

SYLLABUS

COURSE DESCRIPTION: TECHNOLOGY (Computational Science)

Science and Technology Learning Area Course Code: 22113

Grade Level: Grade 8 (M2) Duration: 40 hours, 1.0 credit

This course covers concepts of abstraction, selecting essential attributes for problem-solving, problem-solving steps, pseudocode writing, and flowcharts. Students will learn basic programming skills using variables, conditions, and loops to solve mathematical or scientific problems. The course includes collecting primary data, processing information, creating options, and evaluating outcomes for decision-making. Students will explore software and internet services for data management, secure use of information technology, identity management, and considerations for content appropriateness, agreements, and usage terms for media and resources.

Students will apply abstraction and problem-solving techniques to programming or real-life problem-solving, efficiently gather data, create options for decision-making, and practice safe information technology use, ensuring it benefits learning without causing harm to others.

Indicators

Standard 4.2: Technology (Computing Science)

- 1. Design algorithms using abstraction to solve problems or explain real-life processes.
- 2. Design and write simple programs to solve mathematical or scientific problems.
- 3. Collect primary data, process, evaluate, and present information according to objectives using various software or internet services.
- 4. Use information technology safely, adhering to terms and agreements for media and resources.

Total Indicators Covered: 4