicates that Earth formed about 4.6 billion years ago. What should scientists expect to occur in the future?	64%	55%	100%	67%	58%	62%	63%	67%	67%	56%
21. Peer-review occurs when several experts critique a submitted paper, suggest revisions, and judge it as worthy or not worthy of publication. Which of the following is NOT an appropriate function of peer reviewers?	62%	58%	100%	70%	56%	59%	75%	67%	67%	58%



Science Literacy Concept Inventory (SLCI)										
Percent Correct by Demographic										
	Sex		First Generation			Science Major		Education Level		
22. Science and technology increasingly complement each other. Which example most strongly illustrates how science generates better technology?	29%	33%	50%	35%	29%	31%	31%	33%	22%	39%
23. Theories that explain the nature of matter began by considering every substance as unique. Other explanations stated that all substances arise through unique combinations of earth, fire, air, and water. Later theory determined that all material consisted of small particles called atoms comprised of smaller electrons, neutrons, and protons. Why did such later theories supplant earlier theories?	52%	49%	100%	63%	44%	49%	69%	67%	64%	41%
24. Which of the following assumptions is important to all of science?	36%	36%	50%	35%	37%	38%	25%	33%	36%	36%
25. Two teams tried to establish the recommended daily requirements for a vitamin. Team A used controlled experiments on human subjects to determine the minimum vitamin intake needed to prevent nutritional deficiency symptoms. They recommended that amount as a minimum daily requirement. Team B studied primates' diets in the wild to deduce that the diet of early humans was much like the primates. The primates' diet contained over 150 times the amount recommended by Team A, so Team B recommended a much larger amount than Team A. In this version of the inventory, the researchers request that you select B below, which is the correct answer to the question. Disclosing the correct answer here is not a trick or accident. It has a purpose in this study. The question is. Which dietary recommendation, if any, has the best scientific support?	35%	49%	50%	44%	36%	38%	44%	33%	31%	44%
26. In the 1970's, a group reported a major discovery of an exciting phenomenon in a peer-reviewed journal. Today, textbooks state that the phenomenon does not exist. What is the most likely reason for this?	74%	64%	100%	67%	75%	73%	63%	67%	81%	66%
27. Science and technology are easily confused. Which of the statements below correctly describes science, technology, or both?	32%	58%	100%	54%	32%	43%	31%	33%	42%	41%
28. Science assumes that the physical universe is governed by laws that we can understand. Scientists cannot test this assumption. They believe the assumption is valid simply because they are not able to verify violations of the assumption. Which of the following observations could show that this assumption is violated?	41%	30%	50%	42%	34%	36%	44%	0%	36%	39%

**Appendix:  
Science Literacy Concept Inventory  
(Version 6.0)**

**CSU, Bakersfield  
Fall 2016**

# Science Literacy Concept Inventory Version 6 – Fall 2016,

## CSU, Bakersfield

You are invited to participate in a study focused on science literacy! "Science literacy" refers to fluency in comprehending the process through which scientists understand the physical world.

**Purpose of the Study:** A team of researchers at several California State University campuses recognized that there was no established way to measure whether a course actually helps to produce science literacy. So, the researchers developed a Science Literacy Concept Inventory consisting of multiple-choice items as a means to quickly assess the general state of literacy and the effectiveness of courses, primarily general education science courses, to improve such literacy.

**Validation of such an assessment instrument is laborious.** It can occur only after testing reveals how diverse students view and respond to each item, and this is where the researchers truly need the help of students. The items in this inventory have undergone initial testing with several thousand students to date, but our understanding of how the concept inventory is performing improves with accumulated data. Professors and Graduate Students who have never seen the inventory are also taking it as a part of this research.

**Participation and Procedures:** If you participate, your role on this survey will consist of two activities.

1. Answer twenty-eight multiple-choice items. (Takes about 15 to 60 seconds per item)
2. Provide demographic information about yourself needed for validating the items, especially for item-bias in gender or ethnicity. (Takes under two minutes)

**Risks and Potential Discomfort:** The only risks are the small inconvenience of time involved in completing the inventory. To do this well should take between 25 and 35 minutes.

**Benefits:** Benefits of participation are an engaging and mildly entertaining experience in considering science literacy challenges from viewpoints too seldom encountered in college courses. The items you will examine engage conceptual understanding and do not rely on prior knowledge of facts or ability to perform calculations. Because the reasoning of science involves a type of critical thinking, instructors may employ the inventory as a way to introduce such reasoning in science and critical thinking courses, and then give the inventory again at the end of a class to assess if the class as a whole gained

understanding. Indirect benefits are knowing that you played a part in developing a new and valuable measurement instrument.

Participation is voluntary. In some cases, professors may offer taking the inventory as a voluntary activity without credit. Because encountering the inventory will bring a learning experience, some professors may assign the inventory for credit points. By policy, these professors must provide an alternative assignment for the same credit points in the event that you choose not to take the concept inventory. Any credit points awarded will be for simply taking the inventory and providing feedback. Because this is an experimental instrument, no part of the credit is associated with items answered correctly or incorrectly. The only factor in your gaining credit is completing the concept inventory. Gaining a good learning experience comes from answering each item thoughtfully.

Confidentiality: Professors who need names to credit students for doing the assignments will receive those along with a notice that the assignment was completed, but researchers at CSU Bakersfield share no information about individual students or their responses with professors. Thereafter, the data, with identifying names purged, is used in aggregate by researchers. No personal information is retained that can be associated with any individual in the research database. Data including student numbers may be shared only for the purposes of research within the University at the institutional and program levels. The data shall not be used in course assessment, student assessment, grading, or any decisions involving individual students. Institutional researchers wishing to access such data must have approval by an Institutional Review Board and agree to purge all student identifying information after pairing SLCI data with institutional records before such data will be released. Supplying your student number acts as consent for your data to be used in aggregate in ways that preclude personally identifying you. There are no other incentives to participate.

Participation: Your decision to participate in this study is voluntary. If you begin the concept inventory and then decide that you do not want to complete it, you are free to discontinue participation. Voluntary participation in this research project will in no way affect your grades or future relations with your university.

Rights of Participants: Your decision to participate in this study is voluntary; refusal to participate will involve no penalty of loss of benefits to which you are otherwise entitled. You are not waiving any legal rights because of agreeing to participate in this study. If you have questions regarding your rights as a research participant, please contact the Sponsored Programs Foundation at Humboldt State University at (707) 826-4189, email at [hsuf@humboldt.edu](mailto:hsuf@humboldt.edu) or contact Associate Dean Dr Rick Zechman (707) 826-3546, email [fwz1@humboldt.edu](mailto:fwz1@humboldt.edu) for advice on research participation.

If you have any questions about the Inventory, please contact Dr. Edward Nuhfer by email at [enuhfer@earthlink.net](mailto:enuhfer@earthlink.net) or by phone at 208-241-5029. Only the investigators are currently qualified to provide information on the Science Literacy Concept Inventory or to employ it in research. If you are not 18 years of age or have decided not to proceed, please exit now. When you have completed the inventory, submit it by hitting the

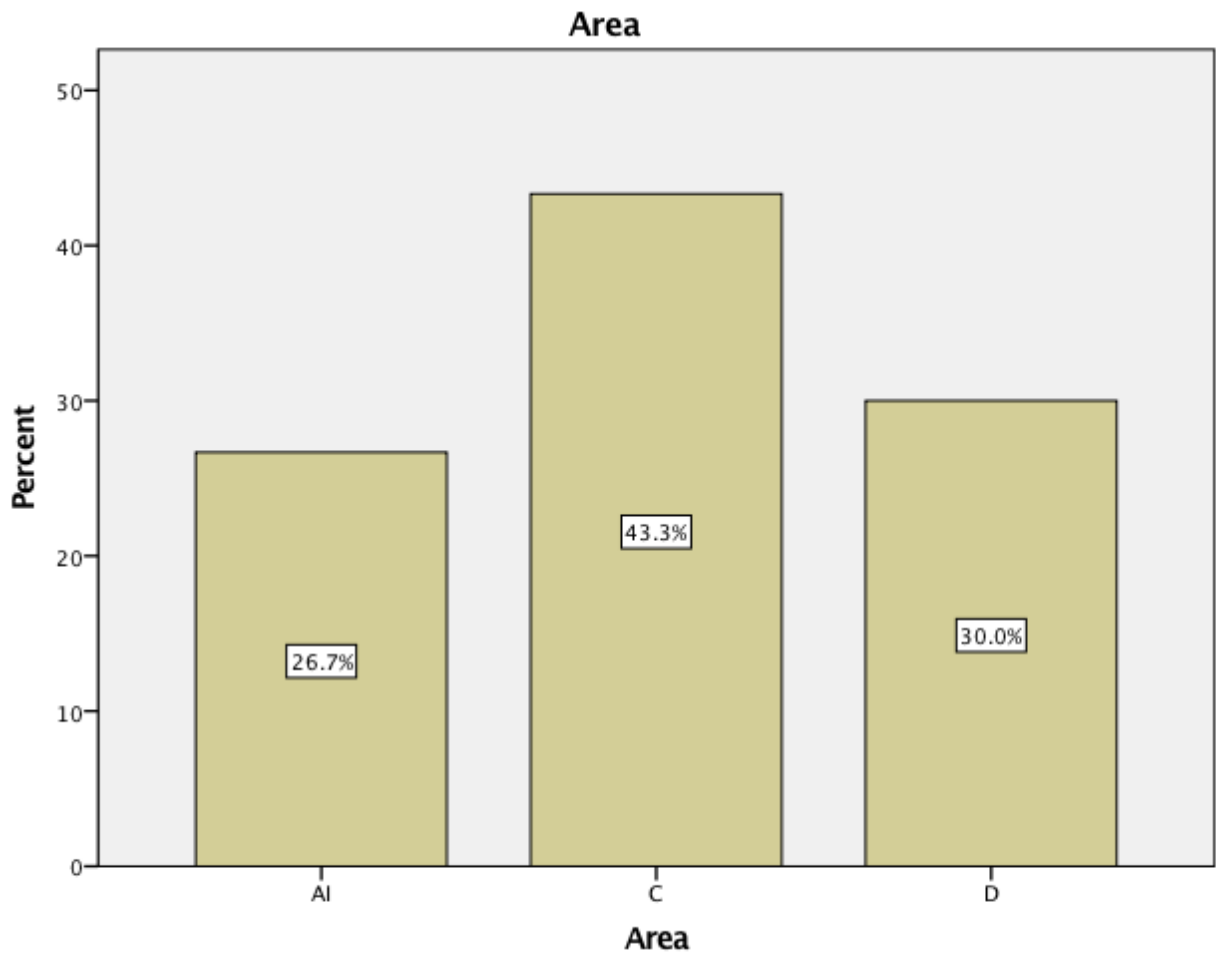
"submit" button at the end of the document. When you do so, you will receive a "Thanks! Your response has been recorded" message. If that does not appear on your screen within a few seconds, it likely results from not completing an inventory item. Because our study addresses both the inventory and the items that compose it, useful data only results from answering all items. The form is programmed not to allow submission with missing answers to items. If submission fails, scroll through and you'll see any unanswered items highlighted in color. Answer any missed items and then hit the "submit" button again.

The required responses apply only to the items, not to the demographic information. Be sure you have completed all information that you want to provide before hitting "submit." If you forget to add any demographic information, such as your name, hitting the "submit" button will send the information on to the database without any reminders. You won't be able to retrieve the form once it is successfully submitted.

By proceeding further, I verify that I am at least 18 years of age, and that I agree to participate in this study.

Area A1, C, and D  
Assessment Results

Draft



Total N=240

Area AI (N=64)

Area C (N=104)

Area D (N=72)

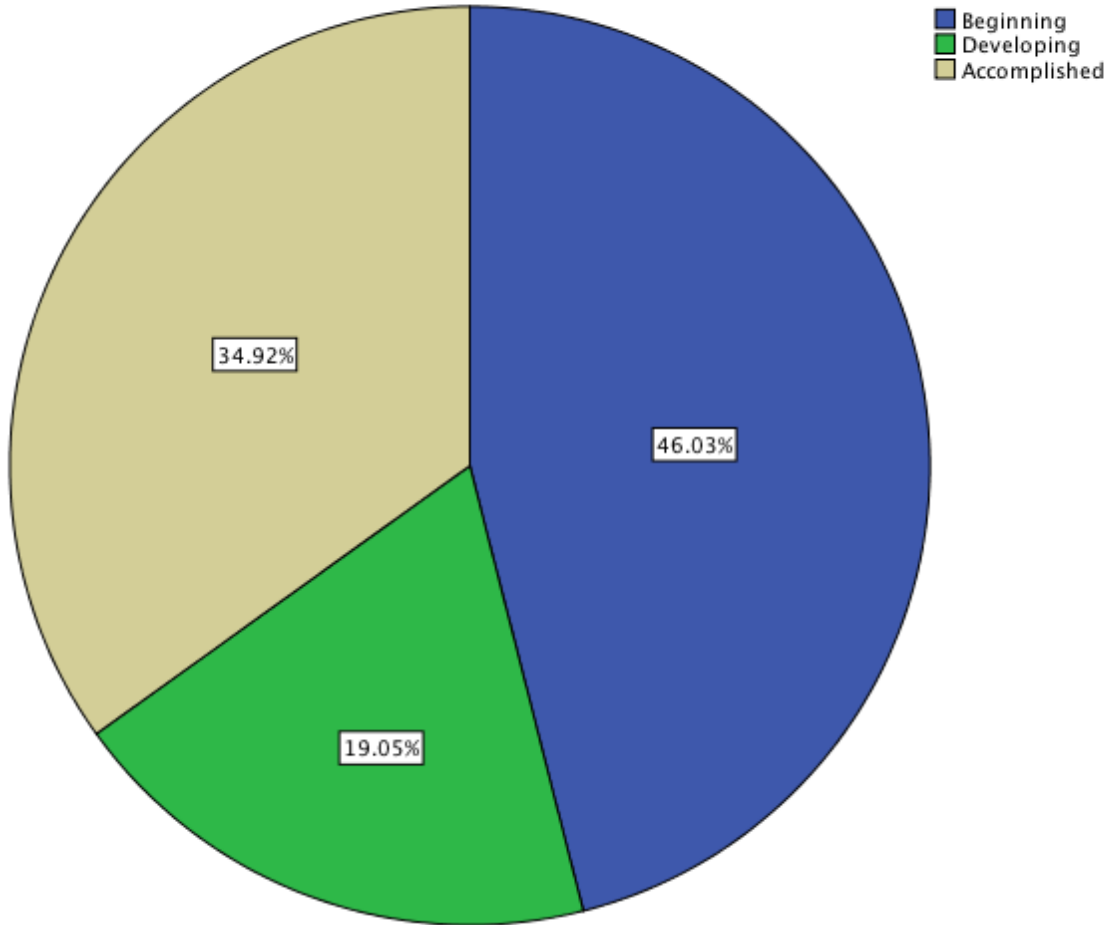
### Scores by Area Crosstabulation

		Area			Total
		AI	C	D	
Beginning	Count	29	51	27	107
	% within Area	46.0%	49.0%	37.5%	44.8%
Developing	Count	12	31	23	66
	% within Area	19.0%	29.8%	31.9%	27.6%
Accomplished	Count	22	22	22	66
	% within Area	34.9%	21.2%	30.6%	27.6%
Total	Count	63	104	72	239
	% within Area	100.0%	100.0%	100.0%	100.0%

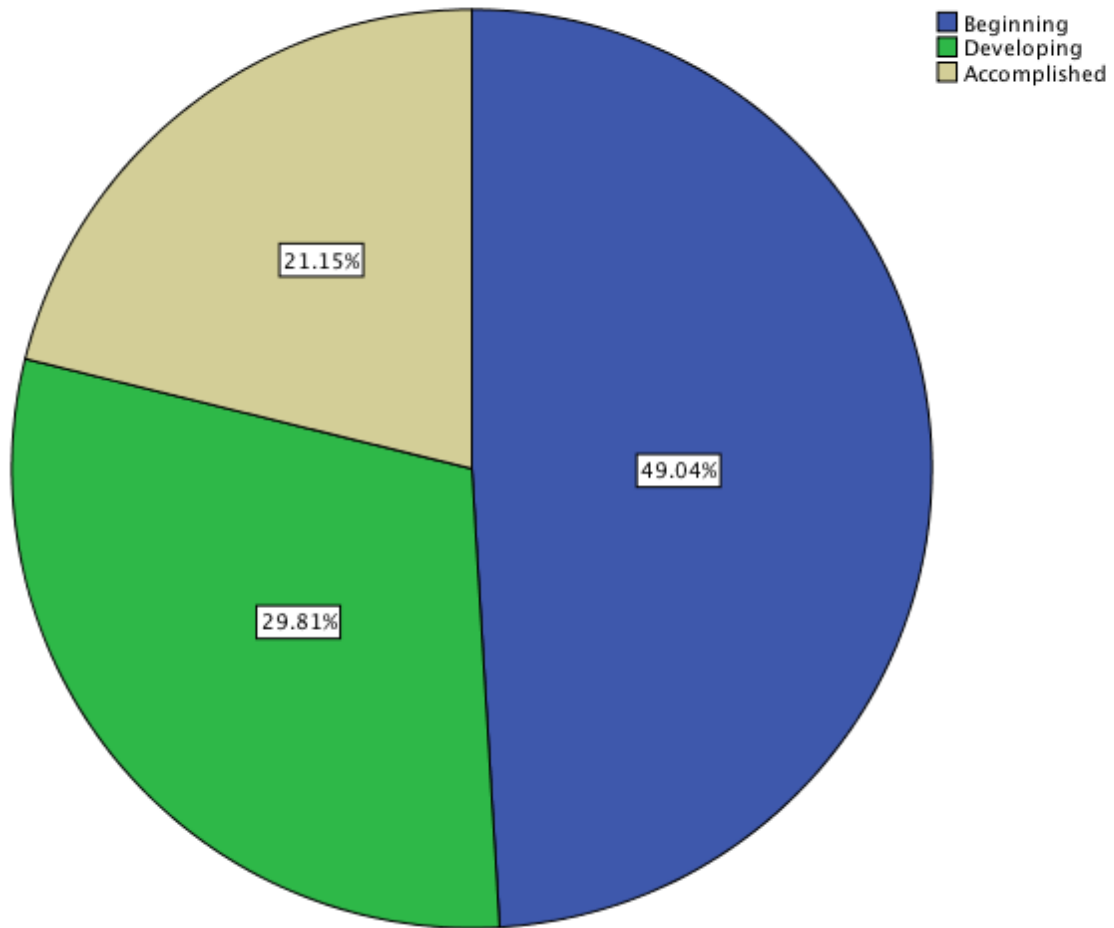
Draft



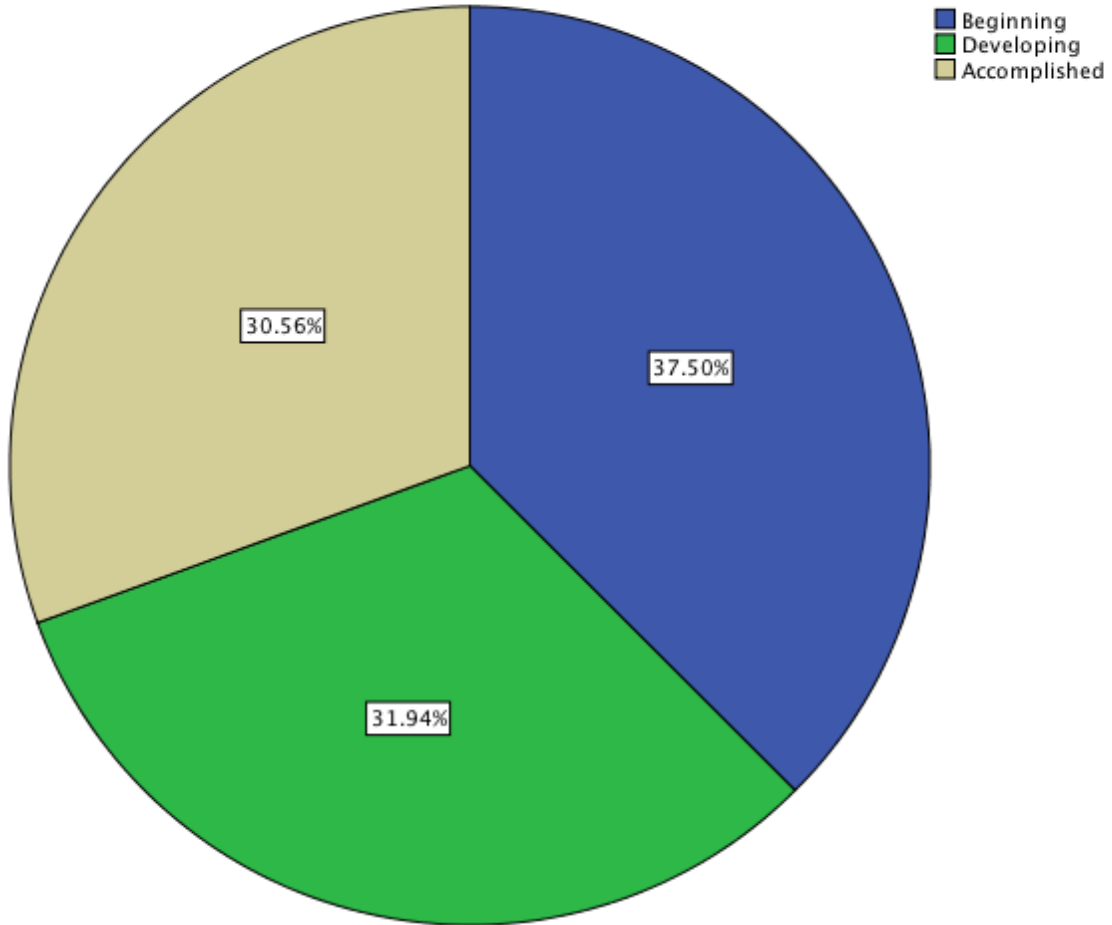
### AreaAI



AreaC



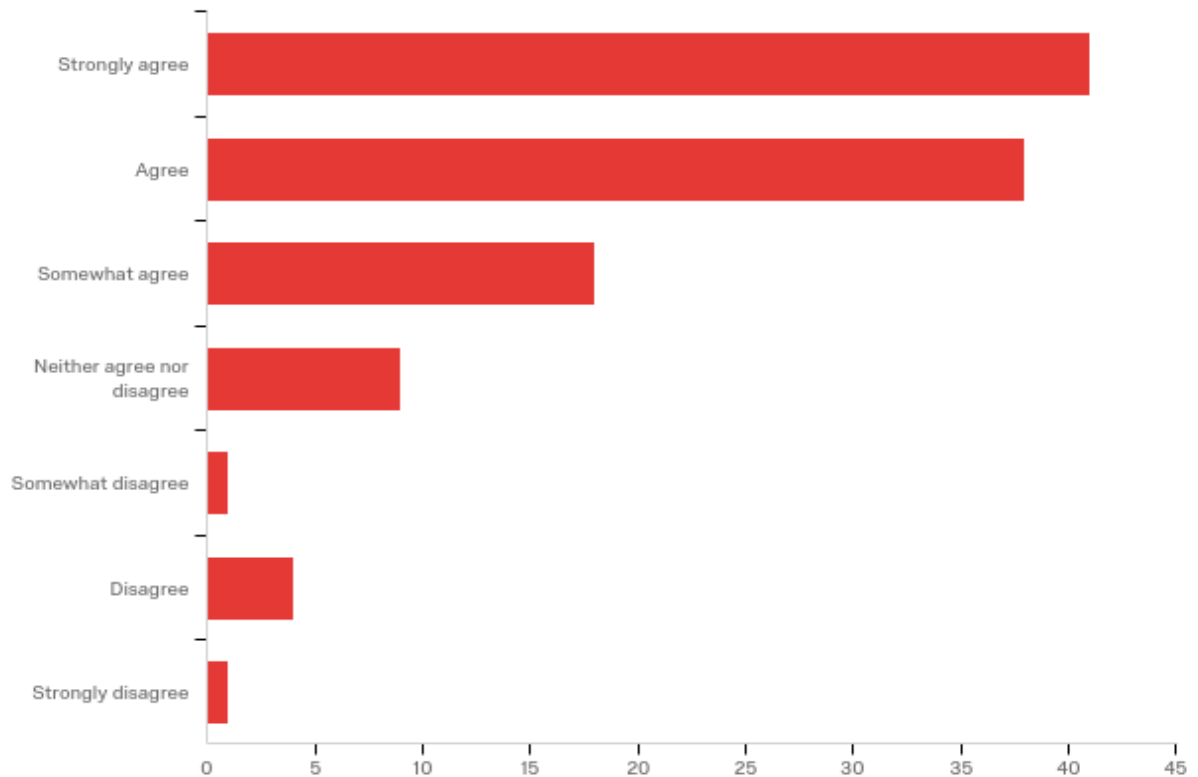
AreaD



Capstone Student Attitudinal Survey  
Spring 2017

Draft

Q1 - My general education experience at CSUB has provided me with the foundational skills (e.g., oral and written communication, critical thinking, quantitative reasoning), necessary for success in career and life.



#	Answer	%	Count
1	Strongly agree	36.61%	41
2	Agree	33.93%	38
3	Somewhat agree	16.07%	18
4	Neither agree nor disagree	8.04%	9
5	Somewhat disagree	0.89%	1
6	Disagree	3.57%	4
7	Strongly disagree	0.89%	1
	Total	100%	112



Because a lot of what i learned in college hasn't really helped me in my career or life outside but more so inside of school.

I have gained so much knowledge and foundational skills.

From various decipline

Because it provided me with new ways to look at and evaluate things

The classes I've taken have helped build on the skills I developed in the Navy.

I feel that I learned a couple of things but overall I still feel I am lacking in the necessary skills to succeed in a career.

my communication skills and also view of some of the subjects discussed in the classes totally changed.

Classes are horrible

Some of the GE instructor appear to care more about just teaching and not focusing on the student

I didn't take GE courses at CSUB

Many of these classes have taught the necessary foundational skills.

I am already working as an RN, where I utilize these skills on a daily basis to perform my basic job functions.

It shows how to see things differently

The required communications and technical writing classes provided a base for success in my career and life.

provided a good foundation

All the courses that I have taken have communicated their information in one or more of these ways.

I transfered to CSUB so I didn't take GE classes here.

I have developed the skills and confidence needed for success in my future career and life.

I will only have taken one GE course, although I did take the GVAR exam.

Resources are provided for student success

we become critical thinker as we age, we learn to think of the same goal with different aspects

Critical thinking and reasoning was applied throughout all courses. Now more easily applied in other aspects of my

career

I think I am lacking on the oral communication such as giving presentations and such.

As an English major, I do not use quantitative reasoning much, but my oral and written communication skills, as

well as my ability to compile and analyze data, have improved significantly since I started here.

The classes I have taken have allowed me to succeed in my current nursing career.

communication and critical thinking were emphasized a lot

I have developed skills that make me marketable and shine above others.

Because it helped me to succeed in my career and in my life

no comment

They answered any questiones I had

I took a few GE classes at CSUB

I feel that I am much more confident with my writing, oral, and communication skills after this course.

Many of the required GEN ED classes only serve as a barrier to students that wish to take major and cognate

classes related to their chosen field of study. Forcing science students to take an art or philosophy class is

pointless. I would rather take more major/cognate classes and be better prepared for a career in my field of study.

GE completed at BC

na

Allowed me to find the major i really wanted

My foundation was strong before I came to CSUB.

I have improved in the skills mentioned above.

This has been a good place to get feedback on what I need to fix in these areas

My GE was completed at another establishment.

Reinforced the professional aspect of nursing

It taught me how to reason and critically think through problems I encounter

They helped develop the skills i already had.

Because it's has shaped me understand to be a well around individual in all areas

General Education has helped me build a healthy foundation for my skills that I have been able to utilize in collage.

My communication teacher taught us to be confident and to speak well when in front of a audience. With the skills

and practices, that class really helped me communicate better.

I think GE is important, but I also didn't take any of my GEs at CSUB.

It had helped me become more engaged to people and professors

N/A

Written reports and other similar duties will be expected at work in my chosen profession.

Completed gen education somewhere else

I believe the GE courses at CSUB made me more equipped with critical thinking and problem solving skills..

The knowledge I have learned in my courses can benefit me in the long run with my future jobs

It taught me that even though I don't think I want to focus on other things besides my major it can be beneficial to

me later on in my career.

Presentations and leadership roles

Some classes are unuseful for what im studying

Great professors

Because it has mostly Enhanced them it has mostly in hints them

Having basic knowledge on every subject area is necessary. However, I consider oral and written communication,

critical thinking, quantitative reasoning necessary to completing a career. One of the main reasons is because the

work force environment needs competitive candidates and having these skills can help anyone succeed in their careers.

I believe this because I have more confidence in what I do and I am not hesitant to take on any challenge.

N/A

Intense course work in English GWA, written communication and reasoning required in all course work I've taken to this point.

Getting out there and getting hands on activity

Some of the classes didn't help me at all or had nothing to do with my major.

The professors are great.

The courses I am taking encourage me to think outside of the box, to face my fears, and put my best self forward.

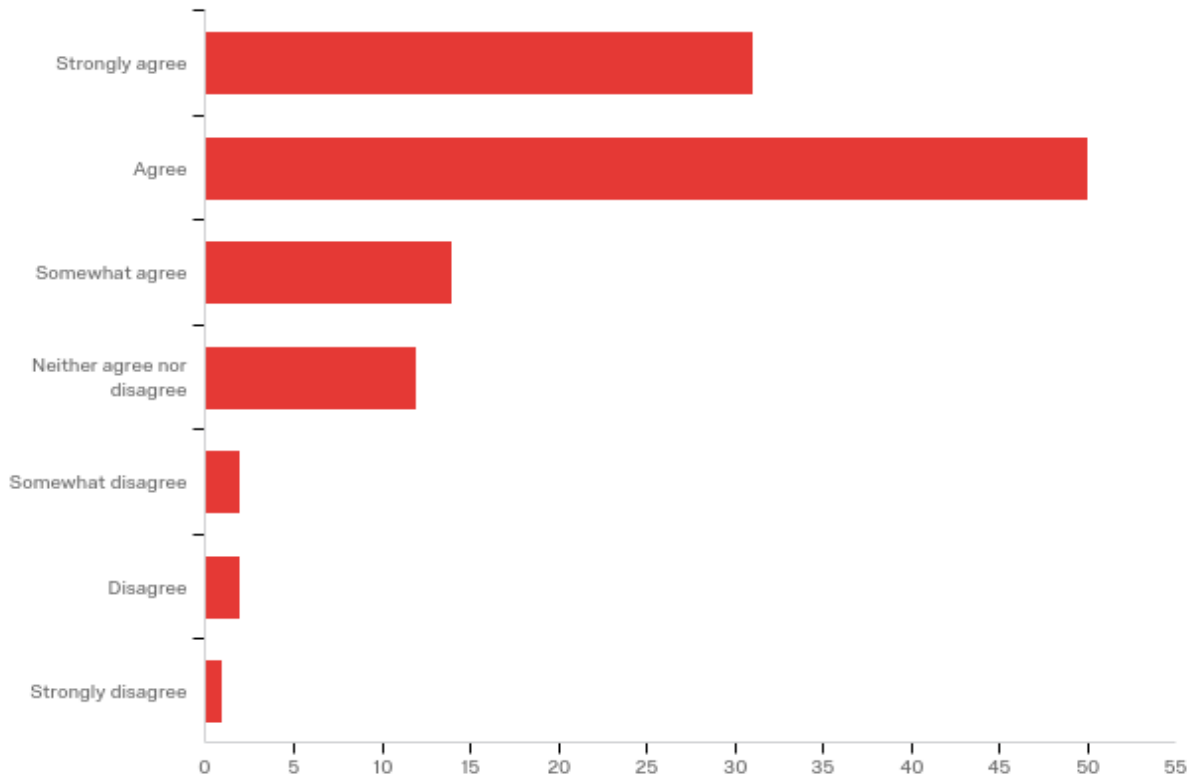
GE classes are easy, and are not necessary. They don't seem to be any different than high school classes.



Juco helped a lot, but I feel like more was reinforced at CSUB  
The writing, research, communication skills I believe to be the most beneficial.  
because during my time schooling i have found a job.  
My writing and oral communication has improved.

Draft

Q3 - My general education experience at CSUB has provided me well-rounded knowledge base across a broad range of disciplines.



#	Answer	%	Count
1	Strongly agree	27.68%	31
2	Agree	44.64%	50
3	Somewhat agree	12.50%	14
4	Neither agree nor disagree	10.71%	12
5	Somewhat disagree	1.79%	2
6	Disagree	1.79%	2
7	Strongly disagree	0.89%	1
	Total	100%	112



workforce projects.

I have learned things that I never imagined I could, and the most amazing part is that most of the things I learned I

can apply to my daily life.

Classes are horrible

I didn't take GE courses at CSUB

The teachings from GE classes widen my knowledge on subjects I did not know much about.

I can perform a variety of different job functions that require a broad and diverse skill set.

general education is good because it makes you a well rounded person

The GE classes required provides a large variety of classes to take.

very great experience

The classes have covered many different subjects and have made me think about the subjects that have been

taught.

I transfered to CSUB so I didn't take GE classes here.

All of the different courses I took were from a wide range of choices. I took something from each course I took.

I took almost all of my GE at Bakersfield College.

I've learned so much about many different fields of study

idk

I gained the knowledge I required to advance myself, my education, and my career.

There are some departments where I did not take any classes at all

I have taken classes in public policy, geology, and psychology that I would not have taken without the requirement.

Everyday I use different things that I have learned in my daily life.

large variety of courses forced to take

I have a general knowledge of many subjects. However, I studied these subjects in my first two years at CSUB so I

haven't been able to develop them in the interim.

It allowed me to choose any carrier

no comment

The classes I did take were beneficial

N/A

Many of the GE classes seem unnecessary. For example, gender race ethnicity courses shouldn't be required. Not

much knowledge was gained.

GE completed at BC

na

My foundation was strong before I came to CSUB.

I have taken classes in art, sociology, philosophy, chemistry, math, engineering, and many others.

I did get a chance to take some fun classes like Opera but due to schedule conflicts I couldn't take more classes like

that

My GE was completed at another establishment.

It taught me how to manage, work, and, family while going to school.

I have learned about the

By having to take course other than my major ones.

Strong language and Logic skills involved in everyday thinking

I have learned multiple things that I did not have knowledge prior to taking the classes.

I really did not need to know what artist made what, but I am well rounded and can answer the art questions in a

trivia.

Didn't take them here but the general guidelines cover a broad range of topics.

it allowed me to become aware of all subjects

N/A

I already had an opportunity to experience a great deal of the world since I returned to school after 20+ years.

Completed gen education somewhere else

I believe the GE courses exposed us to different level of knowledge and skill sets, which I found beneficial in life.

General Education is actually a strong point for CSUB.

I didn't take gen ed courses here

I transferred to Cal. State Bakersfield, but I can totally agree in respect to the Gen. education I received elsewhere.

Exposed to material to expand my horizons

Just part of the gen education experience

Professors are encouraging

I believe this because I feel like I am prepared to take on any task that comes my way once I graduate.

N/A

Courses in humanities, education, music, arts, and mathematics.

The classes ranged in topics.

The courses I have to take are based on different things and they allow me to learn a little bit of everything.

People I discuss this with feel that these classes are useless. If I'm a finance major, why is it that I'm taking my

first finance class 1-year before graduation?

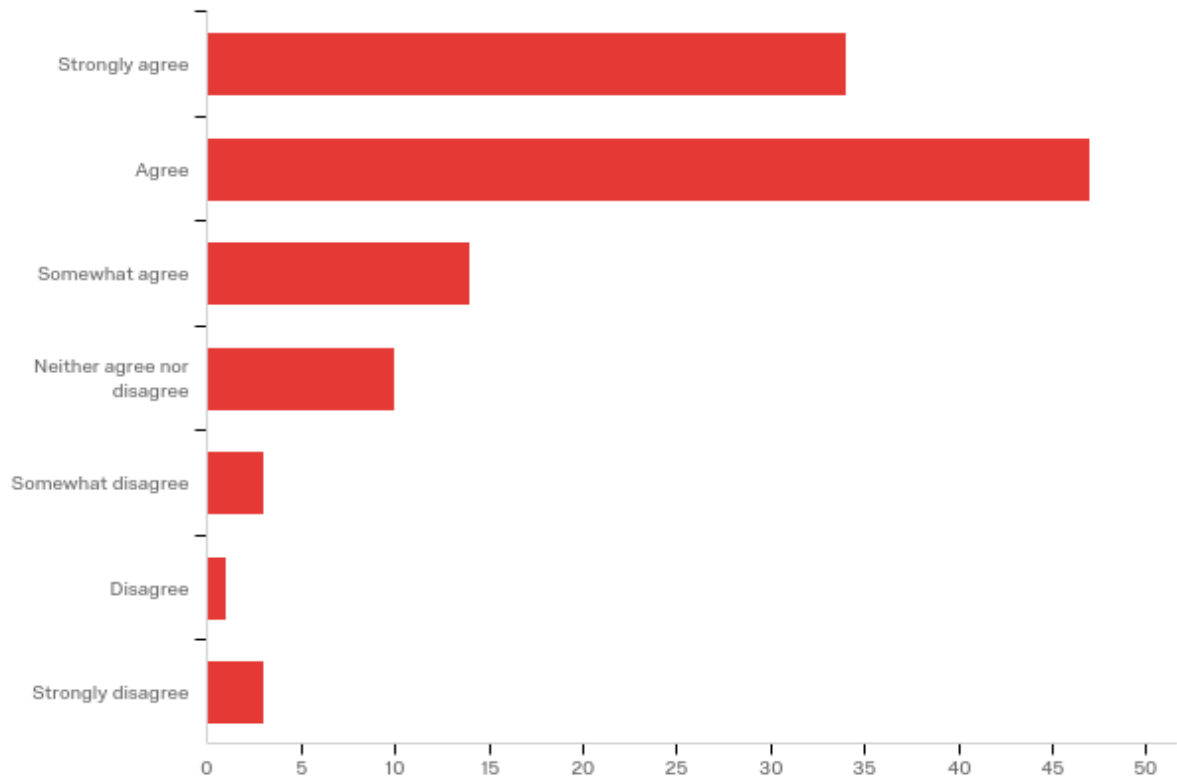
I was able to wet my feet with a bunch of disciplines that interested me.

I have taken a wide variety of classes of multiple subjects

it has helped me be a better person

I have gained knowledge about many different topics.

Q5 - I understand the purpose of the general education courses I had to take.



#	Answer	%	Count
1	Strongly agree	30.36%	34
2	Agree	41.96%	47
3	Somewhat agree	12.50%	14
4	Neither agree nor disagree	8.93%	10
5	Somewhat disagree	2.68%	3
6	Disagree	0.89%	1
7	Strongly disagree	2.68%	3
	Total	100%	112

Q6 - Why I believe this:



Because we met all the objectives in the syllabus  
 I did well and enjoyed my ge courses  
 In order to be an effective person in society, you also need to study disciplines outside of your chosen one.  
 I know money is involved to some extent.  
 They met various areas.  
 By completing GE's, it makes college graduates more well-rounded by equipping them with the basic level of knowledge that they should know in all disciplines.  
 When I think back to what I learned I realize I have applied some of the concepts to my daily life and I am more well rounded.  
 Needed before upper division to be well rounded  
 they show what level the general level students are and not the higher level they need to be  
 i believe the purpose of general education is very important  
 Through the guidance of the council  
 It is to give me exposure to many different areas that imay not otherwise choose or have the



opportunity to be  
exposed to

The GE classes expose students to ideas beyond the discipline they want to follow.  
Some of the classes regarding PR felt like they were repeating themselves with the same material  
over and over

again when expansions on other areas would have been nice.

Some of the classes just not seem to fit the carrer I want in the future but if it is required I might  
have to use in the  
future.

Classes are horrible

I didn't take GE courses at CSUB

I believe that GE classes help motivate students.

To provide diversity

It is important for members of society to have a well rounded education outside of their desired  
major.

great foundational basis

to give knowledge about different subjects

I transfered to CSUB so I didn't take GE classes here.

Every course I took prepared me for something I would need later on in life/in my future career.

I only need one GE course and I am taking it Summer 2017.

I know a lot about different area of study

To make ourselves well rounded.

idk

I understand why I need to take them, it was just a bit annoying at times

The variety of different classes I took help prepare me for my nursing classes.

some were unnecessary

My general knowledge of many things has helped me become a better conversationalist. It has  
also given me a  
valuable skill set.

Theme classes are a waste of time

Because it helped me to be prepare for my career

no comment

I understand the purpose was to make me a more well-rounded person

N/A

I would be better prepared for my career if I was able to focus on major and cognate courses.

GE completed at BC

na

This was never truly explained to me.

I know it is necessary to gain knowledge in other areas but not all classes are helpful.

It just made my semesters easier to deal with. Otherwise I would have overloaded with my Major  
classes

My GE was completed at another establishment.

It gives you the basics needed to be well informed I the subjects and navigate in a professional  
environment more

easily

They were interesting and instructors were well prepared.

Topics covered are used in everyday life

To be a well rounded student

General education is important because having a little knowledge of each subject could go a  
long way.

GE requirements make sense.



It helped me experience all subjects

N/A

I did well in classes and understood material.

Because the GE courses relate to the real world.

It is to make you a well rounded person who is informed in multiple fields.

They help with stuff that isn't in your major. Those can help in any situation

Gen. education is important again because it provided me with a better understanding of how others think and it

gave me a opportunity to expand my thoughts and education besides my own.

To make us cultured and well rounded individuals

To gain a baseline

I understand it but I definitely Definitely disagree

I believe this because I feel like I gained a lot of understanding in many topics.

N/A

It is to ensure I can learn skills to navigate my career with integrity and reason.

I understand why we have to take the General Education classes.

They make me a well-rounded student because they let you learn a little bit of everything.

I do not see how movie and art classes have helped me at all.

GE gave me a better idea of why I wanted to do. I don't plan on changing careers, so I figured I'd take my time and

see where each road lead to.

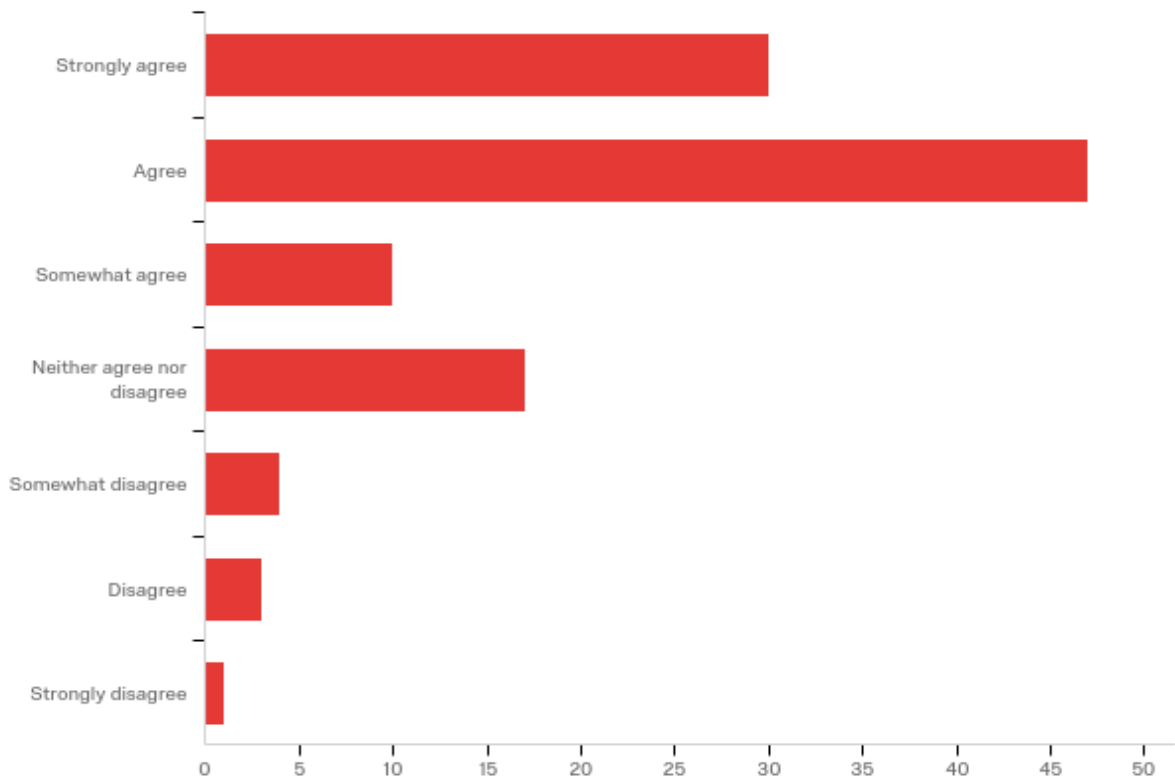
There are some that I don't agree with, specifically the theme classes

i feel that i have taken too many "general education" that it has been a waste of time to repeat the same class

again and again

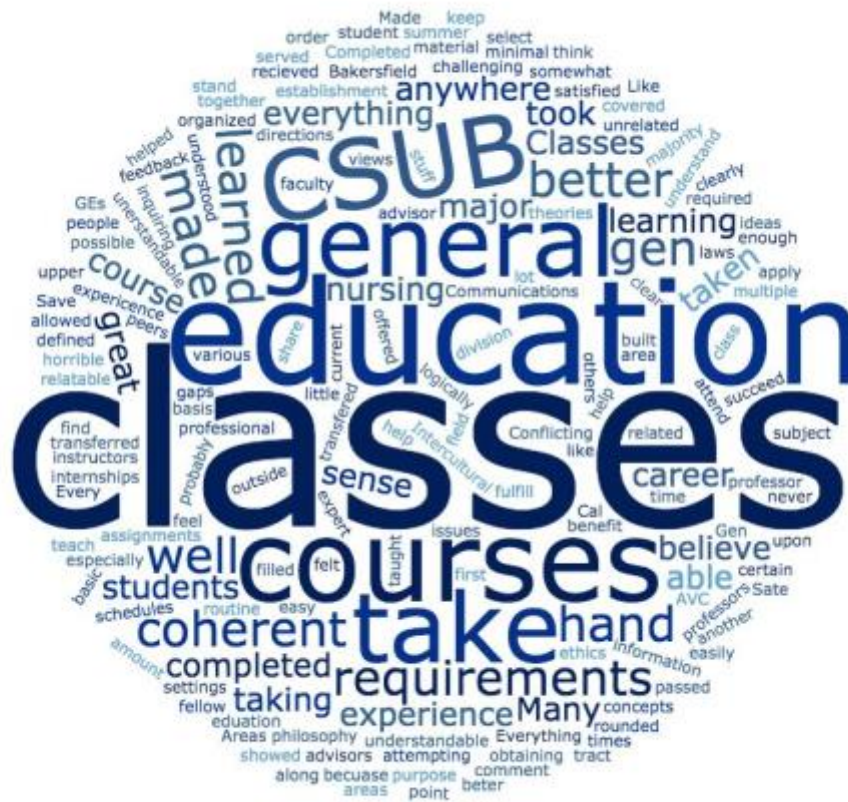
Allowed me to have a general understanding of major concepts.

Q7 - CSUB provided me with a general education experience that was coherent.



#	Answer	%	Count
1	Strongly agree	26.79%	30
2	Agree	41.96%	47
3	Somewhat agree	8.93%	10
4	Neither agree nor disagree	15.18%	17
5	Somewhat disagree	3.57%	4
6	Disagree	2.68%	3
7	Strongly disagree	0.89%	1
	Total	100%	112

Q8 - Why I believe this:



The general education requirements were very organized. Areas were made, and each student has to take a certain amount of classes from each area in order to fulfill the general education requirements.

Some courses went hand in hand with my major.

Classes were somewhat challenging for GE.

I never took a GE course at CSUB.

I took the majority of my GE courses elsewhere  
the classes showed a little about everything which was great

I recieved better education outside of CSUB

i had no issues learning the material

Help from instructors and peers

Many courses built upon others

The areas the courses covered were well defined.

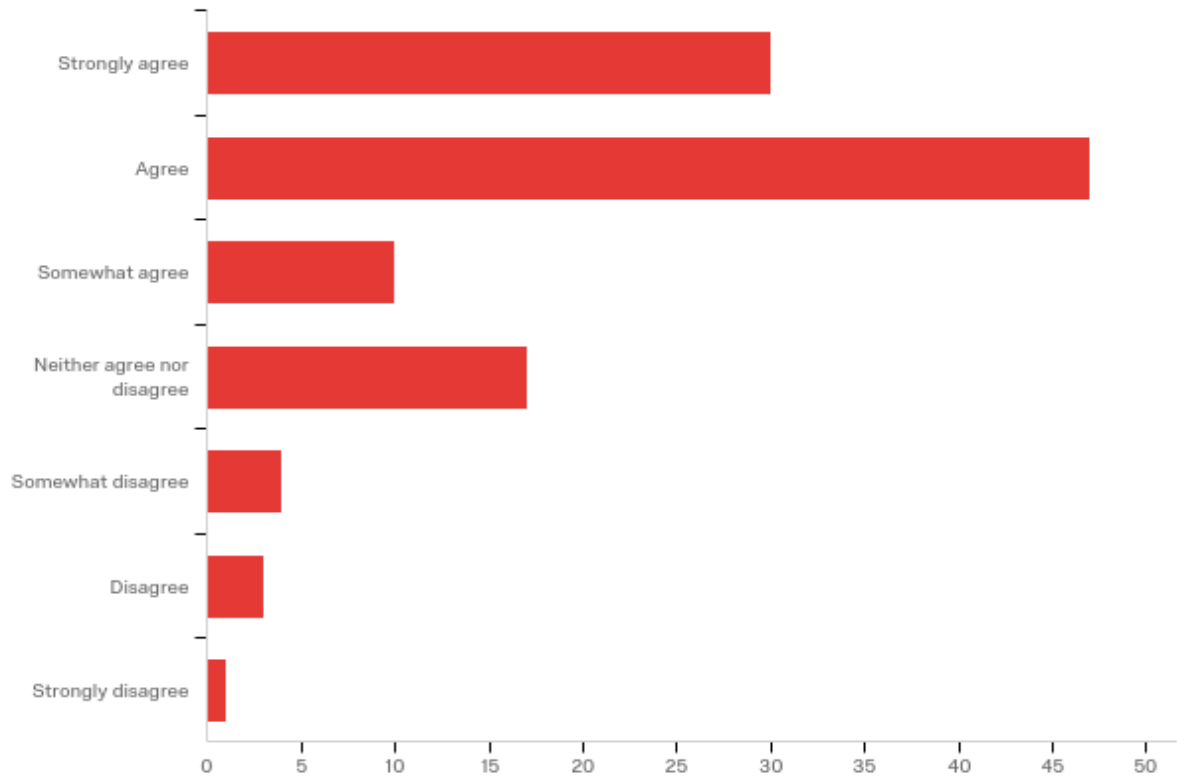
Some of it made sense such as learning the theories then the laws but it felt like there were some gaps that could

have been filled. I think I would feel better if internships were required and there was more help for students for

obtaining them, especially out at AV.

Like I said most of the stuff I learned I can probably apply in the daily basis.  
 Classes are horrible  
 I didn't take GE courses at CSUB  
 Many classes had helped my upper division classes.  
 I passed my classes  
 All of the classes were coherent.  
 everything was easily understandable  
 the classes have been taught clearly.  
 I transferred to CSUB so I didn't take GE classes here.  
 The professors made it possible as well as the advisors.  
 The Intercultural Communications course I will be taking this summer will benefit me in my nursing career.  
 idk  
 Save for a select few, most of the GE classes were easy enough to understand  
 The classes I have taken have allowed me to succeed in my current nursing career.  
 I understood my classes and the basic concepts they were attempting to teach.  
 Because I could use it anywhere  
 no comment  
 My advisor was able to keep me on track with major related courses  
 N/A  
 GE completed at BC  
 na  
 Conflicting directions of assignments with minimal or all together unrelated feedback.  
 My general education experience was well rounded and I would not have learned some of the information anywhere else.  
 I transferred from BC and I didn't have to do a lot of general education classes  
 My GE was completed at another establishment.  
 Made sense  
 I'm able to share ideas and logically stand on point of views  
 I just believe this  
 Some of the general education experience was coherent but the other time it could have been better.  
 I didn't take my GEs here.  
 Some subject I didn't find to be coherent  
 I did not take my GE classes at CSUB.  
 Completed gen education somewhere else  
 I've taken a philosophy on professional ethics.  
 Every professor in GE was an expert in the field with first hand experience  
 I didn't take gen ed here  
 I didn't do my Gen. education here at Cal. State Bakersfield. N/A  
 Very relatable to other people in various settings.  
 I believe this because I am satisfied with my education.  
 N/A  
 A great faculty and inquiring fellow students.  
 They went along with each other.  
 Everything was very clear and understandable in all the courses I am taking  
 Didn't attend CSUB for gen ed requirements.  
 I use what I've learned from GE classes in my daily routine. Each class served its purpose.  
 More classes should be offered at multiple times to fit schedules  
 the general education has been better than AVC

Q7 - CSUB provided me with a general education experience that was coherent.



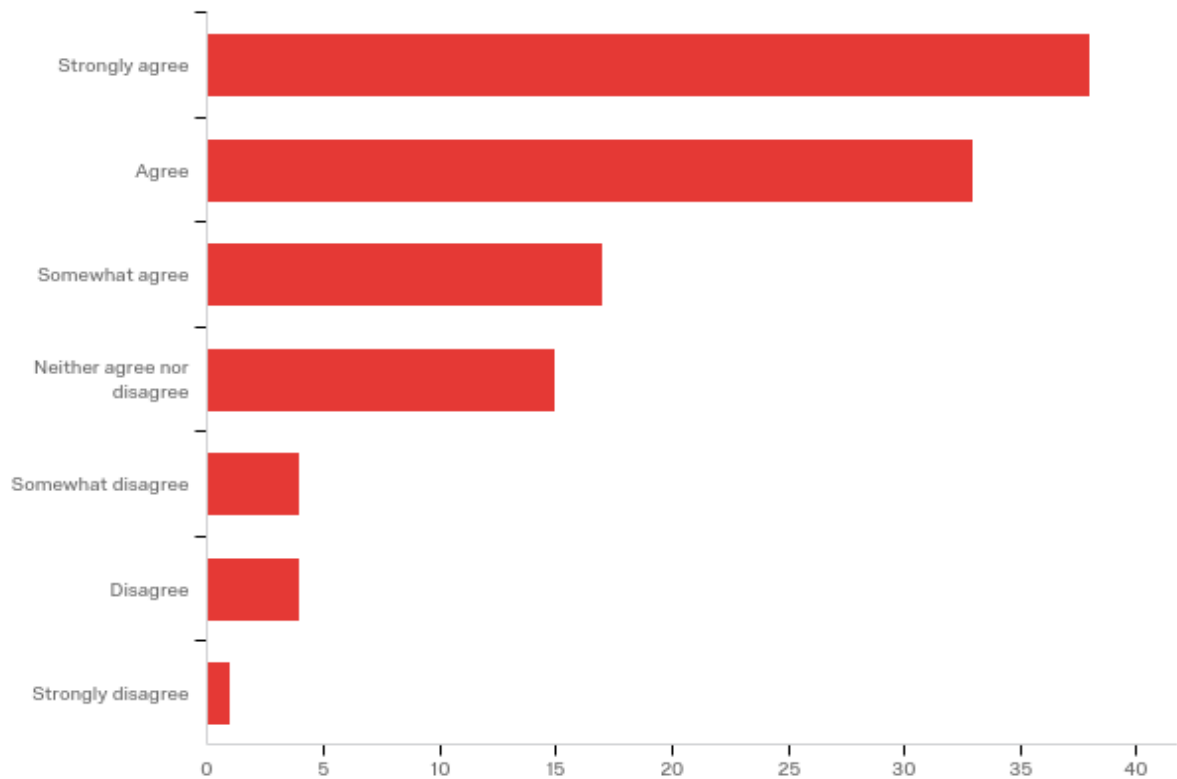
#	Answer	%	Count
1	Strongly agree	26.79%	30
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5	Somewhat disagree	3.57%	4
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7	Strongly disagree	0.89%	1
	Total	100%	112



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Q11 - My general education experience at CSUB was worthwhile and was a valuable part of my overall university experience.



#	Answer	%	Count
1	Strongly agree	33.93%	38
2	Agree	29.46%	33
3	Somewhat agree	15.18%	17
4	Neither agree nor disagree	13.39%	15
5	Somewhat disagree	3.57%	4
6	Disagree	3.57%	4
7	Strongly disagree	0.89%	1
	Total	100%	112





I didn't take GE courses at CSUB

I learned and understood possible subjects that could help me in the future.

Why not

All of the classes were worthwhile and I learned new things in each.

I transferred to CSUB so I didn't take GE classes here.

I really enjoyed my educational experience at CSUB. I not only met new people in class I learned a lot about myself

and grew as a person which prepared me for my future.

I believe education in general is worthwhile and valuable.

idk

The GE courses do help with becoming well rounded, although, because they were GE courses I felt at times like I

was being babied in the sense of sometimes being spoon feed information

Classes like psychology and public policy had material applicable to other fields, but others, like geology, will

probably not do me much good in my future career.

The classes I have and currently are taking have allowed me to succeed in my current nursing career.

took away from the major a bit maybe?

As previously stated, I have used the knowledge of various subjects to improve my everyday life.

Because education is very valuable

no comment

Some classes I felt were not necessary. However, most were interesting.

N/A

GE completed at BC

na

My foundation was strong before I came to CSUB.

I don't know that all of my GE experience was worthwhile but some was valuable.

It felt like a waste of time, the only benefit was the break up of my major classes

My GE was completed at another establishment.

After 5 years, I am able to provide and experience new things with new individuals.

It was valuable, I learned a lot

I enjoyed attending the university. I did not like the switch from quarter to semester but overall it was great.

I didn't take my GEs here.

I gave me an opportunity to experience all subjects

Completed gen education somewhere else and received first diploma in humanities

I was challenged and become a better educated person.

I didn't take gen ed here

My general education allowed me to practice my social skills with others, which to me was most important.

I became a more well rounded person

I was involved

I believe this because my experience has helped me really figure out what I want to do in life.

N/A

It prepared me to achieve in my upper division courses.

The writing helped in my major classes.

It helps you become clear on what you want to do, what you want to study.

Didn't attend CSUB for gen ed requirements.

GE classes helped narrow my interests.

I think the major specific classes were much more valuable



No.

no

I wish I could have taken this GE course before taking the RN-BSN program.

No

n/a

Not really

I would suggest reconsidering the upper-division GE classes. By then, most students have probably taken a variety of classes in all fields and have relatively stable career goals.

No.

I hope that we can spread out General Education to go across more academic years. In my final year, I found that

taking lower division general education classes helped me balance my workload of my major upper division

classes. I recommend that the school informs students that this is an option so they do not burn out during their

last two years.

It was really amazing

no

N/A

N/A

na

Many of the assignments were unnecessarily complicated or difficult. Clear direction from the faculty is needed.

I wish I could've had more class options. I feel like my education was limited in that I didn't get to take courses

because they were not being offered in all semesters or quarters

There should be less general education classes for the curriculum.

No

No

It has been one of the best times of my life.

No

General education experiecne at CSUB was great.

Not really, just that I'm probably not the person you're looking for input from.

It helped me realized what I wanted to do in the end

no

Please continue the great experience you are providing when it comes to GE

It was fun and I was happy to be here

My gen. education has brought me a long way.

No

I have no additional thoughts.

N/A

No.

It was helpful for the most part but some classes didn't make sense for me to take.

Not currently

Reconsider the theme upper level requirements and if they are really necessary.

## **Moving Forward: Fall 2017 to Spring 2018**

1. Assessment of SELF Courses
2. Assessment of Information Literacy
3. SELF and Information Literacy Assessment instruments were developed by 8 faculty members from 3 schools