IT-Adventures CD Program Objectives & Schedule

Module 1

Module Agenda

- Introduction to IT-Adventures
- Introduction to Cyber Defense (CD) program
- Topics Schedule

IT-Adventures

- Dedicated to increasing interest in and awareness of information technology (IT) among high school students
- Focused on four program areas:
  - Cyber defense,
  - Game design programming,
  - Robotics,
  - Multimedia

Cyber Defense

- Program is focused on developing an understanding of :
  - IT components and their operation and integration
  - Cyber security both in concepts and in operations
- Program will provide an opportunity to design, build, manage and defend an IT environment

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Cyber Defense Program Objectives

- Over the school year, you will be able to:
  - Apply security concepts and tools to an environment that serves a purpose.
  - Use security concepts, practices and tools to prevent violations of security policy.
  - Use virtualization to construct an IT environment consisting of multiple virtual components that operate together as an IT environment that serves a purpose.

Cyber Defense Program Objectives II

– Use IT administrative practices to implement and maintain an IT environment that serves a purpose.

– Apply networking concepts, components, tools and services in order to build and maintain a functional IT environment that serves a purpose.

– Participate in a competition that tests you and your team's ability to defend against outside attack.

Starting Requirements

- Time to:
  - Participate in IT-Club meetings
  - Complete the activities
  - Read handouts

- Interest in technology

- Desire to learn and work as a member of a team

- Excitement for learning while having fun

- Willingness to learn from mistakes

Assumptions About You

- You have used a computer
- You have access to a computer at home and/or school
- You use the Internet from home and/or school
- At home or school you have a "high-speed" Internet connection (examples: cable TV provided or DSL connections)

Permission and Precautions

- Your parent or legal guardian has given their permission in writing to participate.

- The Iowa State's virtual "playground" is connected to the Internet, and you should not save any personal data, including reusing passwords on the playground.

- Other than for those times specified in an exercise, **do not** use playground resources to attack other IT-Club member systems, other schools or other Internet based systems.

Program Content Structure

- 23 sessions spread over school year
- Sessions will consist of:
  - Videos
  - Activities
    - Hands-on labs, worksheets and more
  - Supplemental Handouts
    - Not all needed learning can be done in available IT-Club time.

Program Schedule

Note: The schedule is delayed, You can work through the content in order with a goal of finishing before IT-Olympics

Month	Session	Content
September	1	Introduction to IT-Adventures and CDC program Discussion of IT Environments
	2	Discussion of IT Concepts, Part 1
	3	Discussion of IT Concepts, Part 2
October	1	*No new material – flex time that can be moved*
	2	Virtual Machines & VMWare Playground Environment
	3	Operating Systems, Part 1
	4	Operating Systems, Part 2
November	1	Networking, Part 1
	2	Networking, Part 2

Program Schedule II

Month	Session	Content
November	3	Network Services, Part 1
December	1	Network Services, Part 2
	2	Networking tools
January	1	IT Services Architecture OS Hardening, Part 1
	2	OS Hardening, Part 2
February	1	Network Application & Service Hardening/Securing
	2	Network Security, Part 1
	3	Network Security, Part 2
March	1	Event Management
	2	Response Strategies

Program Schedule III

Month	Session	Content
March	3	CDC Environment, Rules, Roles and Objectives
April	1	CDC Blue Team Strategies
	2	Competition Scenario, Part 1
	3	Competition Scenario, Part 2
	-	IT Olympics – Cyber Defense Competition Iowa State University, Ames, Iowa

End of Module 1

- What questions do you have for your teacher regarding the Cyber Defense program?