Sponsored by:

- STEM Education Laboratory
- Department of Curriculum and Instruction
- FAU Davie Campus
STEM Education Lab Goals:
• FAU - Community involvement to develop strategies for the integration of STEM for literacy and workforce readiness
• Research, develop and disseminate best STEM education strategies
• Facilitate the adoption of effective STEM education in formal and informal educational settings
STEM Education Lab Mission

- To facilitate:
  - Teaching
  - Learning
  - Research
  - Evaluation
  - Curriculum

- In areas of
  - Science,
  - Technology
  - Engineering
  - Mathematics
Meet the Instructional Technology Faculty

Dr. Victoria Brown

Dr. Ann Musgrove

Dr. Jillian Powers
Invention Cycle

Create
Share
Remix
Play
What makes a robot?

CONTROL CENTER: MANAGE THE INCOMING DATA.
What makes a robot?

BODY: REQUIRED TO CARRY OUT A TASK
What makes a robot?

SENSORS: TO RESPOND TO THE ENVIRONMENT
Computational Thinking for Robotics

Decomposition: Breaking down complex problems or systems into smaller manageable parts.
Computational Thinking

Pattern recognition: Looking for similarities between problems.
Computational Thinking

Abstraction: Identification of irrelevant details to focus on important information.
Algorithms: Developing step-by-step solutions or the development of rules that can be used to solve similar problems.
Computational Thinking

Evaluation: Analyzing the results of the solution.
Computational Thinking

Reflection: How could the results be improved or how can the process be changed to work better next time?
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