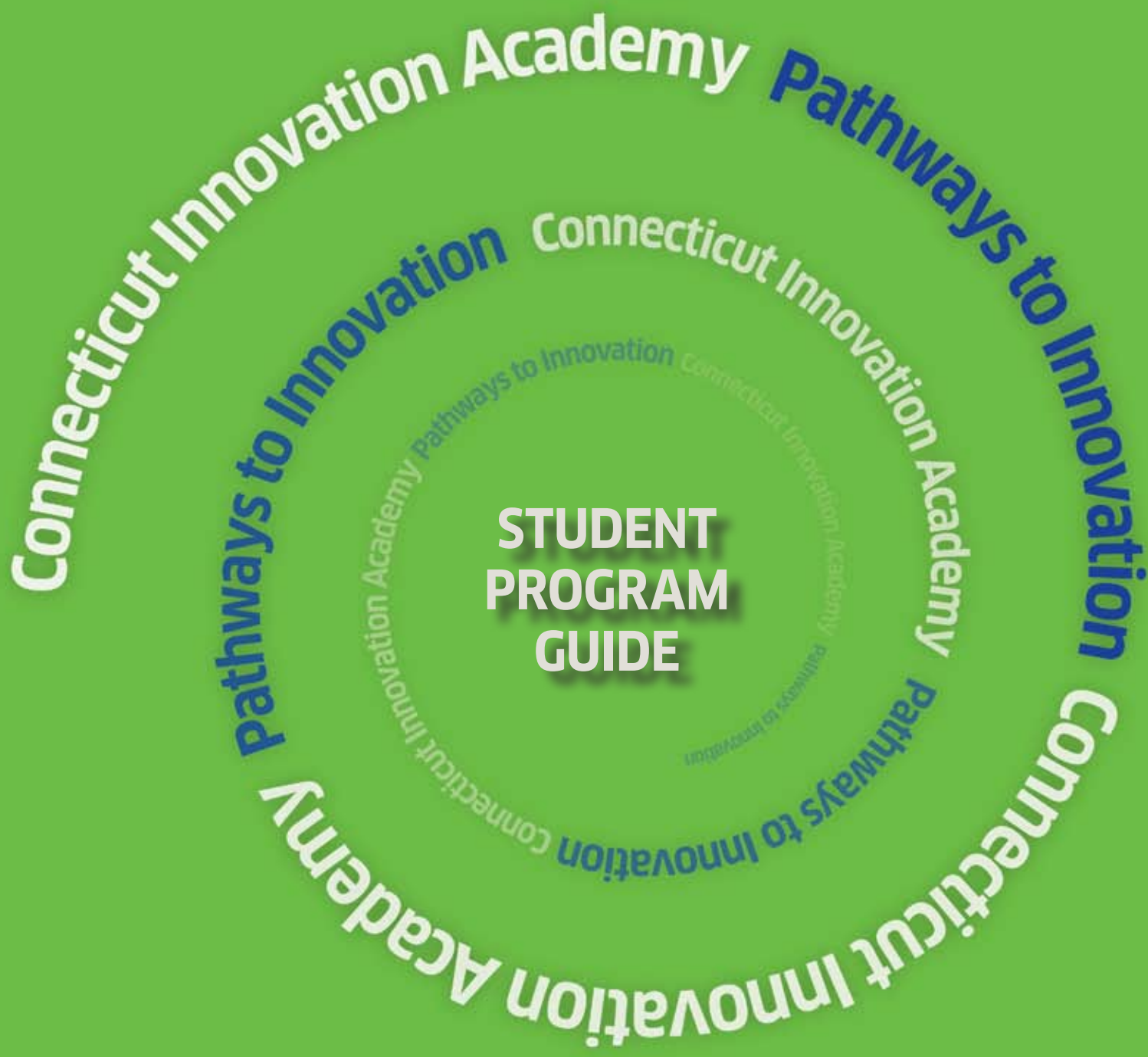
CT ★ STUDENT INNOVATION EXPO

'08–'09
Participant

STUDENT PROGRAM GUIDE



"Connecticut's Energy Vision for a Cleaner, Greener State is focused on lowering prices for consumers, the state becoming less reliant on foreign energy, fostering the use of environmentally sound technology, and making this state a center for economic development and technological innovation in the energy sector."

~Connecticut Governor M. Jodi Rell

CT's Energy Vision
For a Cleaner, Greener State

Welcome to the Connecticut Innovation Academy!

The Center for 21st Century Skills @ EDUCATION CONNECTION, in collaboration with Connecticut Career Choices (CCC), Connecticut Pre-Engineering Program, and the Connecticut College of Technology, is pleased to announce the 2008–2009 Connecticut Innovation Academy, a program to prepare students for success in 21st century Science, Technology, Engineering, and Math (STEM) careers. The Connecticut Innovation Academy, formerly known as the IT Leadership Academy, is a Connecticut State Department of Education interdistrict program, and a major component of the Connecticut Office for Workforce Competitiveness/CCC initiative. This workforce-development project demonstrates how students improve academic performance through the use of technology in a context that promotes diversity, collaboration, and 21st century skills.

The Connecticut Innovation Academy (CTIA) develops academic skills and 21st century career skills through the completion of the *Innovation Challenge*. Each school team, consisting of at least one teacher and six students, is challenged to develop a computer-based learning game that teaches the concept of sustainable energy and/or environmental responsibility. Throughout the school year, student teams learn about gaming technologies and environmental energy concerns as they develop mock companies and assume positions in each company to complete the challenge. Each student documents the work in an individual ePortfolio that demonstrates the variety of skills developed and artifacts produced during the program. Students compete for awards and recognition as they present their ideas and projects to a panel of business professionals and higher-education faculty, online and at the Connecticut Student Innovation Expo. The Expo will be held May 8–9, 2009, at the Connecticut Convention Center in Hartford, CT.

All CTIA students and teachers have access to a password-protected online learning environment available via the Connecticut Education Network. The CCC Web site (http://ctcconline.org) supports CTIA participants and facilitates the completion of the Innovation Challenge.

CTIA is sponsored by CCC and the Connecticut Office for Workforce Competitiveness. CCC engages Connecticut middle and high school students in a variety of stimulating courses in order to promote interest in 21st century STEM careers.

CCC Course Web Site

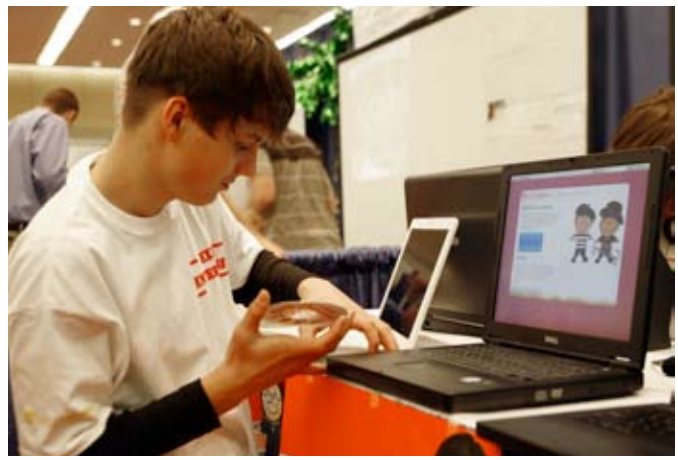
The CCC course Web site
is the online learning environment
for all CTIA students:

http://ctcconline.org

THE INNOVATION CHALLENGE

"The success of complex video games demonstrates games can teach higher order thinking skills such as strategic thinking, interpretative analysis, problem solving, plan formulation and execution, and adaptation to rapid change."

(Federation of American Scientists. "Harnessing the Power of Video Games for Learning." Washington, DC: National Summit on Educational Games, 2006.)



accept the challenge	This year's program challenges Connecticut Innovation Academy students to develop a computer-based learning game that teaches a concept related to sustainable energy and/or environmental responsibility.
research	Students brainstorm and research ideas from a broad range of environmental topics. (See page 3.) Students also investigate case studies of computer learning games developed by professional game companies and case studies of companies who have taken steps to "go green."
develop	After researching domain names and validating ideas online, each student team forms a mock company and authors a white paper that describes the components of the computer learning game and its relationship to the chosen environmental topic.
design	After developing and refining their solutions, teams generate interest in their solutions via the World Wide Web (WWW) by designing motivating marketing material, such as animations, computer simulations, jingles, print advertisements, and video commercials.
present	Each team presents its solution to the Innovation Challenge in three different venues for evaluation by a panel of business professionals and higher-education faculty. First, they post a company Web site on our Internet server for online evaluation. Second, they create an interactive exhibition booth at the Connecticut Student Innovation Expo, May 8–9, 2009, at the Connecticut Convention Center. Finally, they deliver a 5-minute oral presentation to demonstrate their innovative solutions.

REQUIRED ELEMENTS

Each team's computer game content must focus on at least one environmental issue. Suggestions include, but are not limited to, the following topics.

Biofuel vs. Petroleum Fuel	Energy Conservation
Clean Air	Local Environmental Action
Clean Water	Redevelopment of Brownfields
Climate Change	Renewable/Sustainable Energy
Effect on Ecosystems	Waste and Recycling

Company Identity: Each team forms a mock company, assigns game development and research responsibilities, and develops a company identity that includes the following components.

- ❑ Company Name and Profile
- ❑ Company Slogan
- ❑ Company Logo
- ❑ Company Organizational Chart
- ❑ Company Employees' Resumes, Job Descriptions, and ePortfolios

White Paper: Each team develops a computer game that teaches a specific environmental concept that is described in detail in a white paper and includes the following elements.

- ❑ Narrative Description of the Game
- ❑ Research & Development Citations
- ❑ Domain Name Search Validation
- ❑ Market Test and Evaluations
- ❑ Business and/or Educational Service
- ❑ Game Info, Features, Characteristics
- ❑ Game Technical Specifications

Company Web Site: Each team's Web site applies and documents the research, problem-solving activities, and critical-thinking skills used to design, plan, and produce the learning game. In addition, teams insure that the following items have been completed.

- ❑ Browser Compatibility Check
- ❑ Platform Compatibility Check
- ❑ Plug-in Notification Posted
- ❑ Posted on the WWW on ctexpo.org Server

Game Prototype: Each team develops a working prototype of the computer game that is accessible via the team Web site and playable on both Macintosh and Windows operating systems. Include the following elements.

- ❑ Concept Map of Game Components
- ❑ Browser-based Game Demo
- ❑ Game Download with One or More Levels
- ❑ Compatible with BOTH Mac and Windows OS
- ❑ Game Rating: Everyone 10+ <http://www.esrb.org/ratings/ratings_guide.jsp>

Marketing Materials: Each team designs and develops marketing materials to present the computer game via the team's Web site. Include the following components.

- ❑ Company Web Site
- ❑ Game Specifications Page
- ❑ Market Test Results
- ❑ Computer Game Advertising Jingle
- ❑ Computer Game Magazine Advertisement
- ❑ Computer Game Animation Commercial
- ❑ Computer Game Video Commercial

ePortfolio: Each student's ePortfolio documents the research, problem-solving activities, and multimedia development used to design, plan, and produce the computer learning game. Each ePortfolio also documents the student's individual activities during the project and should contain digital files, digital photographs, research citations, digital video, and personal reflection about the work.

AWARDS/EVALUATION CRITERIA

Awards and Recognition

CTIA students are recognized for outstanding performance in a variety of categories.

Outstanding Team Player
Outstanding Team Leader
Outstanding Web Site Design
Outstanding Exhibition Booth
Outstanding Game Design
Outstanding Marketing Elements
Outstanding ePortfolio
Outstanding White Paper
Outstanding Oral Presentation
Battelle Business Innovation Prize
CCC Internship Award
ITLA/CTIA Alumni Leadership Award

Evaluation Criteria: A panel of distinguished business professionals and higher-education faculty will use the following criteria to evaluate participants at the Connecticut Student Innovation Expo.

Elements	Extraordinary	Above Average
Content	abundance of relevant material properly cited and clearly related to the Innovation Challenge; engaging presentation uses a wide variety of multimedia content	sufficient information properly cited and related to the Innovation Challenge; many good elements, but an uneven balance; presentation uses some multimedia content
Coherence and Organization	exhibition and presentation are organized and well-developed; specific materials illuminate a unique solution; presentation content flows together with a good variety of relevant materials	exhibition and information are presented in logical order; generally well-connected, but not captivating to the viewer; content presented with some variety in format of materials
Creativity	unique presentation of ideas and materials; the unexpected element is used to full advantage, capturing audience's attention; effective variety of elements and layout	original presentation of ideas; nice variety of materials and media, but audience is not sincerely captivated or engaged
Marketing Materials	engaging marketing materials create a unique, cohesive brand identity; materials are accessible on the WWW (online and downloadable) and include all the required elements	brand identity created by marketing materials is not uniquely original; materials are accessible on the WWW (online, but not downloadable) and include all the required elements
Oral Presentations	business casual dress; poised; clear articulation; proper volume; steady speaking rate; proper posture and eye contact; confident and enthusiastic presentation with team participation and support	business casual dress; acceptable articulation and presentation, but not quite polished or enthusiastic; some fumbling and minor distractions; some team participation and support

Student Behavior and Performance Expectations

'08–'09 Connecticut Innovation Academy Interdistrict Grant Program

Connecticut Innovation Academy students are expected to achieve a high level of success in *Academic Performance, Behavior, Project Participation/Performance,* and *Technology Use.*

Academic: Students must maintain a C average or above at school and have a minimum 90% attendance record. Successful performance in school and in the Connecticut Innovation Academy (CTIA) is a major goal for students.

Behavior: Students must demonstrate acceptable behavior at school and at course meeting sites. Appropriate and exemplary behavior in school and in the CTIA program is a major goal for students.

Performance: Students are expected to perform to the best of their abilities at all times. One of the most important CTIA goals is to prepare students for the world of work. Therefore, all students will be held to the same standards of performance as employees in a workplace.

Technology: Students are expected to adhere to the Acceptable Use Policy of their schools during all CTIA activities. Equipment provided to CTIA students and teachers is for the expressed purpose of completing course activities and projects. Any breach in the Acceptable Use Policy may result in suspension or termination from the program.

DRESS CODE: Connecticut Innovation Academy students are expected to dress in *business casual attire* appropriate for a business environment. Students are expected to follow the dress code as detailed in the Business Casual Article during all program activities and meetings. Specifically:

- All students are expected to present a neat and clean appearance during program activities and meetings.
- No hats or inappropriate t-shirts may be worn during program activities or meetings.

EXPECTED CONDUCT: Appropriate conduct is expected of all CTIA students. Mutual respect for all program participants ensures an atmosphere that fosters creativity, collaboration, and participation.

Student responsibilities include, but are not limited to

- attending all scheduled classes and scheduled meetings;
- performing duties to the best of one's ability at all times;
- observing all fire and safety rules; and
- refraining from any and all acts of intimidation or violence against property and/or people.

DISCIPLINE: Teachers and the Program Director will closely monitor the attendance and performance of all CTIA students. If it is determined that a student is displaying problems in any of the above areas, disciplinary actions may result, including a verbal warning, a written warning, and/or suspension or termination from the program.

The student, parent, and teacher have read, understand, and agree to adhere to the Student Behavior and Performance Expectations of the Connecticut Innovation Academy. Your signature* indicates acceptance of these terms.

*Each student will receive a copy of this agreement to be signed and returned.

EXPO 2009 DISPLAY GUIDELINES

CT Student Innovation Expo Display Guidelines

To insure a safe and enjoyable experience and public exposition for all participants, student projects and displays must adhere to the following guidelines. If the CT Student Innovation Expo or CT Convention Center management considers the presence or operation of any equipment or material to be dangerous or unsafe, it shall have the right to prohibit or remove such equipment or material from the exposition.

1. An 8’ x 10’ x 8’ exhibition booth will be provided with a 3’ x 6’ table and 2 chairs. All displays must fit within the 8’ x 8’ x 8’ display space of the booth. No aspect of the display will be permitted outside or above the boundaries of the booth.

2. Projects, presentations, or exhibition booths may not display or involve the following at any time:
   - Blood products, fresh tissue, teeth, or bodily fluids
   - Nonhuman vertebrate animals or their parts
   - Pathogenic agents
   - Recombinant DNA
   - Carcinogenic or mutagenic chemicals
   - Compressed gas (including, but not limited to, CO_2)
   - Controlled substances
   - Explosive chemicals
   - Hazardous substances or devices (including, but not limited to, BB guns, paint ball guns, potato cannons, air cannons, knives or other sharp objects)
   - High-voltage equipment
   - Toxic chemicals
   - Lasers (any strength)
   - Ionizing radiation X-rays or nuclear energy
   - Radioactive materials

3. Glass bottles and lab ware, either empty or containing any substance, are prohibited from all displays and must be replaced by break-resistant containers.

4. Mercury thermometers are prohibited from displays.

5. Drugs, over-the-counter medications, antibiotics, and vitamins are prohibited from displays.

6. The operation of high-pressure vessels and pressurized systems is not permitted.

7. No open flame, torch, or burner is permitted in the display area.

8. No food or candy of any kind may be displayed or distributed.

The Connecticut Student Innovation Expo
www.ctexpo.org

Throughout the Expo you will see exciting demonstrations of innovative, technology-driven activities that include creative problem solving, digital media, science research, Web site design, and imaginative, interactive project displays. The energetic student presenters will explain and present their work to distinguished representatives from our business-sector and higher-education partners. Projects will be judged and awards given in several categories as detailed on page 4 of this guide.

Friday, May 8th

	9:00 a.m.	10:00 a.m.	11:00 a.m.	12:00 p.m.	1:00 p.m.	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.
TSA	**TSA** Opening Ceremony	**TSA: Ongoing Competitions**				***TSA Awards Ceremony***			
CCC							**CCC** Exhibition Booth Set-up		

Saturday, May 9th

	8:00 a.m.	9:30 a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.	11:30 p.m.	12:00 p.m.	12:30 p.m.	1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.
CCC	CT EXPO *Business Breakfast*	CT EXPO *Opening Ceremony*	**CCC: Exhibitions**				*Student Lunch* Cyber Cafe						***CCC Awards Ceremony***
			CCC: Ongoing Competitions for CTIA, E-Commerce, Biotechnology, CTASR, and Foundations of Health Science and Technology										
CPEP			**CPEP: Ongoing Competitions**								***CPEP Awards Ceremony***		
					Student Lunch Cyber Cafe								
PLTW			**PLTW: Capstone Presentations**				*Student Lunch* Cyber Cafe		***PLTW Awards Ceremony***				

MONTHLY MEETING SCHEDULE

September

September 26: 9 AM to 1 PM—Field trip to IBM Southbury Conference Center for **Group A** Schools: Hartford Pathways HS, Hartford Weaver HS, New Britain HS, Region 1 HVRHS, Plymouth Terryville HS, Simsbury HS, Thomaston HS, Waterbury Crosby HS, Waterbury Kennedy HS, Woodstock Academy

October

October 3: 9 AM to 1 PM—Field trip to IBM Southbury Conference Center for **Group B** Schools: Bethel HS, Brookfield HS, Fairfield Warde HS, New Haven Hill Regional, New Haven Scholars Academy, New Fairfield HS, New London STMHS, Newtown HS, Region 9 JBHS, Region 15 PRHS

November

November 7: 9 AM to 1 PM—Field trip to IBM Southbury Conference Center for **Group A** Schools: Hartford Pathways HS, Hartford Weaver HS, New Britain HS, Region 1 HVRHS, Plymouth Terryville HS, Simsbury HS, Thomaston HS, Waterbury Crosby HS, Waterbury Kennedy HS, Woodstock Academy

November 14: 9 AM to 1 PM—Field trip to Connecticut College of Technology Campus for **Group B** Schools: Bethel HS, Brookfield HS, Fairfield Warde HS, New Haven Hill Regional, New Haven Scholars Academy, New Fairfield HS, New London STMHS, Newtown HS, Region 9 JBHS, Region 15 PRHS

December

December 5: 9 AM to 1 PM—Field trip to Connecticut College of Technology Campus for **Group A** Schools: Hartford Pathways HS, Hartford Weaver HS, New Britain HS, Region 1 HVRHS, Plymouth Terryville HS, Simsbury HS, Thomaston HS, Waterbury Crosby HS, Waterbury Kennedy HS, Woodstock Academy

December 12: 9 AM to 1 PM—Field trip to Connecticut College of Technology Campus for **Group B** Schools: Bethel HS, Brookfield HS, Fairfield Warde HS, New Haven Hill Regional, New Haven Scholars Academy, New Fairfield HS, New London STMHS, Newtown HS, Region 9 JBHS, Region 15 PRHS

January

January 9: 9 AM to 1 PM—Field trip to IBM Southbury Conference Center for **Group B** Schools: Bethel HS, Brookfield HS, Fairfield Warde HS, New Haven Hill Regional, New Haven Scholars Academy, New Fairfield HS, New London STMHS, Newtown HS, Region 9 JBHS, Region 15 PRHS

January 16: 9 AM to 1 PM—Field trip to Connecticut College of Technology Campus for **Group A** Schools: Hartford Pathways HS, Hartford Weaver HS, New Britain HS, Region 1 HVRHS, Plymouth Terryville HS, Simsbury HS, Thomaston HS, Waterbury Crosby HS, Waterbury Kennedy HS, Woodstock Academy

February

February 6: 9 AM to 1 PM—Field trip to IBM Southbury Conference Center for **Group A** Schools: Hartford Pathways HS, Hartford Weaver HS, New Britain HS, Region 1 HVRHS, Plymouth Terryville HS, Simsbury HS, Thomaston HS, Waterbury Crosby HS, Waterbury Kennedy HS, Woodstock Academy

February 13: 9 AM to 1 PM—Field trip to Connecticut College of Technology Campus for **Group B** Schools: Bethel HS, Brookfield HS, Fairfield Warde HS, New Haven Hill Regional, New Haven Scholars Academy, New Fairfield HS, New London STMHS, Newtown HS, Region 9 JBHS, Region 15 PRHS

March

March 6: 9 AM to 1 PM—Field trip to IBM Southbury Conference Center for **Group B** Schools: Bethel HS, Brookfield HS, Fairfield Warde HS, New Haven Hill Regional, New Haven Scholars Academy, New Fairfield HS, New London STMHS, Newtown HS, Region 9 JBHS, Region 15 PRHS

March 13: 9 AM to 1 PM—Field trip to Connecticut College of Technology Campus for **Group A** Schools: Hartford Pathways HS, Hartford Weaver HS, New Britain HS, Region 1 HVRHS, Plymouth Terryville HS, Simsbury HS, Thomaston HS, Waterbury Crosby HS, Waterbury Kennedy HS, Woodstock Academy

April

April 3: 9 AM to 1 PM—Field trip to IBM Southbury Conference Center for **Group B** Schools: Bethel HS, Brookfield HS, Fairfield Warde HS, New Haven Hill Regional, New Haven Scholars Academy, New Fairfield HS, New London STMHS, Newtown HS, Region 9 JBHS, Region 15 PRHS

April 17: 9 AM to 1 PM—Field trip to IBM Southbury Conference Center for **Group A** Schools: Hartford Pathways HS, Hartford Weaver HS, New Britain HS, Region 1 HVRHS, Plymouth Terryville HS, Simsbury HS, Thomaston HS, Waterbury Crosby HS, Waterbury Kennedy HS, Woodstock Academy

EXPO DEADLINES

Monday, May 4:
by 5 PM
Post completed CTIA team Web site to the ctexpo.org server.

Friday, May 8:
3 PM to 6 PM
Exhibition Booth Set-up
6 PM to 8 PM
Connecticut Student Film Festival

Saturday, May 9:
9 AM to 4 PM
CT Student Innovation Expo Awards Ceremony and Public Viewing

www.ctexpo.org

PROGRAM PARTICIPANTS

Participating School Districts

Bethel HS
Brookfield HS
Fairfield Warde HS
Hartford Pathways HS
Hartford Weaver HS
New Britain HS
New Fairfield HS
New Haven Hill Regional HS
New Haven Scholars Academy
New London STMHS
Newtown HS
Plymouth Terryville HS
Region 1 HVRHS
Region 9 JBHS
Region 15 PRHS
Simsbury HS
Thomaston HS
Waterbury Crosby HS
Waterbury Kennedy HS
Woodstock Academy

Program Partners

Albert Schneider
Senior Delivery Project Executive
ECM Program, IBM Global Services
www.ibm.com

The Center for 21st Century Skills
@ EDUCATION CONNECTION
www.skills21.org

Connecticut College of Technology Regional Center for Next Generation Manufacturing
www.nextgenmfg.org

Connecticut Education Network
www.cen.ct.gov

Connecticut Pre-Engineering Program
www.cpep.org

Connecticut State Department of Education
www.state.ct.us/sde

EDUCATION CONNECTION
Regional Educational Service Center
www.educationconnection.org

The Office for Workforce Competitiveness
www.ct.gov

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Connecticut Career Choices is an initiative funded and implemented by the Connecticut Office for Workforce Competitiveness. <http://ctcareerchoices.org>

The Connecticut Innovation Academy is funded in part through grants from the National Science Foundation Advanced Technology Education, grant #0402494 and grant #0703011.

The Connecticut Innovation Academy is funded in part through an interdistrict grant from the CT State Department of Education, grant #09-242-10.

Publication Notes

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"We cannot solve our problems with the same thinking we used when we created them."

~Albert Einstein

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