



PO BOX 123  
University of Papua New Guinea, WAIGA  
Papua New Guinea  
Phone: (675) 78999972/73454356  
Email: natzman21@gmail.com  
Website: <https://stemresourcesandtraining.com>

## Unit 1 Module 1 Assignment #1

### Instruction

Assignment #1 is based on Unit 1, Module 1. Total marks are out of 30 and this research assignment worth 30%       /30 marks

### Question 1

What is STEM? Define the disciplines of science, technology, engineering, and mathematics (5 marks)

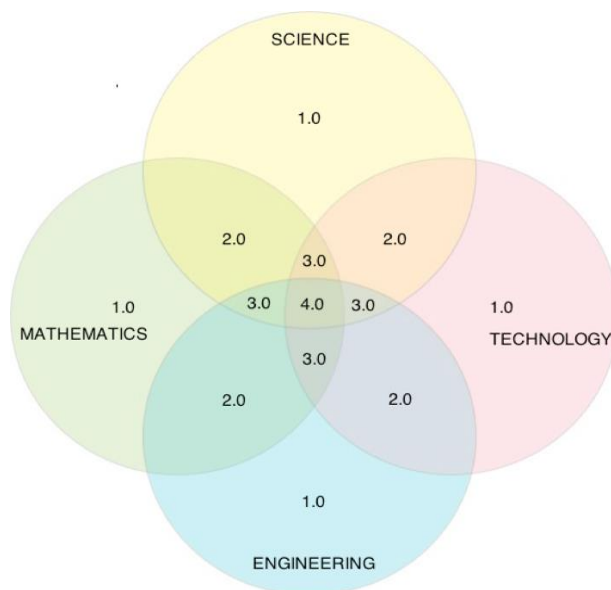
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### Question 2

What is STEM education? (3 marks)

### Question 3

Based on the idea of **integration** as shown in the diagram below, explain the meaning of the number 3.0. (2 mark)



#### Question 4

A group of students were given the challenge to design a model of a boat that can hold more load. They tested their models through floating and sinking by placing loads (marbles) in their boat models to see if their models could hold more marbles.



If STEM Education entails the integration of disciplines, identify the different STEM disciplines or subjects involved in this challenge or boat project, and explain the concepts of each STEM subject involved. **(5 marks)**

#### Question 5

Explain reasons for STEM education or why it is important and examine the challenges of STEM integration. **(5 marks)**

#### Question 6

Skim through the policy document - Science Grades 9 and 10 Standards-Based Junior High Syllabus (2020) and the different sections of the syllabus particularly the following sections:

- Aims and Goals p.2
- Overarching Curriculum Principles p.10
- STEAM Rationale, Aims and Goals and Guiding Principles p.26
- Core Curriculum p.28
- Essential Knowledge, Skills, Values, and Attitudes p.29

Explain the perspectives of STEM integration or STEM education in the above sections of the policy document. **(5 marks)**

#### Question 7

What are 21st Century Skills, and why are they important? **(5 marks)**

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