

STEM and Ursuline Education



Ursuline Educational Services, October 2012

Ursuline  VALUES·VOICE·VISION

Ursuline Spirit



**“Institutions are
projections of what
goes on in the human
heart.”**

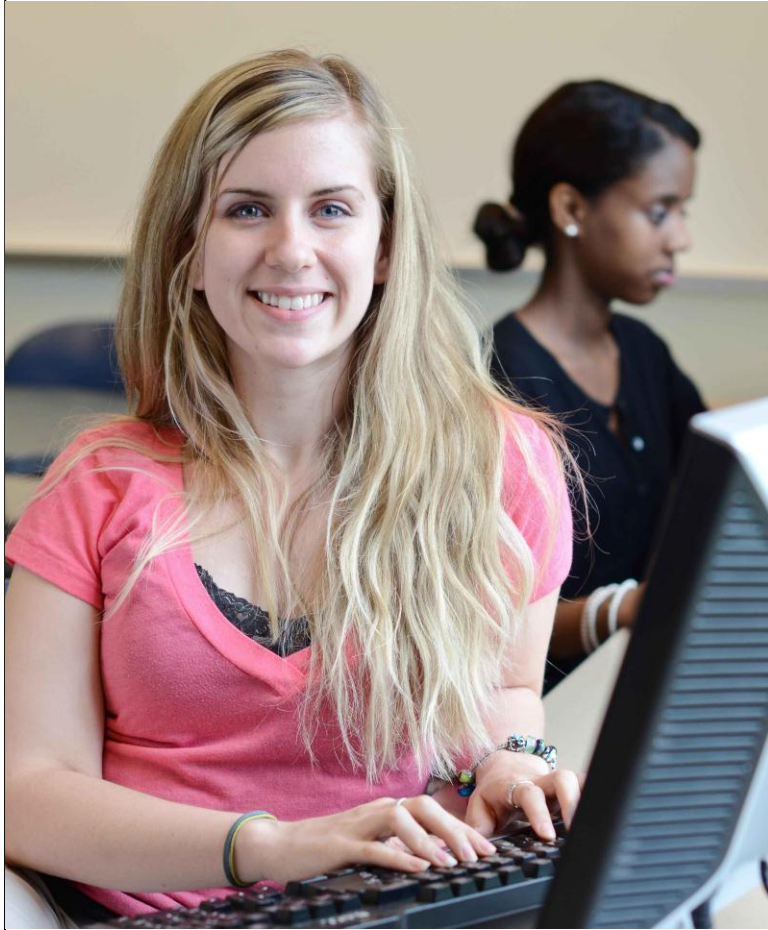
• Parker Palmer

STEM Experiences



- **Personal Reflections**
 - Most memorable STEM class
 - Most outstanding STEM teacher
 - Learning from experience

Technology Today



- Impact of Technology
 - Computers, cell phones, PDA, laptops, iPods, MP3 players, iPhone, iPads, skype
- Value of Technology
 - Listening
 - Feedback
 - Collaboration: sharing
 - Constructive Learners: content creators
 - Information

Women in STEM Areas



- Why women aren't interested?
- What can we do to encourage interest?
- What are you doing?

Research Results



- **U of Colorado**
- **Ohio State U**
- **U of Hawaii**
- **U of Texas – Austin**
- **Norfolk State U**

Impact of an Ursuline Education



- We are **all educators, teachers** – no matter what job or task we do.
- How does the Ursuline approach to education impact STEM

What does it mean to be an Ursuline Educator



- Basic Assumptions
- Aims
- Reglements
- Essential Elements
- Characteristics
- Implications

Basic Assumptions of an Ursuline Education



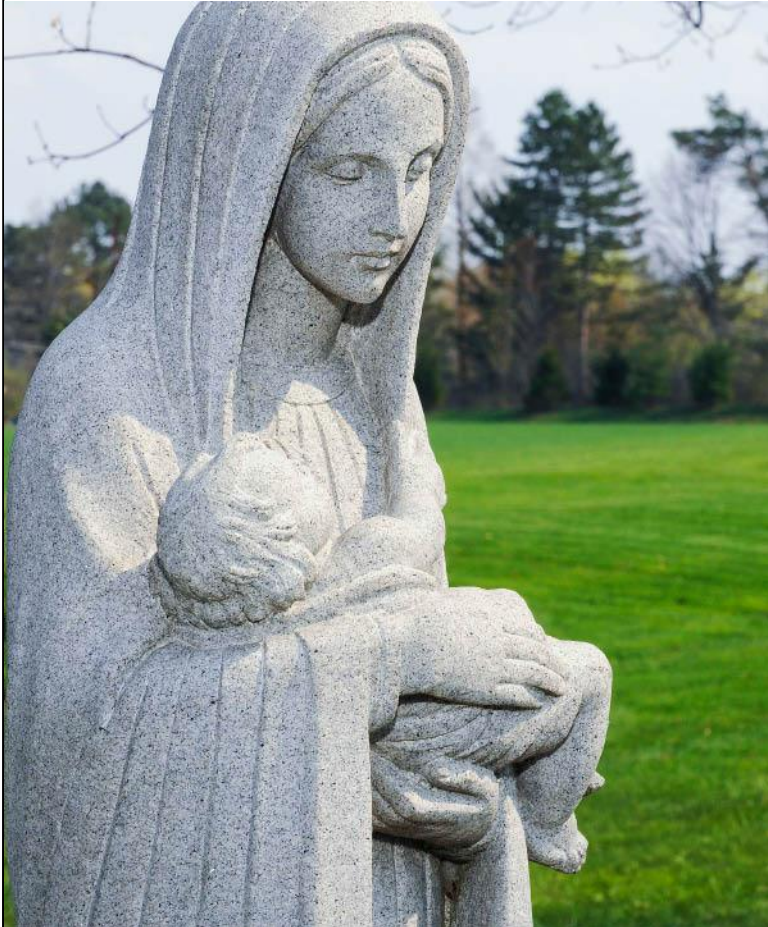
- Everyone is created in the image and likeness of God
- Everyone is a unique creation
- Education includes formation of the whole person

Basic Assumptions of an Ursuline Education

- Education is adapted to the time & culture
- Educational spirit must be taught and caught
- Education is gift not just employment/work



Aims of an Ursuline Education



- Formation of integrated spiritual individuals
- Formation of individuals who can impact society

Aims of an Ursuline Education



- Recognizes individual capabilities
- Balances between gifts of individuals and outside pressures
- Harmonizes spiritual and intellectual
- Humanistic education includes all branches of human knowledge

Ursuline Reglements



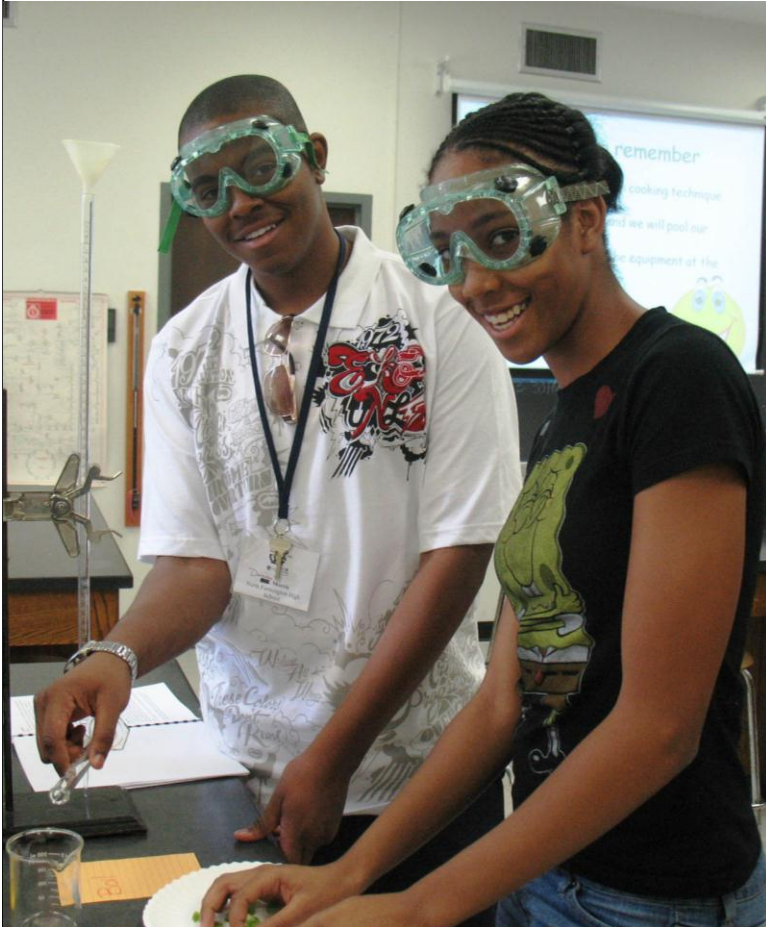
- Role of Educator
 - Surround each student with care, respect, love
 - Discern and develop each student's uniqueness
 - Be firm but inspired by love
 - Be open to constant learning

Ursuline Reglements

- Pedagogy
 - Learner centered
 - Interactive; student active participation
 - Create independent thinkers
 - Develop whole person
 - Teacher and student as learners



Ursuline Reglements



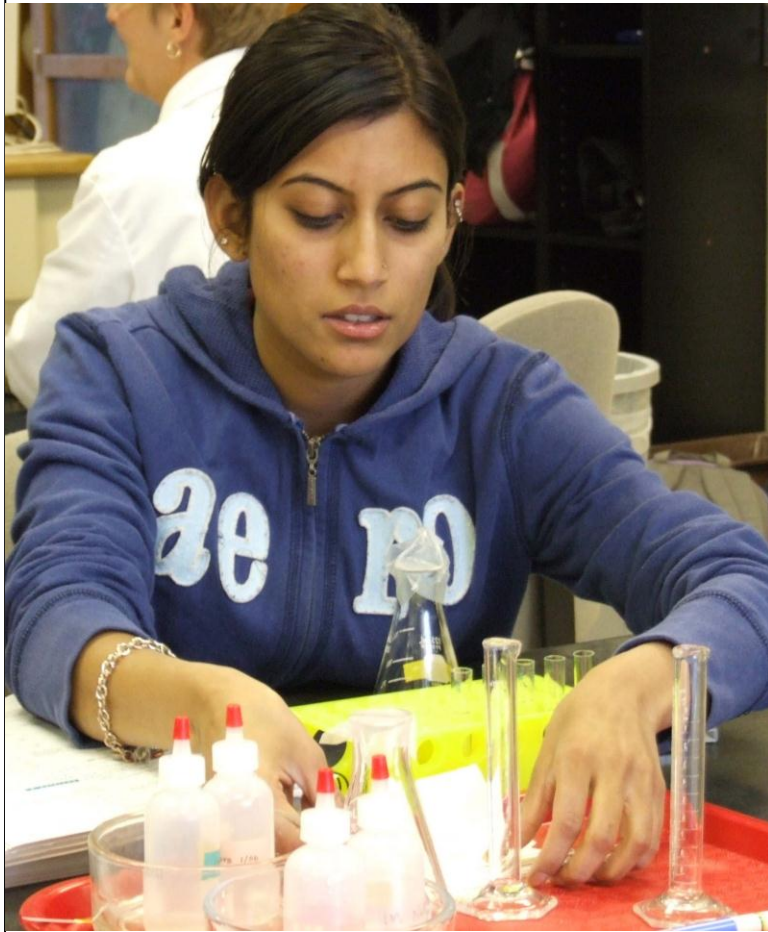
- **Groups: acquisition of knowledge**
 - Facts and information
 - Social education
- **Individuals: develop mind and thought**
 - Develop total human person: mind, heart, hands and will
 - Develop judgment: value we attribute to people/things

Essential Elements of Ursuline Education

- Personal contact with each student
- Development of whole person
- Sense of belonging and community
- Spiritual relation to God



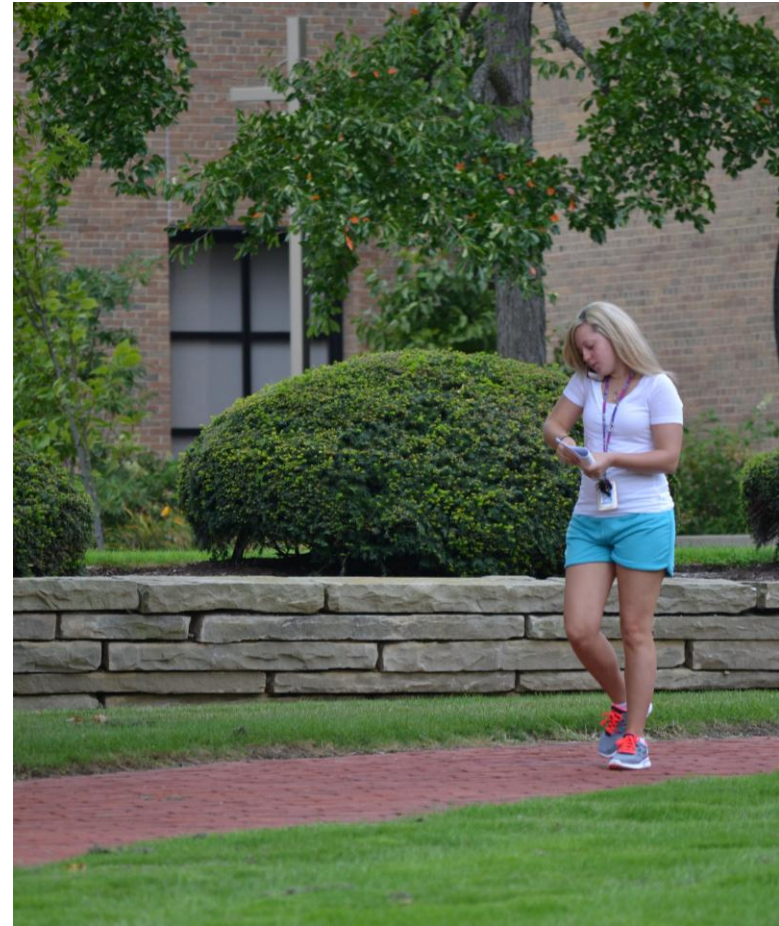
Essential Elements of Ursuline Education



- Atmosphere that lives the spirit of Ursuline
- Role of teachers and administrators as models
- Call to social action and service

Characteristics of an Ursuline Education

- Academic Excellence
- Change
- Community
- Concern for the Individual
- Leadership
- Spirituality
- Social Consciousness/Service
- Women



Implications



- Tools of education change but not philosophy and pedagogy
- STEM education earlier
- Adult communication
- Team building
- Tangible projects
- Societal benefit
- Role models

What can we do to encourage STEM?

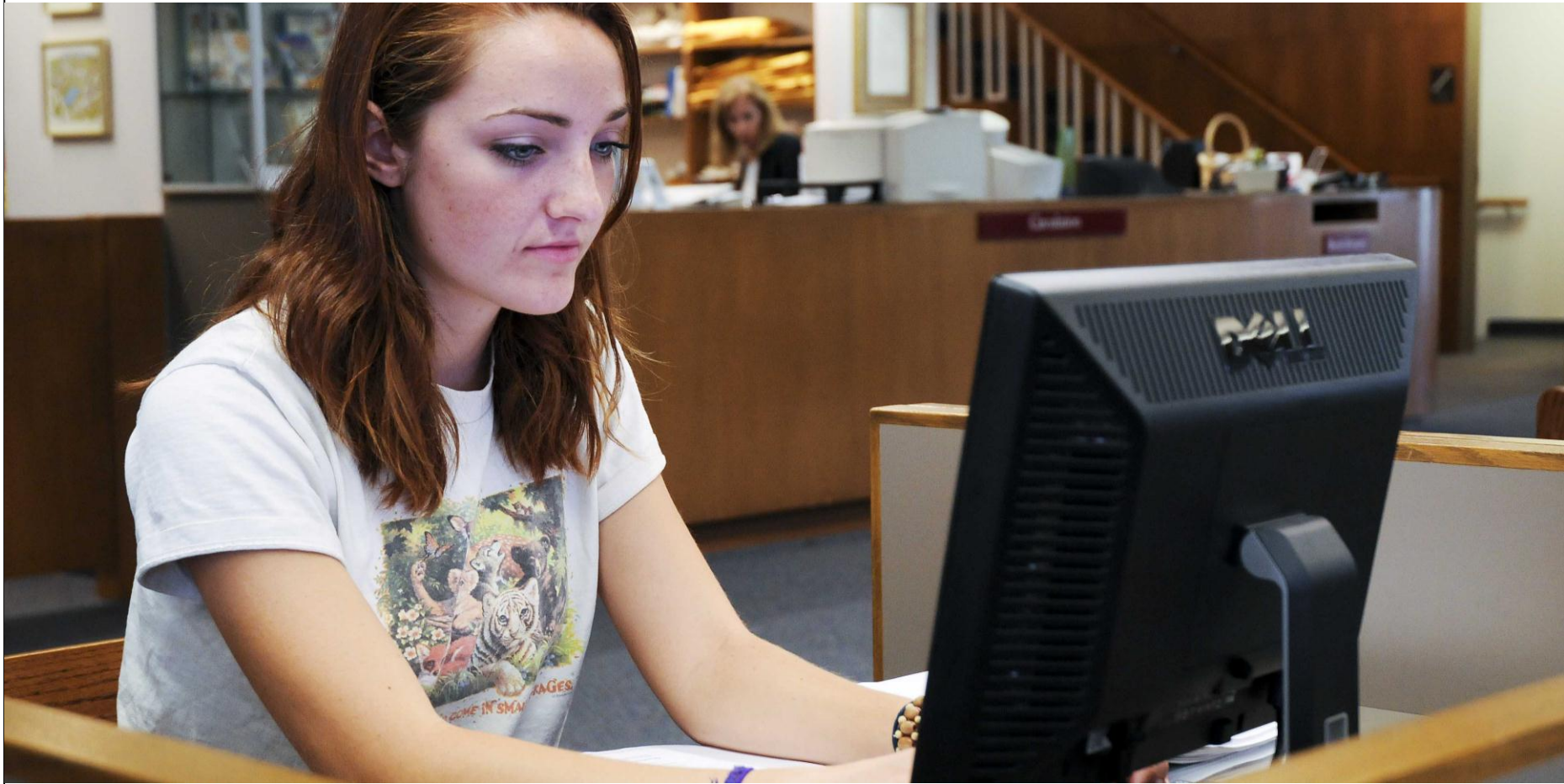


Encourage STEM



- Social beliefs – girls can achieve in STEM
- Potential of intellectual “growth”
- Confront stereotypes & bias
- High standards set by girls
- Spatial skills

“Give good example—teaching more by what you do than what you say.” St. Angela



Inspiration



**“Act, bestir yourselves,
have faith, make efforts,
have hope, cry aloud to
God with all your heart;
then, without any doubt
you will see marvels.”**

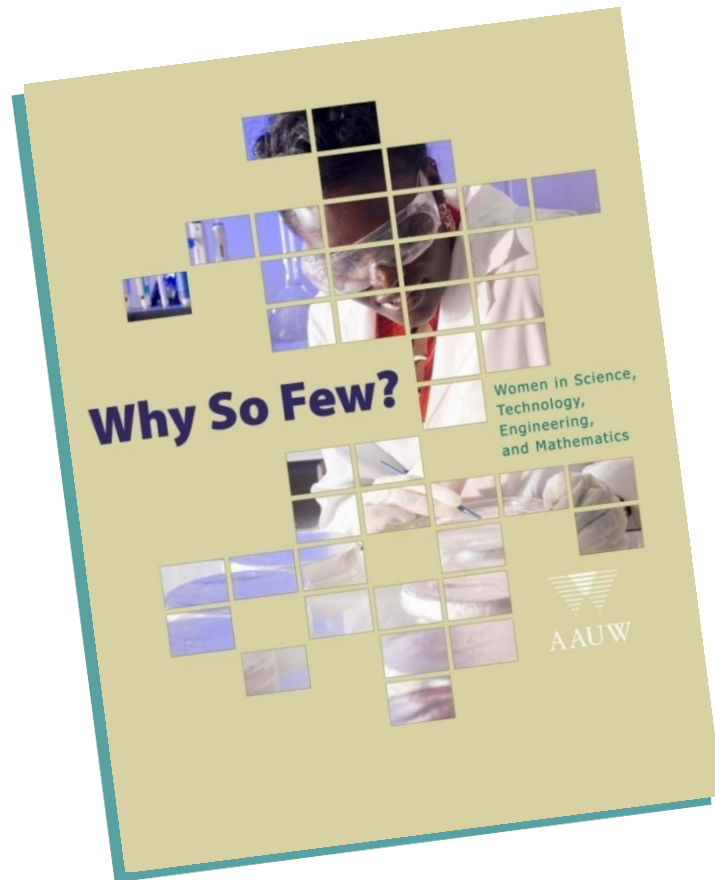
St. Angela Merici

Resources



- Take a test to learn about your unconscious bias at
– <https://implicit.harvard.edu>
- Women in science, technology, engineering and math
– www.womeninscience.org/
- Google: **women in STEM**

Why So Few? Women in Science, Technology, Engineering, and Mathematics



To download the report
www.aauw.org

To contact the researchers
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