Northern Heritage Mills

A Northeastern Sustainable Resource Center and Educational Organization Northern Heritage Mills, Inc.
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Northern Heritage Mills Position Paper

October 3, 2014 Leadership and Education Summit to Encourage Young Women of Promise to Study Science, Technology, Engineering, Math and Entrepreneurial Opportunities

Claremont, NH Community Center

PROGRAM CONCEPT

It is the intent of Northern Heritage Mills, to develop a resilient culture for creative learning experiences in STEM, manufacturing innovations, entrepreneurship and, with partners, to identify and assist school aged young women of promise in opportunities for future career selections. Specifically, our focus is to encourage young women in their seventh, eighth, ninth and tenth grade years of middle and high school to consider entering the fields of employment in STEM and business leadership.

Heritage Mills has partnered with superintendents of schools, principals, technical school directors, teachers, guidance counselors and career development professionals each of whom will be selecting the young women of promise.

Our focus is to provide **HOPE** as well as encouragement and an opportunity to young women who would not otherwise have such opportunity for success. What each would have is the **PROMISE** that with encouragement each young woman can achieve a valuable education. Each young woman will be able to look forward to highly skilled jobs and a **HOPE** to carry with them the ability to focus on their studies and overcome any challenges they may encounter to be successful in STEM careers.

PROPOSED PROGRAM OUTLINE

Heritage Mills proposes an educational interactive seminar that will encourage the young women to meet and learn from several regionally known women in science, technology, manufacturing and business. Students will arrive on the proposed Friday in October to attend an introductory reception, move to planned sessions and learn about each female specialist before and after a luncheon as well as enjoying a post presentation conclusion with networking. There will be small interactive and collaborative engineering teams of five to seven young women with one specialist and one facilitator. Students will have hands-on and technology problem solving activities that will produce a finished product or a solution to the identified problem at the conclusion of each session. The entire event is expected to be about six hours.

The specialists will originate from industry, medical and research institutions or who are self-employed in the fields of civil engineering, electrical engineering, information technology, scientific research in medicine, manufacturing engineering, environmental engineering, robotics research, architecture, biomedical engineering, design engineering and chemical engineering. The female facilitators will be from industry, education or college/university students majoring in STEM fields. Specialists will be selected by peers or recommendations from industry, research institutions, engineering facilities or schools of higher learning.

PROGRAM COMPLIMENT

The one hundred young women, selected by their guidance counselors and teachers, will be from a proposed radius of 70 miles from Claremont, including Vermont and New Hampshire, and we plan to have a ratio of five to seven young women traveling with a chaperone to the event from each of their school districts. The group leaders and specialists will be focused professional women. With 15 specialists, 50 young women from New Hampshire, 50 from Vermont, 10 proposed guests, 50 staff, 15 chaperones and 15 group leaders we expect approximately 205 individuals.

PROGRAM FOLLOW UP

Surveys given to the young women during and after the event are anticipated to show the influence of the interactive sessions on female students' future positive decision-making. The surveys will be designed to encourage the students to take more classes in the STEM fields as well as to join the mentoring programs that will be available at the summit and their schools. Our goal is that the experiences and knowledge gained will result in a positive outcome in the young women's future career choices. Following the 2014 event there will be planned follow-up programs to provide support to this educational summit. Additionally, summer meetings, mentors, and hands-on learning experiences will reinforce the positive experience of the young women in attendance.

The first year of a two year mentoring program will consist of three sessions. In January, March and May 2015 the mentoring programs will be focused on positive encouragement, reinforcement and STEM conversations to retain the student's focus and the specific STEM field of interest. Two meetings will be located at the technical school in Claremont and one meeting will be held at a STEM industry location in the region such as an engineering company, technology lab, architectural firm, medical research facility, an advanced manufacturing site, chemical engineering center, etc.

During the first year students will be encouraged to have a stronger STEM association with their next year's curriculum. Mentors will work in concert with guidance counselors to track and measure each student's progress. The second year students will have four mentoring sessions in the months of December 2015, and February, April and June 2016. One of the sessions will be held at a STEM industry and the remainder at the Claremont Technical School. It is during the second year students will be prepared and encouraged to concentrate in the STEM field and mentors with guidance counselors will track and measure the success of each student.

Additionally there are also opportunities for young women attending local colleges such as Keene State, Dartmouth, NHTI, River Valley Community College, who are currently studying engineering, manufacturing technology and leadership skills to provide community service and

become a mentor's assistant for the follow up meetings. Heritage Mills with these mentors, assistants and guidance counselors will continue the purpose of the conference and it is expected that this reinforcement, with creative hands-on learning experiences, will provide unprecedented opportunities to the young women involved in our leadership and educational summit.

The follow-up programs are the missing links that will expand the classroom experience and eliminate the challenges of young women immersed and succeeding in engineering, science, manufacturing and entrepreneurship.

In several mentoring once-a-year programs located at manufacturing or engineering firms we expect to have technicians demonstrate the creative, idea/design and engineering components and the manufacturing process that demonstrates the transformation of raw material into a finished product. It is expected this program will provide for another complete tool set of actual creative educational and beneficial learning experiences that individual schools may not afford or make available.

SUMMARY

Northern Heritage Mills also realizes these creative learning experiences will make engineering, science and technology feel more comfortable to simplify and reinforce interdisciplinary learning pathways for more advanced studies and applications or toward more advanced manufacturing positions.

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