# IT-ADVENTURES

## OBJECTIVES AND SCHEDULE

## MISSION 1

# AGENDA

- ● IT-Adventures Overview

- ● Smart-IT Overview

- ● Program Schedule

# OVERVIEW

- IT-Adventures is an extra-curricular program for high school students meant to spark interest in three technology-based areas.

  - The three areas of focus (venues) include:
  – Cyber Defense
  – Robotics
  – Smart-IT

# OVERVIEW

- Program Goals:
  - Garner interest in technology-related fields
  - Increase enrollment of students in IT-related degree programs
  - Provide students with the support they need to earn their degree
  - Make IT fun!

# SMART-IT VENUE

Smart-IT is a great steppingstone for students who want to learn some programming but may not have any experience doing so.

This venue is a great way for students to see their programming come to fruition, by programming a robot to perform specific tasks.

# SMART-IT VENUE

This new venue will feature smart device programming (Raspberry Pi) with sensors to solve a problem.

Students build a smart device, which is judged at IT-Olympics.

During IT-Olympics, students will work on a real-time challenge.

All schools will be given a parts list in the fall and will be asked to purchase at least 2 sets of parts.

# IT-OLYMPICS

- At the end of the year, students have the opportunity to compete in the one-day IT-Olympics, which includes the following opportunities:

  ● Compete in multiple competitions, including a challenge they've prepared for ahead of time and a day-of challenge

  ● Compete against teams from around Iowa, interacting with students to learn and have fun

  ● Interact with other venues in the IT-Adventures group

# PROGRAM SCHEDULE

| Month & Week | Mission | Content |
| --- | --- | --- |
| Sept. 6th | 1 | Mission 1: IT-Adventures Objectives and Schedule |
| Sept. 13th | 2 | Mission 2: Getting to know your RVR and Python introduction |
| Sept. 20th | 3 | Mission 3: Setting up the RVR and Raspberry Pi |
| Sept. 27th | 4 | Mission 4: Linking the RVR and Raspberry Pi |
| Oct. 4th | 5 | Mission 5: If Statements / Conditionals |
| Oct. 11th | 6 | Mission 6: Iterations: For Loops & While Loops |
| Oct. 18th | 7 | Mission 7: Arrays and Strings |
| Oct. 25th | 8 | Mission 8: Monthly Challenge |
| Nov. 1st | 9 | Mission 9: Functions |
| Nov. 8th | 10 | Mission 10: Files |
| Nov. 15th | 11 | Mission 11: Debugging |
| Nov. 22nd | | THANKSGIVING BREAK (no material) |
| Nov. 29th | 12 | Mission 12: Monthly Challenge |
| Dec. 6th | 13 | Mission 13: Dictionaries and classes |
| Dec 13th | 14 | Mission 14: Fun week / Catch up |
| Return from winter break | 15 | Review of important information and overview of what is coming up |
| | 16 | Practice for Smart-IT Competition |
| March | | Practice for Smart-IT Competition |
| | | Practice for Smart-IT Competition |
| | 17 | Competition Scenario |
| April | | Competition Scenario |
| | | Competition Scenario |
| | | Competition Scenario |
| May | | Smart-IT Competition |

# QUESTIONS?

Reach out to IT-Adventures support staff

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