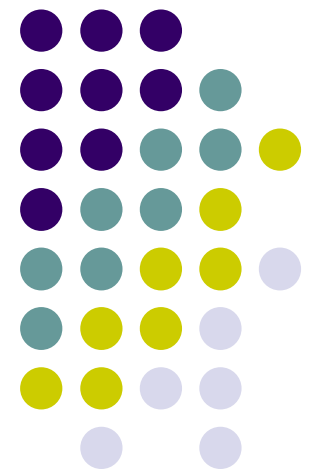


Building Learning Communities Conference 2011

The Global STEM Classroom

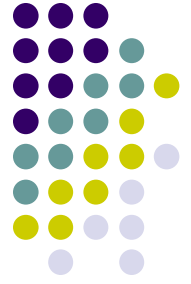
*GTEC Global Technology &
Engineering Consortium*





GTEC

**Educating students who can
succeed in a *flat and diverse globe***

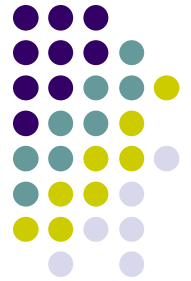


Leadership Team

- **Larisa K. Schelkin**, Founder & Concept Author, CEO & President
- **Annamaria Pisari Schrimpf** Director of Educational Technology, Winchester Public Schools
- **Isa Kaftal Zimmerman**, Principal, IKZ Advisors, former Superintendent of Schools

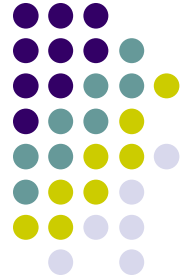
Topics for today:

Part one: All about GTEC

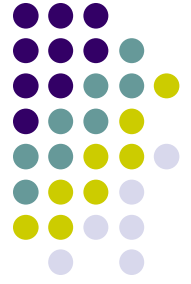


- **Global Virtual STEM (Science, Technology, Engineering, Math) Classroom concept & background**
- **Global Diversity, Global Teamwork/Intercultural Communication**
- **Pilot 2010-2011**
- **Advisory Board**
- **How your school can participate**

The challenge

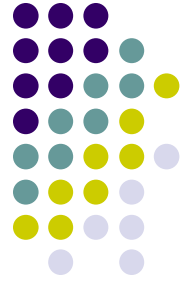


In today's global engineering market, engineers work in international teams & some experience difficulties in communication, relationships & understanding across different cultures.



Learning in the future

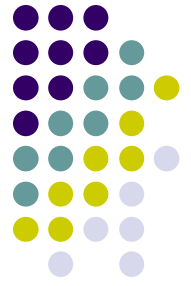
- **“A learning environment that moves with us”
or, “classrooms without walls”**
- **Digital content**
- **One to one device to learner/teacher**
- **Online and hybrid environments**
- **Everyone is a teacher**
- **What we cannot yet imagine**



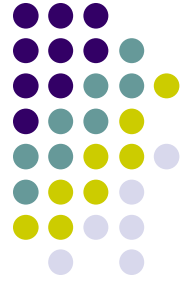
Global diversity education

- **Working effectively /managing across cultures**
- **Using advanced communication technology for global engineering/ technology/science projects**
- **Developing a knowledge base for global engineering/ technology/science corporations**

Diversity Skills Needed for Working Globally (in the GTEC Program)



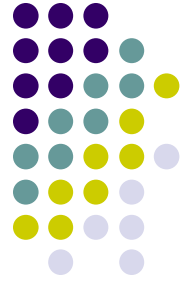
- **Examining one's own beliefs & assumptions about differences and stereotypes**
- **Ability to take cultural differences into consideration while participating in a project & building multicultural team**
- **Examining one's personal values & their impact on one's actions, reactions, & perceptions**



And

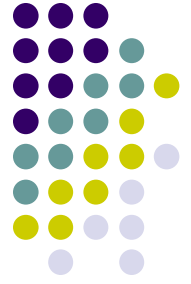
- **Developing various communication styles; verbal & non-verbal communication; contextual communication; native vs. foreign language**
- **Mindful consideration of cultural & stylistic differences**
- **Productive functioning of the global/virtual multicultural team while it works on designing/producing the final engineering product**

The pilot year



To develop & use authentic international engineering/ technology/science projects for teams of secondary school students

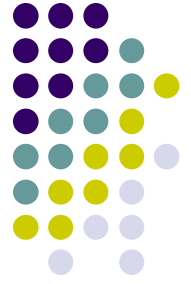
To pilot diversity curriculum



Year One Partners

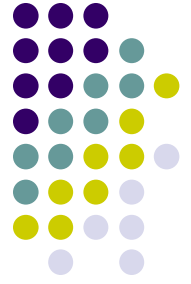
- **Franklin Olin College of Engineering (Needham, MA)**
- **Spirit of Knowledge Public Charter School (Worcester, MA)**
- **Haywood College of Engineering (Stoke-on-Trent, UK)**
- **Keele University (UK)**
- **Newburyport HS (MA)**

Topics for today: Part two



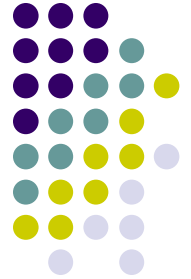
- **21st Century Skills Needed for Working Globally
(in GTEC Program)**

21st century skills.1



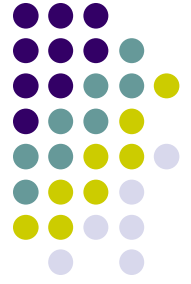
Learning & Innovation Skills
Creativity & Innovation
Critical Thinking & Problem Solving
Communication & Collaboration

21st century skills.2



Life & Career Skills Information Literacy

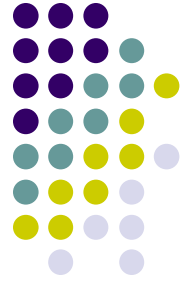
21st century skills.3



Media Literacy

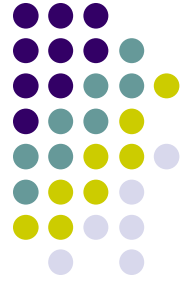
ICT Literacy

Global Awareness



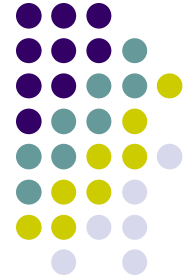
What lessons were learned?

- **Enjoyed collaborating across the globe.**
- **Influenced thinking about a future career, a indicated STEM a possibility.**
- **Learning communication and design technology required direct instruction**
- **Needed how to learn virtually**
- **Needed 1:1 technology**



Sources

- **Tatyana Fertelmeyster, Connecting Differences, a consultant to GTEC**
- **Partnership for 21st Century Skills**
<http://www.p21.org/index.php>...see newly published Common Core Toolkit



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