

Welcome!

**The webinar will begin at
2:00 Eastern/11:00 Pacific**

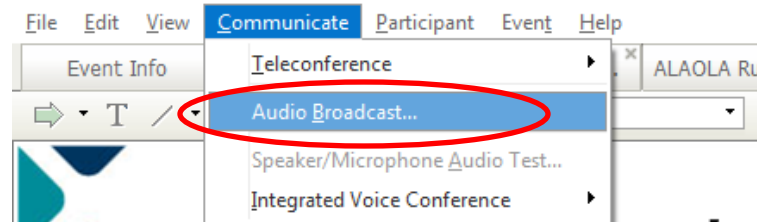
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Today's audio is streaming to your computer's speakers or headphones.

Too loud or soft? Adjust volume level in the Audio broadcast box:

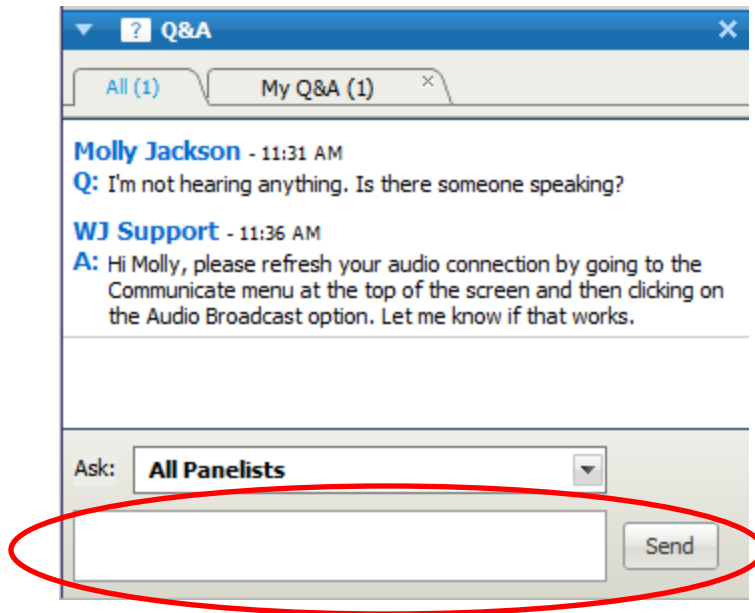


Lost all sound? Hear an echo? Click on the **small radio tower icon** (above chat box) OR go to the **Communicate** menu (at the top of the screen) and select **Audio Broadcast** to refresh your connection.



Need Help?

Please post **technical support questions** into the **Q&A Panel**.



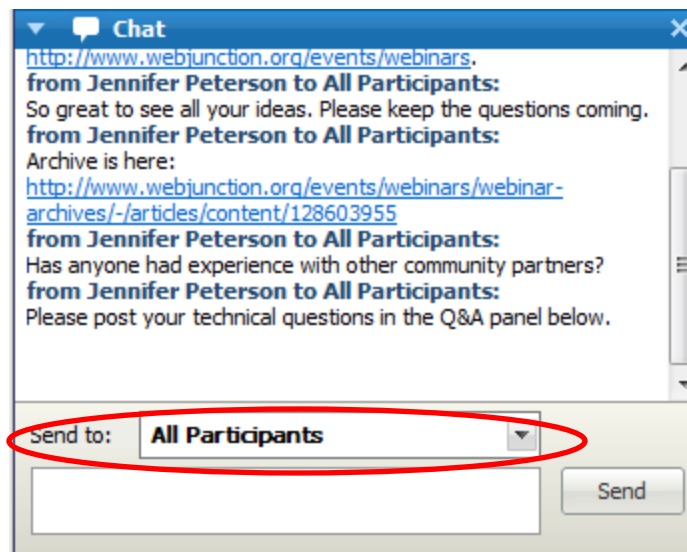
Step 1: Type the problem in the **dialog box**.

Step 2: Click **Send**.

Chat Etiquette

Use **Chat** to talk with attendees and presenters about the topic.

Do not post technical questions to Chat.



And if you're tweeting, use this hashtag: **#wjwebinar**

Customize your experience

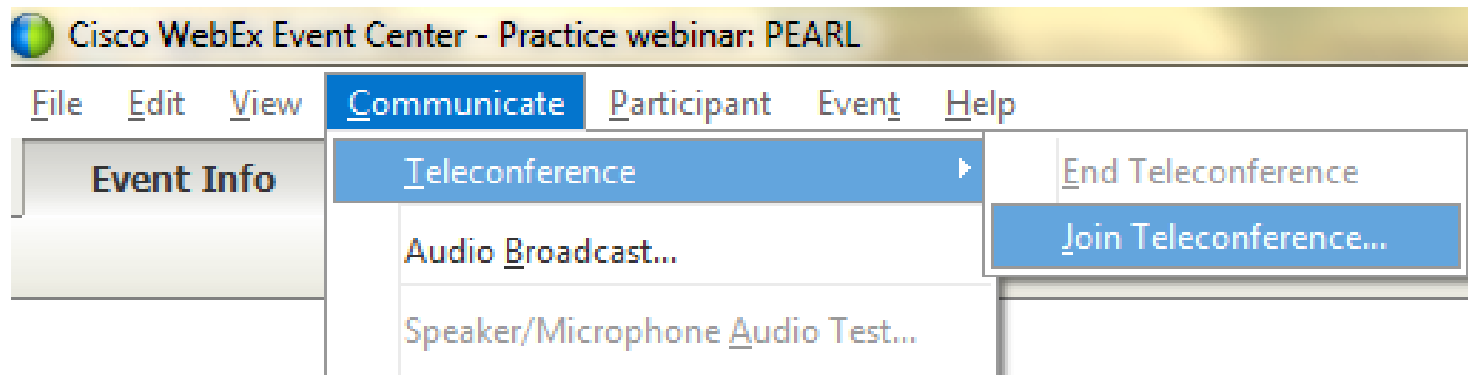
Panels can be opened or closed by clicking on the panel name at the top of the column, or by using the X in the individual panel.

Hover over edge of panels to drag and resize.

The screenshot displays a webinar interface with three main panels: Participants, Chat, and Q&A. The Participants panel is expanded, showing a list of participants including Jennifer Peterson (Host), Susan Pieper, and Marci Merola. The Chat panel is also expanded, showing a message from WJ Support to All Participants. A red arrow points to the 'X' icon on the right side of the Participants panel header, indicating how to close the panel. Another red arrow points to the right edge of the Participants panel, indicating how to drag and resize it.

Telephone Access

If you not able to listen via your computer, you may join by phone.



Step 1: At top left corner, select

Communicate > Teleconference >Join Teleconference.

Step 2: Call the toll-free number provided.

Step 3: Enter the **Access Code** provided.



Remember to post to **Q&A panel**
if you need technical assistance.

Other Technical problems?

Contact WebEx support

Event Number: 712 023 869

Phone: 1-866-229-3239



Co-Produced by:
Jennifer Peterson
WebJunction
Community Manager



Co-Produced by:
Betha Gutsche
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Florida Department of State's Division of
Library and Information Services

Idaho Commission for Libraries

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Indiana State Library

Maine State Library

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Mississippi Library Commission

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State Library of **North Carolina**

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Texas State Library & Archives Commission

Library of **Virginia**

Washington State Library

And to the **Bill & Melinda Gates Foundation**
for their continued support of WebJunction.



INSTITUTE of
Museum and Library
SERVICES

Today's Presenter



Angela Brade

Chief Operating Officer,
Support Services, Howard
County Library System,
Maryland



HiTECH

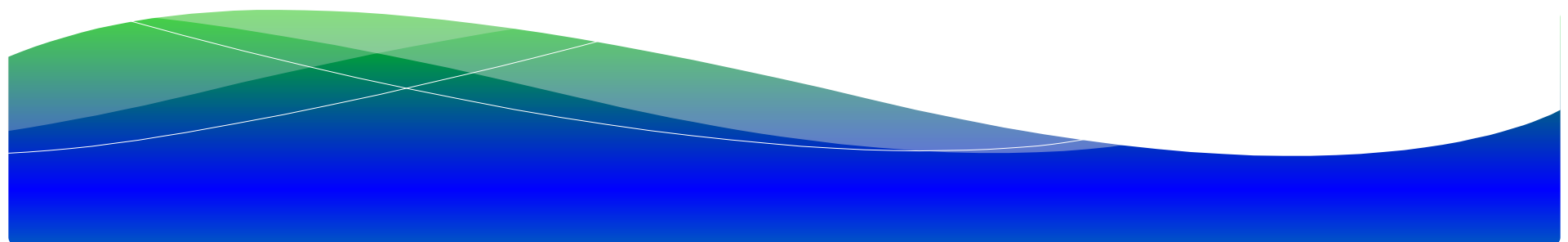
Howard County Library System

The Road to a STEM Career



Where Teens and Technology Meet:

Engaging teens with digital media







Today's Agenda

- Creation of HiTech
- Focus: Curriculum
- Youth Response:
What Seems to Work



Learning


Howard County Library System, MD
HiTech: The Road to a STEM Career
hclibrary.org



Since HiTech's launch, more than 2,000 teens have participated in a wide range of classes, created a mobile game that was released in 2013 and has been downloaded 5,000 times around the world, and worked on the library's Choose Civility e-book featuring their own stories and photos.

Howard County Library System's HiTech digital media lab is designed to open doors and opportunities to the region's teens. HiTech delivers cutting-edge science, technology, engineering and math (STEM) education using hands-on technology projects, experiential learning and peer-to-peer communications. Envisioned as a launching point for the STEM career pipeline, HiTech focuses on producing the next generation of scientists, mathematicians and engineers to meet the needs of the region's highly-skilled job market. The curriculum includes both self-paced and structured learning opportunities divided into four modules that emphasize interaction, improvisation, invention and instruction. The HiTech Academy component focuses on teens who are interested in pursuing higher education in science, technology, engineering or math by providing instruction, site visits to STEM work environments and attendance at college-sponsored STEM sites.

2013 Top Innovators



URBAN LIBRARIES COUNCIL 2013 TOP INNOVATORS

Inspiring Libraries. Transforming Communities.



Creation of HiTech

- ✓ January 2012:
Awarded grant from IMLS and MacArthur Foundation
- ✓ January - March 2012:
Planning and youth forums
- ✓ April – May 2012:
Acquisition and space design
- ✓ June 2012:
Open the Doors!

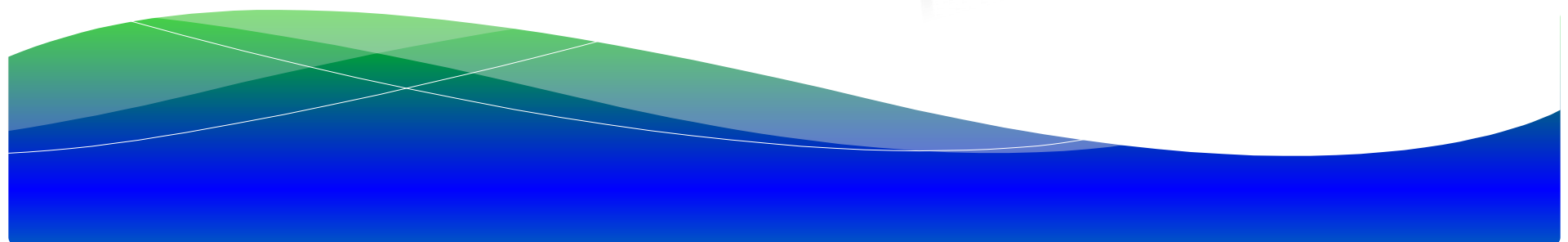


HiTech was partially funded by a grant from IMLS and the John D. and Catherine T. MacArthur Foundation.



Creation of HiTech

- Vision and Mission
- Asked Youth for Input – Listened
- Internal Brainstorming
- Designated Space
- Established Goals and Timelines
- Clear on Our Competencies





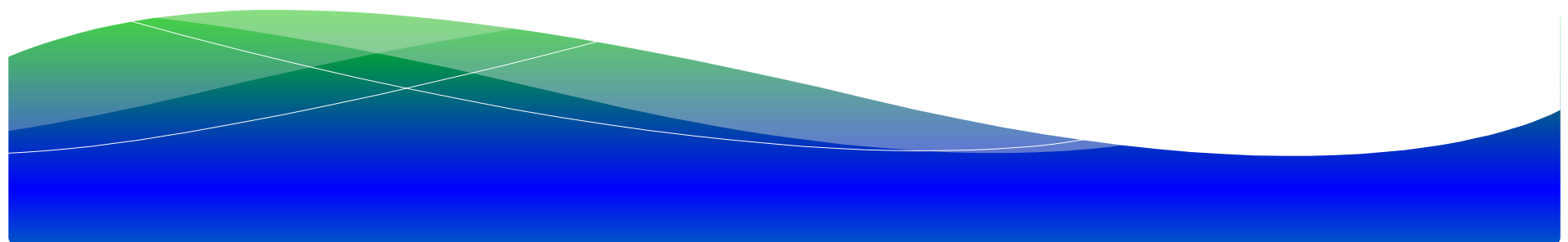
Vision and Mission



Envisioned as a ***launching point for the STEM career pipeline***, HiTech focuses on producing the next generation of scientists, mathematicians, technologists, and engineers needed in the community and nationwide.

Interact + Improvise + Invent + Instruct

Leveraging the best technology, teaching tools, and experts to deliver a top-quality STEM education experience, HiTech incorporates an innovative methodology that blends instruction with experiential learning and peer to peer communications.



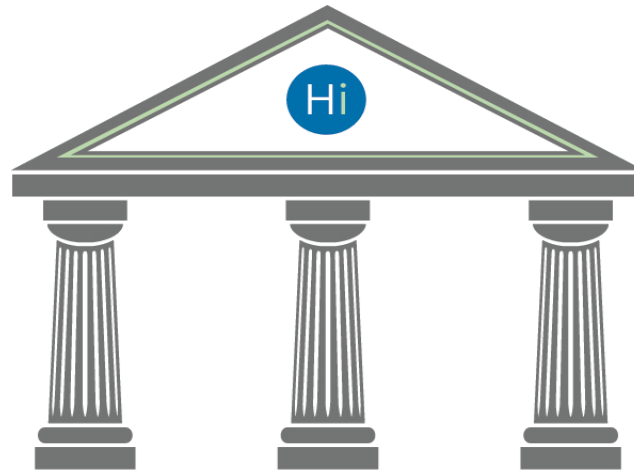
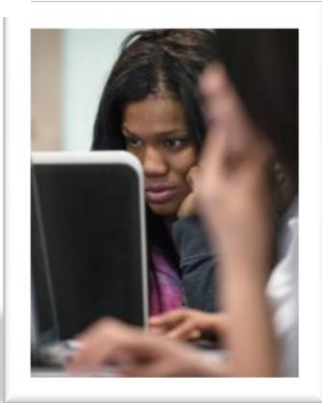


Creation and Foundation of HiTech

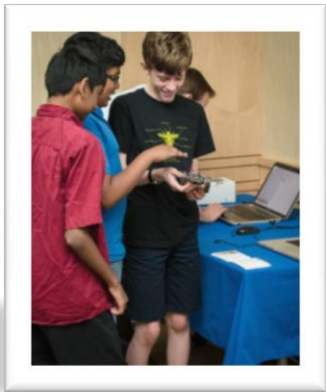
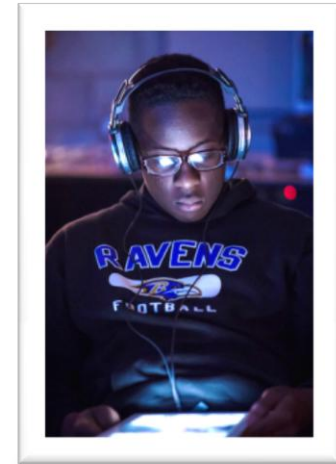


Howard
COUNTY Library
SYSTEM

inform + instruct + interact = educate



Public Libraries = Education



**SELF-DIRECTED
EDUCATION**
 » Books, etc.
 » E-resources

**RESEARCH
ASSISTANCE &
INSTRUCTION**
 » Individual
 » Group

**INSTRUCTIVE &
ENLIGHTENING
EXPERIENCES**
 » Community/Cultural Center
 » Signature Initiatives
 » Partnerships



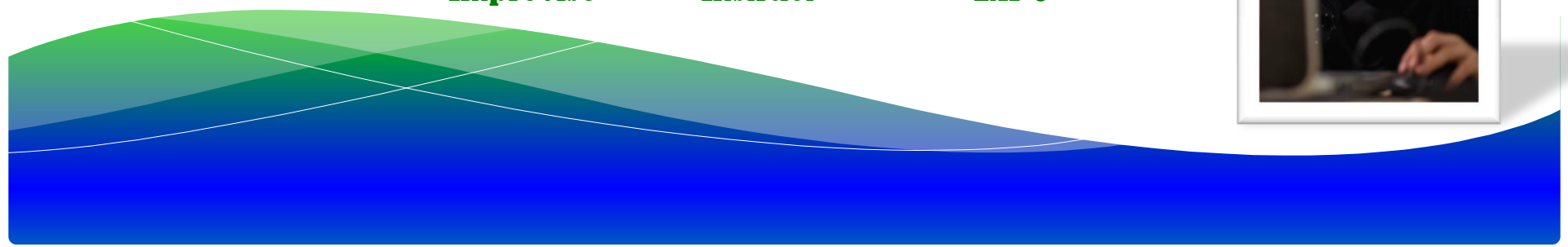
**Interact
Improvise**



**Invent
Instruct**



**Forums
EXPO**





Creation of HiTech – Jan/Feb 2012 Youth Forum(s)



Attendees: 55

Advertisement:
In Branch
Teen Instructor

Lessons Learned:

**ALL teens are interested in a variety
of educational opportunities**





Creation of HiTech Forum – Youth Responses

1. What do you expect to get from coming to the digital media lab?

Text Response

Learning how to use the internet better.
 Food, gaming(programing, crating, playing)
 learn to make a film
 Information on different plans .
 a brand new experience and to learn new technological skills that about the technology.
 I believe I will find myself immersed in a positive and constructive understanding of digital media technology.
 i would learn about new things
 games, learning and anything
 I expect that it will teach me ne
 I expect to get a place where w
 I expect to learn to more about
 Learn more about the media w
 Laptops, Computers just for tel
 i exxpect that we will be able
 An experience shun.
 I want something for youths to
 rules of how to use it
 I want to be able to expand my
 I would except a place to learn
 express ourselves.
 I expect to learn how to do con

2. What software or hardware would you like to have available at the digital media lab?

Text Response

All
 Apple
 PC. apple
 garade band
 mac windows ubuntu
 a place where we can make videos or editing photos

3. What projects or ideas you would like to work on in the digital media lab?

Text Response

a dreamworks film
 How to design a website and how to create a program.
 programming, music production
 making movies
 design, technology
 videos
 Constructing web sites and games.
 maybe to make an android app
 how to make games how to make my own website how to learn how to play an instrume
 how to dance better (break dancing)
 I do garage band
 I would like to work on makin
 how to make a game
 making beats or movie produ
 gaming more digital resource
 Developing Music, work on h
 reports, essays, research, (sc

7. Please rate you INTEREST in the topics discussed today, where 1 is "not at all interested" and 5 is "very interested" in the topic.

#	Question	1: Not at all Interested	2	3	4	5: Very Interested	Responses	Mean
1	Digital Media	1	6	6	12	21	46	4.00
2	International Exchange	7	8	11	13	7	46	3.11
3	Digital Music and Multimedia Production	0	2	4	13	26	45	4.40
4	Gaming	2	2	9	10	23	46	4.09
	Mobile Book						46	2.96

13. What suggestions do you have to help make the next Youth Forum better? Is there anything we should do differently?

Text Response

none
 More food
 more food

5. Are you:

#	Answer	Response	%
1	Male	26	57%
2	Female	20	43%
	Total	46	100%



Creation of HiTech-Youth Forum

Topics, Vision, & Mission

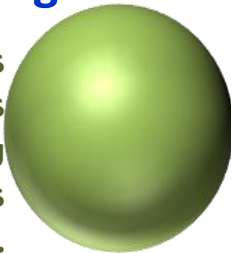
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inform + instruct + interact = educate

International Exchange

Networking with Other Youths
Youth in Other Countries
International Digital Learning
International Languages
More.....



Digital Media

Internet Collaboration
Website Design
E-Publications
More....



Games

Play
Logic/Design/Build
More....



Purpose

Youth

Authors/Evaluators/ Creators

Mobile Book Collections

Mobile Apps
Mobile Books
More.....



Digital Music & Multimedia

Digital Music Production
Video Production
More.....





Creation of HiTech-Youth Forum

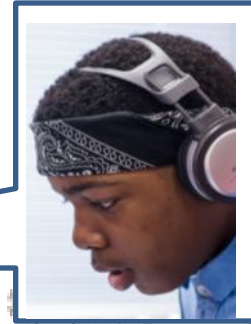
Dedicated Space

@ Savage Branch

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**Registered
Classes**
*Improvise/Invent/
Instruct*
1300 sqft

**Music
Video**
*Improvise/
Invent/
Instruct*
200 sqft

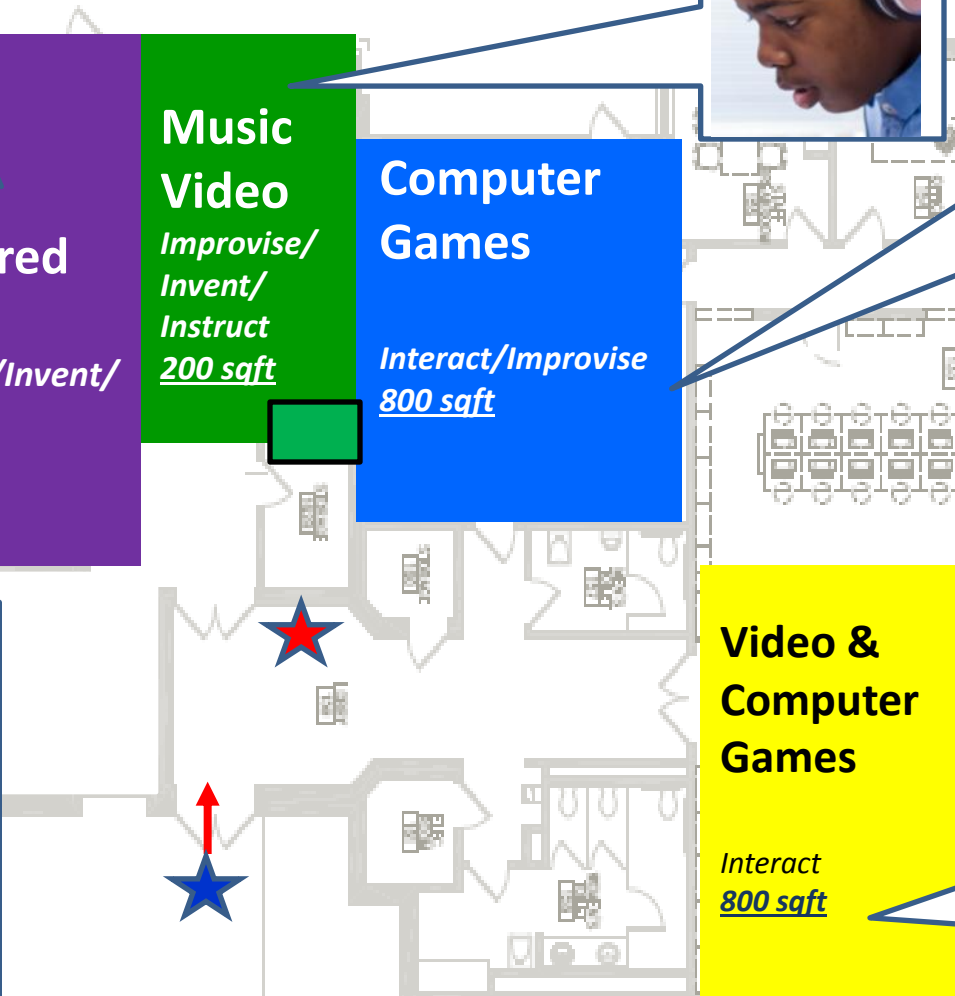
**Computer
Games**
Interact/Improvise
800 sqft

Approximately: 3K Sq Ft
Benefits:

- Dedicated space in isolated area
- Large area

**Video &
Computer
Games**

Interact
800 sqft





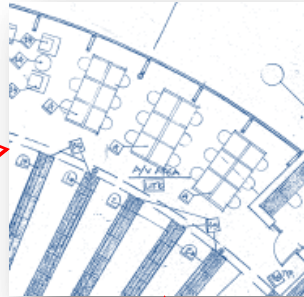
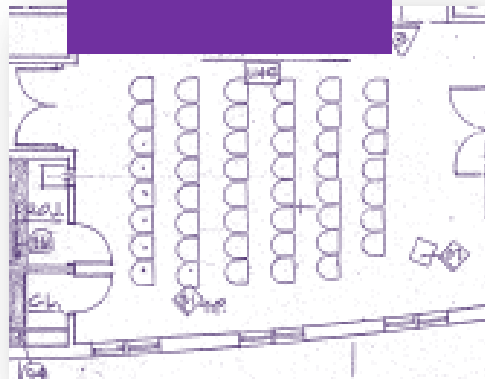
Creation of HiTech-Youth Forum

Dedicated Space

@ ECO Branch



Conference Room
All classes
800 sqft



Public Space: Study table area
All, except music
900 sqft



Teen Cove
All, except music
200 sqft

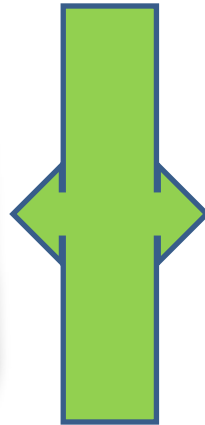
Approximately: 1,900 Sqft

Benefits:

- Dedicated space - 3 location s within the branch attracts more interest.
- Slightly smaller – intimacy of space
- Size doesn't matter

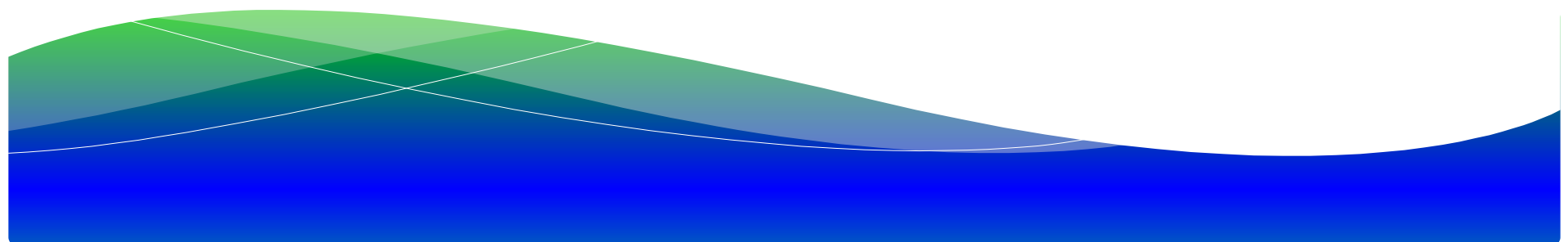


Creation of HiTech Competencies



Partners:

- ❖ Mindgrub Technologies
- ❖ University of Maryland Clark School of Engineering
- ❖ Howard County Public School System
- ❖ Columbia Association – *Sister Cities Program*
- ❖ Voices for Change
- ❖ Friends of Howard County Library





Questions and Answers

Creation of HiTech



Next....



- ✓ Creation of HiTech
- ✓ **Focus: Our Curriculum**
- Youth Response: What Seems to Work

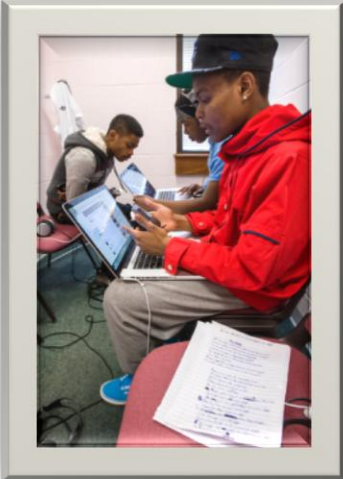


Digital Music & Multimedia

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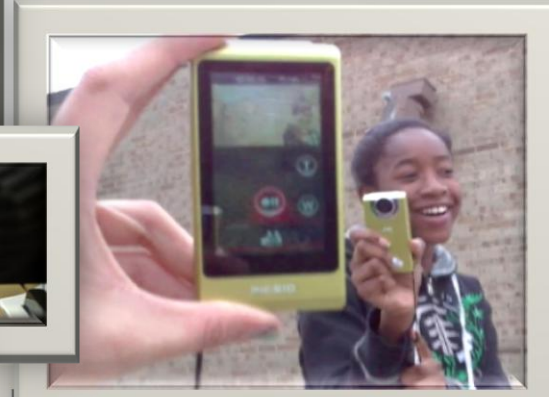
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Instructor Bryan Johnson, left, helps Nick Espinoza, 16, of Columbia, during Music Mash Up class at the Severn Library.



- Interact
- Improvise
- Learn
- Record/Edit/Produce

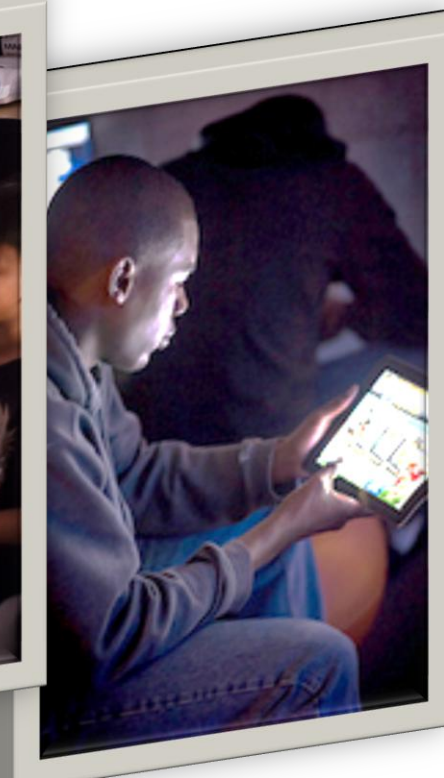
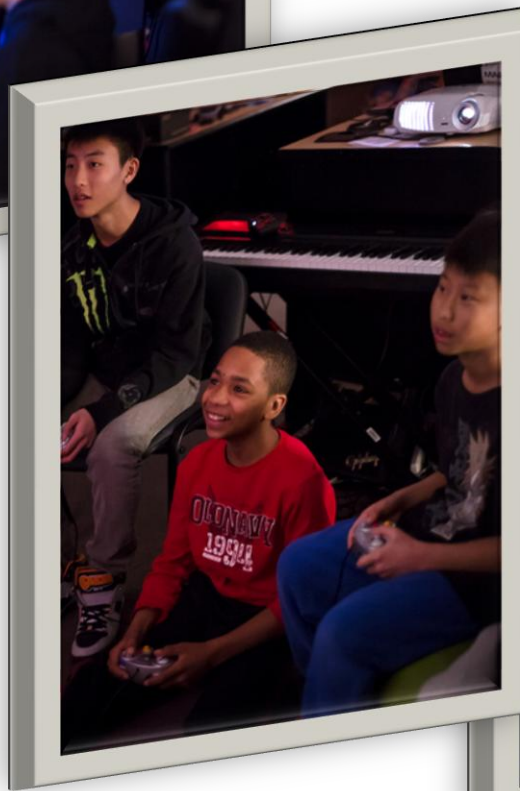




Games



- *Hangout*
- *Interact*
- *Improvise - Explore*
- *Cultivate the culture*





Game Logic, Design, & Application

Week #1 Recap: Creating Functional Requirements

Class, great work yesterday! Everyone of you guys have truly great ideas. Below is a brief description of the type of game we've been describing so far. I've tried to include everyone's ideas, but let me know what I have missed! Use the following worksheets to list the features, objects, levels and characters in the game- but make sure to describe how we interact with all these things too. Next session we're going to put all these ideas into action by making a detailed **shrecap: Creating a Storyboard**

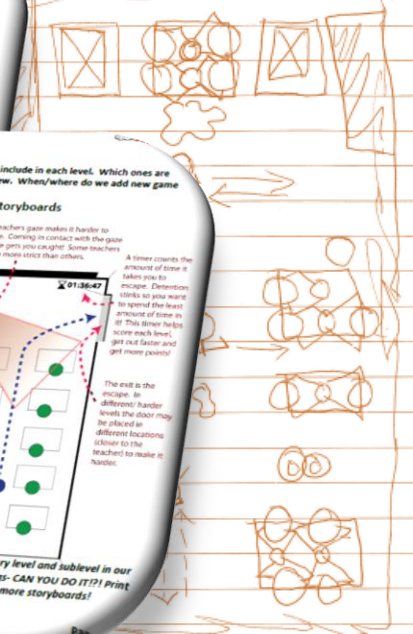
What we discuss:
Concept: Our character detention to save a friend

- Some bosses are sleepy and allow you to move easier, that could mean that there are more bullies under their watch too.
- Lotion or oil-slick to distract bullies
- Speed boost- running over a sneaker icon helps you travel faster, it could be the different maker in getting out of the rooms.
- Powerups like weapons are probably not appropriate to include in this game, since we don't want to promote guns/violence in school.

Levels: As we escape

- Like in "where's my water" or "Cut the rope," we want to make each level the same size. We don't want to make some levels too big and others too small- so every level or puzzle will be as big as possible.
- Each level unique will be what the character and the objects

Cafeteria Cooking



This week: Wireframes/ Storyboards

Objects like boxes may allow you to hide from the teachers gaze. You can't judge boxes in any direction by walking into it in the direction you want it to go.

The teachers gaze makes it harder to escape. Coming in contact with the gaze might get you caught! Some teachers may be more strict than others.

A timer counts the amount of time it takes you to escape. Detention stinks so you want to spend the least amount of time in it. This timer helps score each level, get out faster and get more points!

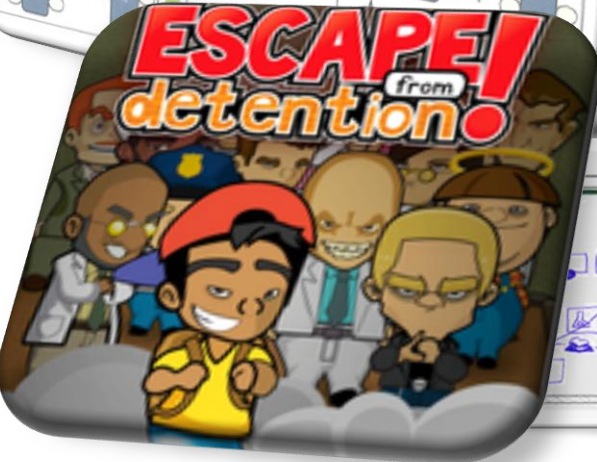
The exit is the escape. In different levels the door may be placed in different locations. Stickler to the teacher to make it harder.

we wireframes for every level and sublevel in our game. 50 of these drawings- CAN YOU DO IT?! Print them out and you want to create more storyboards!

- Invent
- Instruct
- Create/ Design



ESCAPE! from detention



Leave your desks, gather the right 2 ingredients (out of 3 or 4), light the Bunson burner (after passing the bully) and mix the chemicals creating 10 sec. of smoke, then escape.





Game Logic, Design, & Application



- Develop job related skills
- Escape more than 6,000 downloads nationwide





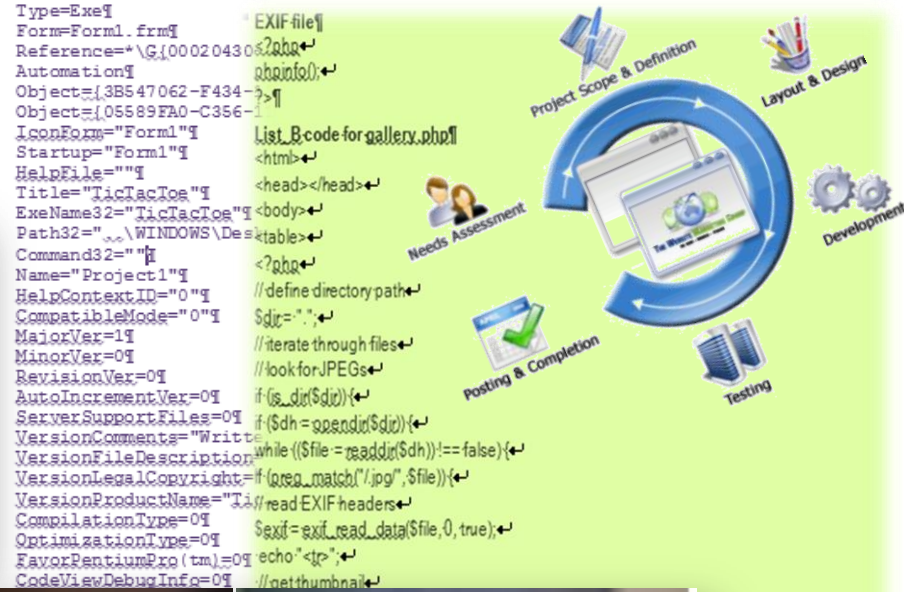
Game Logic, Design, & Application



Howard COUNTY Library SYSTEM

inform + instruct + interact = educate

- ✓ JavaScript
- ✓ HTML
- ✓ Python
- ✓ Andriano Coding for various projects



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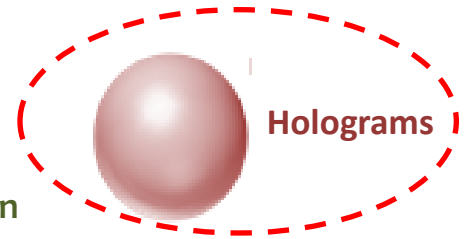
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Impact of Youth Input



Technology of Fashion



Holograms



Digital Media

- Internet Collaboration
- Website Design
- E-Publications
- More....

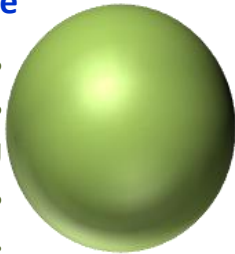


Games

- ✓ Logic/Design
- ✓ Play
- TBD Build/Prog Mgt
- More....

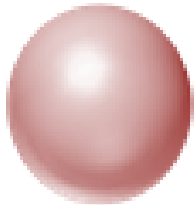
International Exchange

- Networking with Other Youths
- ✓ Youth in Other Countries
- International Digital Learning
- International Languages
- More.....



Goal

Authors/Evaluators/ Creators

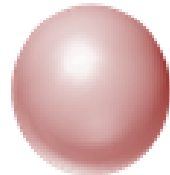


3D Design and Animation



Mobile Book Collections

- ✓ Mobile Apps
- ✓ Mobile Books
- More.....



NanoTechnology



Digital Music & Multimedia

- ✓ Digital Music Production
- ✓ Video Production
- More....

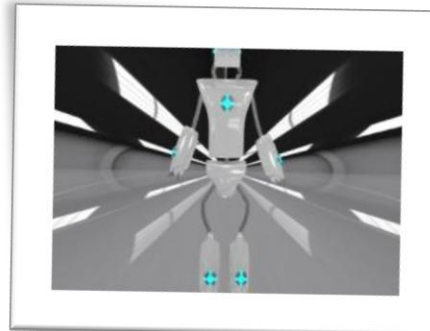
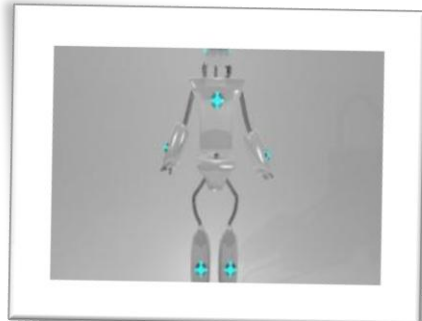
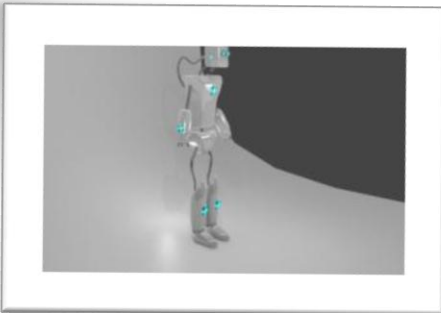
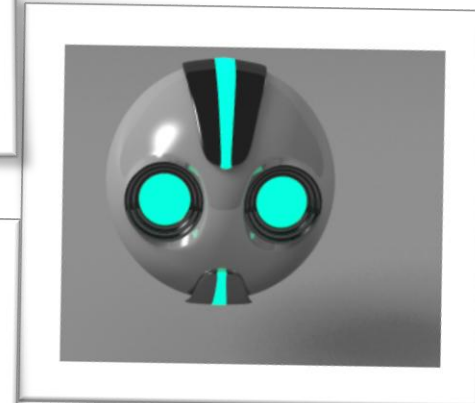
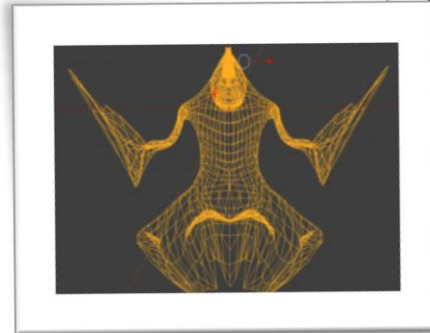
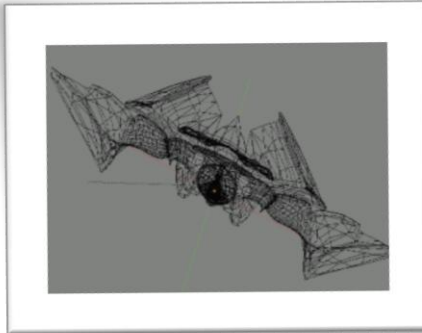
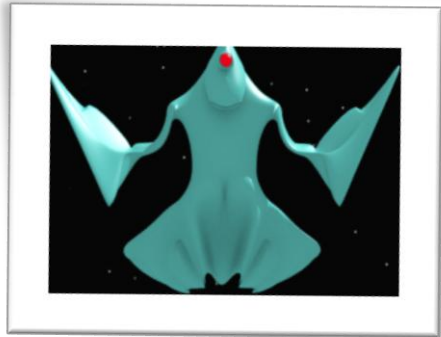
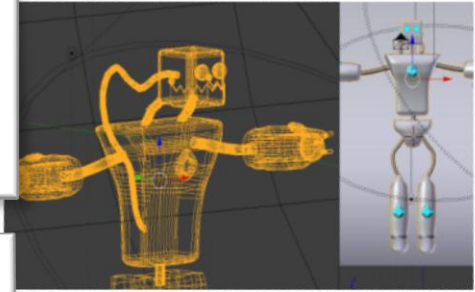
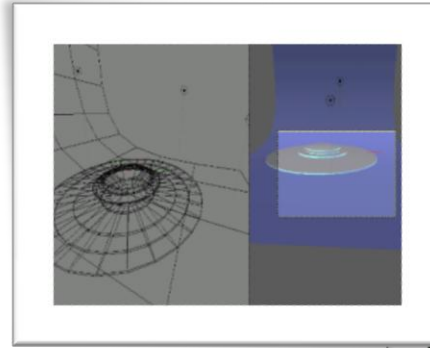
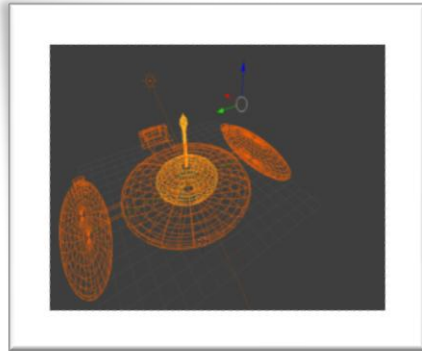
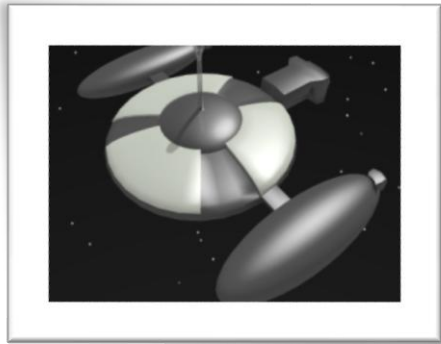


3D Design

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inform + instruct + interact = educate





Technology of Fashion



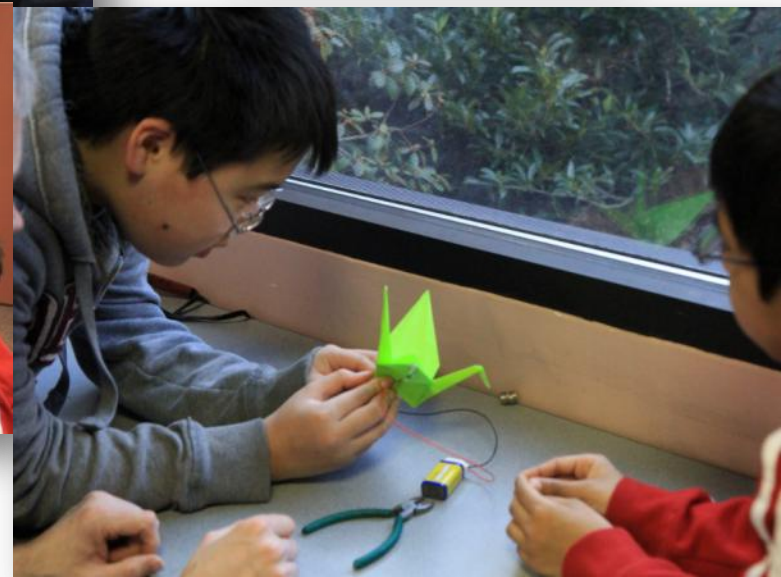
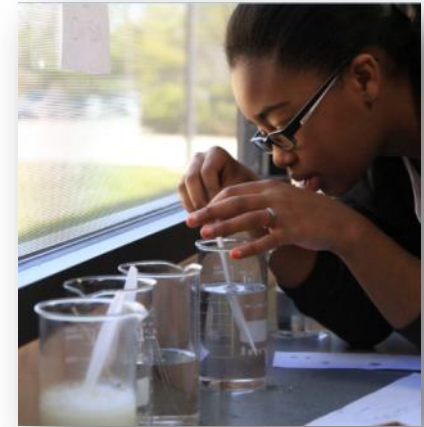
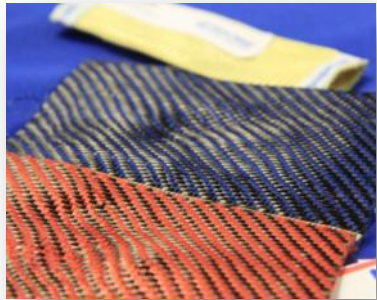


NanoTechnology



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HiTECH

Howard County Library System

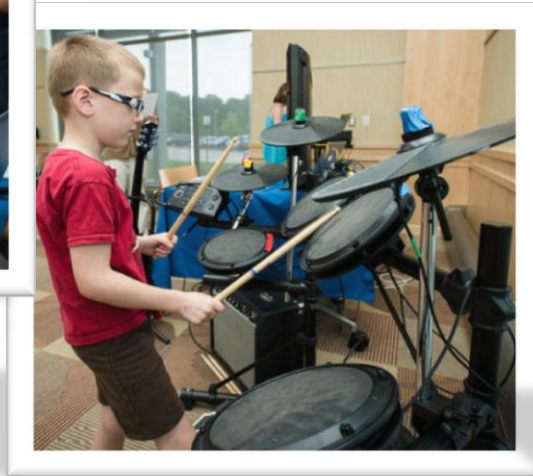
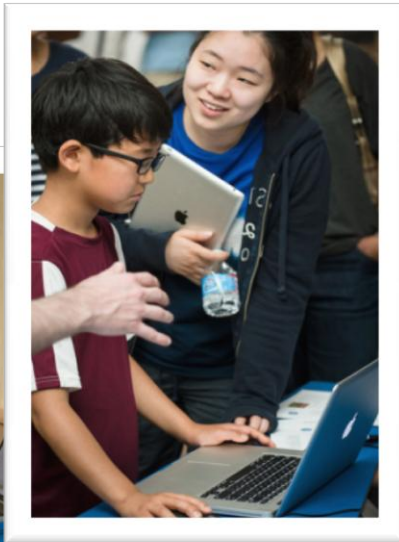
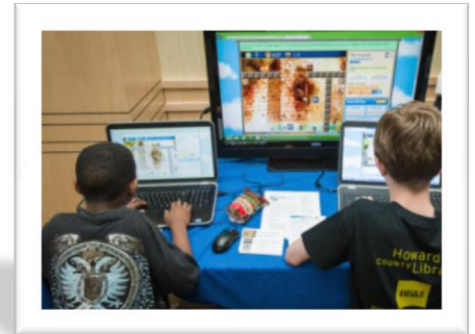
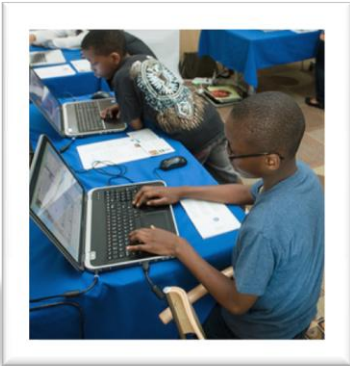
The Road to a STEM Career



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inform + instruct + interact = educate

Expo





Questions and Answers

Curriculum





Next....



- ✓ Creation of HiTech
- ✓ Focus: Our Curriculum
- ✓ **Youth Response: What Seems to Work**



Customer Response and Work Works

- ✓ Customer satisfaction
- ✓ Flexibility & responsiveness
- ✓ Great team of professionals who....
 - Possess capacity to embrace change
 - Think outside the box daily
 - Consistently deliver extraordinary customer service





Metrics



Total Number Days Open

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2012	1	1		1	1	1	4	5	9	12	10	10	55
2013	4	14	10	15	12	8	12	3					78
Total	5	15	10	16	13	9	16	8	9	12	10	10	133

Total Number of Visits By Teens (11 - 18 Years)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2012	52	41		41	44	35	137	149	206	318	177	149	1349
2013	53	227	213	396	245	215	588	94					2031
Total	105	268	213	437	289	250	725	243	206	318	177	149	3380

Based on Attendance: Primary Age Visiting HiTech is 11-15

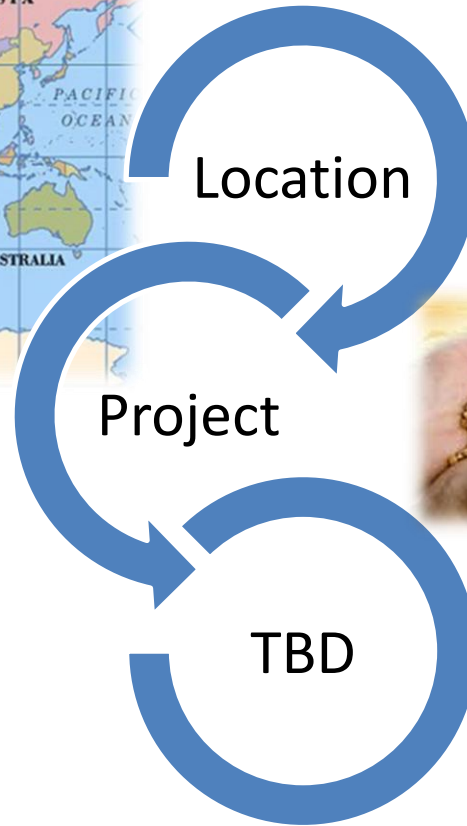


Flexibility - International



Howard
COUNTY Library
SYSTEM

inform + instruct + interact = educate





Flexibility - Curriculum

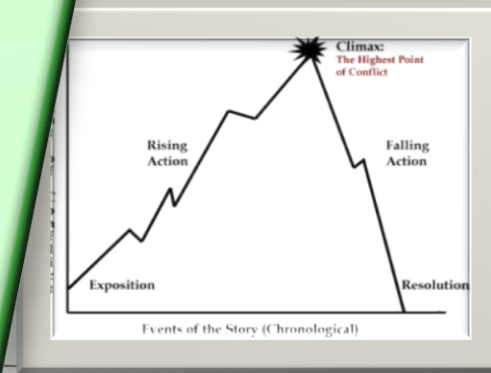


Howard
COUNTY Library
SYSTEM

inform + instruct + interact = educate



- Sign In
- Stories
- Settings
- Point of View
- Conflict Type
- Characters
- Theme
- Plot Elements
- Scenes
- Locations
- Audio Clips
- Movies





CHAPTERS OF CIVILITY



1

IMPORTANCE OF CIVILITY

It's important to be respectful to people because when you are respectful to others, people will respect you. When you are respectful, you are making the right choice, and making friends will be easier because people will see you as a good person. Being respectful can make someone happy, and make you a great role model.

-- Jordan



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Why is it important to be Civil?

1. To succeed in life
2. To know how to function in life, and teach others the correct way to act.
3. To avoid violence
4. In order to be involved in your community
5. In order to have a great career and live your dreams

-- Journee

Friends!
Funny
Trustworthy
 caring
 thatE for you
 please24
 Different
 awesome



Lorem ipsum dolor sit amet, ligula suspendisse nulla pretium, rhoncus tempor placerat fermentum, enim integer ad vestibulum volutpat.

Stop the bullying stand up to it! Stop those bullies don't just stand there stand up. About 53% of teenager commit suicide of bullying. For example there was this boy that was a fun playful kid. He was nice loving and friendly. He was getting bullied he was upset but strong. B basement dead.

Now those bystan



Dear Bullies,

I think I know why you bully other kids. It's to stop other kids from bullying you, so you mentally and/or physically bully other kids to make yourself popular or to make older or even younger kids stop teasing you. Sometimes you bully other kids just for the fun of it, well it's not fun for the victims, parents, or their friends. There's always a bystander and those bystanders should stand up for those victims of bullying! Then this issue would stop kids from not going to school or outside without getting embarrassed or hurt.

Sincerely,
Jihan

I'm My Own Bully

There are cuts and scars all over me,
From stress, frustration, and just one bully.
I've made it clear I'm not as happy
As I was before when I knew what to be.

I want to stand out, and make a change,
But there are so many things getting in the way.
I've stared at the mirror, not liking the view
Oh my god what am I going to do.

I feel I'm not worth it, or never good enough.



2

WAYS TO STOP BULLYING

A lot of bullying goes on in the world, and kids that could do better don't because people destroy their courage to speak up for themselves. Some people don't know the harm that bullying does, but it destroys lives and if you destroy people's lives you start



4

INSPIRATIONAL MESSAGES

Dear, depressed people

When you have problems (which I guarantee everybody will have) .With



3

CREATING A BETTER WORLD



Communication and PR



Class Listing

3D Animation Class

Learn how to create a 3D scene using Blender. In this series, learn how to model efficiently, tackle the user interface, manipulate objects, and create textures. all eight sessions; registration required.

Building Renewable Energy – Part 1

Learn about renewable energy. In small teams, build a custom designed turbine that actually generates electricity! Don't miss out on the fun. Ages 11-18. Registration required.

Create a Video Game and Participate in the National STEM Video Game Challenge!

Join the HiTech Video Game Team that will learn how to design and program video games to submit to the National STEM Video Game Challenge. The HiTech Team will meet six times to prepare for the game competition. Hosted by Joan Ganz Company, IMLS, and HCLS, the competition is sponsored by entertainment software association, Microsoft, AMD, and Hive. Registration required.

Green Earth Technology

Learn about environmental issues and how technology and nanotechnology are used to help solve them. Collaborate with other youth in the testing of nanotechnology-based products to develop your own solutions.

Create A Video Game



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Apr 1 - 5 Mon - Fri 9 am - 12 pm (Ho. Co. schools closed)

HiTech is supported in part by a grant from the John D. and Catherine T. MacArthur Foundation and IMLS. Visit hclibrary.org/hitech_events.

*Registration is required. [Register online](#) or by calling 410.880.5980.

Music Mashup



Create original music with your own instruments, our electronic equipment, or existing sound tracks to create a musical selection. Don't miss out on the fun! The Music MashUp group will create and record an original song. Ages 11-18. Registration required.

Apr 1 - 5 Mon - Fri 9 am - 12 pm (Ho. Co. schools closed)

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Mobile Game



Join the HiTech Mobile Game Design Team that will conceptualize and design a mobile game app, as well as create sound effects. The HiTech Team will meet seven times to create the game and sounds. The seventh session will be scheduled after the preliminary design is completed. Ages 11-18. Registration required.

Apr 1 - 5 (Mon - Fri) 9 am - 12 pm (Ho. Co. schools closed)

April 25 (Thu) 9 am - 12 pm (Ho. Co. schools closed)

Session #7 TBD

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(1) 5-7 video game entries into National Competition

(1) Listing of tested green technologies to improve environment and listing of priority



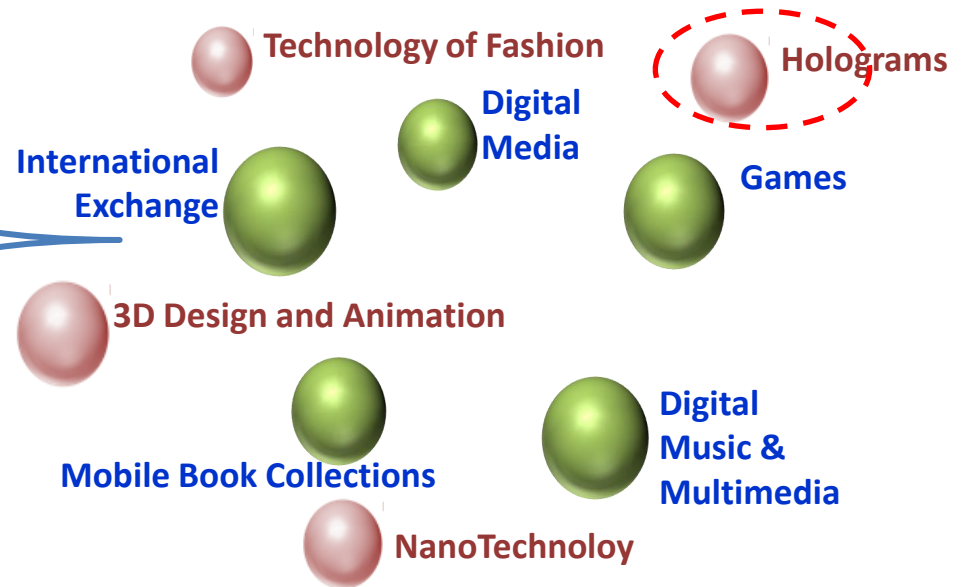
Instructors and Staff

• HiTech Team

- STEM Instructors
- Receptionist
- Support Personnel
- Interns and Volunteers
- Leverage Organizational Resources
- Leverage Partners
- Evaluation and Development Person

• Instructor Qualifications

- Needed skill set
- Passionate
- History of working with youth
- Flexible
- Ability to think outside the box!





Where Teens and Technology Meet: *Engaging teens with digital media*

THANK YOU FOR YOUR TIME!

Links to View Students' Thoughts About HCLS' HiTech

HCLS HiTech STEM Lab - 3D Robot Rendering http://www.youtube.com/watch?v=QyD_ZgDPL1Y

HCLS HiTech STEM Lab - Nanotechnology <http://www.youtube.com/watch?v=cJshQdJxnkc>

HCLS HiTech STEM Lab - Awesome! <http://www.youtube.com/watch?v=6uJ3A9I2hA4>

HCLS HiTech STEM - I Feel Kinda Famous http://www.youtube.com/watch?v=xmRe3_rDmVo

HCLS HiTech STEM Lab - Win a Scholarship-if the President Plays <http://www.youtube.com/watch?v=icXhB7gyJ2w>

HCLS HiTech STEM - Subtly Point That Out To My Friends <http://www.youtube.com/watch?v=lpMw6Ep2CSU>

***Links are also provided on
WebJunction event page***



Questions and Answers