S.T.E.M Conference
Science, Technology, Engineering, Math
Strategies That Engage Minds

April 9, 2013

A Unique opportunity for Gifted and Talented 7th & 8th Grade Students
Offering a variety of fun hands on activities this conference will introduce students to STEM careers. Students will have the opportunity to attend up to 3 sessions presented at WITC and Northland College.

Topics

***Biotechnology *Computer Aided Design *Ecology *Geology *Robotics *Meteorology *Wind Turbines**

(See page 2 for session descriptions)

Where

Wisconsin Indianhead Technical College, Ashland Campus
Northland College, Larson Juhl Center for Science & Environmental Studies
Ashland High School

When

April 9, 2013

Agenda

8:45 AM Registration at WITC Conference Center

9:00 AM Opening Session

9:30 AM – 11:20 AM Morning Sessions

11:30 AM Lunch (Pizza will be served)

12:30 PM – 2: 20 PM Afternoon Sessions

2:30 PM Depart for Home

Conference Fees

Free to the members of the CESA #12 Gifted & Talented Grant Consortium
(Ashland, Bayfield, Butternut, Chequamegon, Drummond, Maple, Mellen, Mercer, Northwood, Phillips, Solon Springs, South Shore, Superior Washburn).
$25 per student for Non Consortium Members (Hayward, Hurley, Winter)

Registration

Complete Attached Form
Registration due date is April 1, 2013
Limit of 100 students
First come first served

STEM Session Descriptions

Introduction to Biotechnology: DNA Extractions: We will extract DNA from different biological materials and discuss how scientists are using DNA procedures in biology in different areas of biological science. Presented by **Dr. Peter Weishampel**, Professor of Biology & Natural Resources.

Introduction to Computer Aided Design: Students will have the opportunity to experience a CAD (computer aided design) system, students will be introduced to how computers can use software to create, analyze, render, and produce models. Presented by **Ken Zeman**, Teacher Ashland High School

Forest Ecology: Students will learn the distinguishing characters of Northwoods conifer tree species and their habitats. We will also discuss career opportunities in forest ecology. Presented by **Dr. Sarah Johnson**, Professor of Natural Resources.

Introduction to Earth Materials and Resources: Students will learn the basics of identifying minerals and rocks by their distinctive physical properties, textures and structures. We will discuss the importance of minerals and rocks as resources for society. We will also look at minerals and rocks under a specialized petrographic microscope. Presented by **Dr. Tom Fitz**, Professor of Geoscience.

Robot Obstacle Course: Program a robot to navigate an obstacle course and learn about computer programming and mathematical concepts used in the world of robots. Learn about careers in robotic engineering. Presented by **Paul Gordon,** WITC Instructor & **Theresa Paulsen**, Mellen School District

You Too Can Understand How Hurricanes Work: Through hands-on examination of pressure, rotation, and friction, students will be able to understand the basic workings of a mature hurricane. Presented by **Dr. Luke Van Roekel**, Professor of Atmospheric Science.

Build a Turbinator: Design and build a simple windmill and test to see which design generates the most electricity. Learn about career in energy conservation. Presented by **Ian Meeker**, University of Wisconsin Extension

Registration 8:45 AM	**WITC Conference Center**		
General Session 9:00 AM	**WITC Conference Center**		
	WITC	**Northland College**	**Ashland High School**
Morning Sessions 9:30 AM – 11:20 AM	• Robot Obstacle Course • Build a Turbinator	• Introduction to Biotechnology: DNA Extraction • Forest Ecology	• Computer Aided Design (CAD)
Lunch 11:30 AM – 12: 20 PM	**WITC Conference Center**		
Afternoon Sessions 12:30 PM – 2:20 PM	• Robot Obstacle Course • Build a Turbinator	• You Too Can Understand How Hurricanes Work • Introduction to Earth Materials & Resources	• Computer Aided Design (CAD)

For more information on registration contact: Nancy Harrison at CESA 12, 715 682‑2363 ext 160 nancyh@cesa12.k12.wi.us