Exciting Summer Research... on Sustainable Electronics for Your STEM Teachers Through the Research Experiences for Teachers (RET) Program

Purdue University seeks high schools interested in having their STEM teachers (biology, chemistry, physics, engineering, etc.) participate in summer research on sustainable electronics. Your teachers would work on projects to make cell phones, laptops, and other electronic devices greener.

**Research projects would include:**

- Finding environmentally friendly replacements for toxic materials often used in electronics
- Cost-effectively recovering and reusing electronics instead of sending them to landfills
- Using nature’s resins such as lignin and soy instead of petroleum-based resins to build circuit boards

Summer RET activities include an orientation, introduction to basic engineering principles and terms, initial interviews to understand teachers’ interests and instructional needs, and matching teachers with unique research projects related to science or engineering standards. Also:

- Fields trips to local electronics recycling centers and industry related to electronics
- Teachers participate at either Purdue or Tuskegee University for 6-8 weeks during summer
- Assistance on designing lesson plans related to green electronics
- Follow-up by Purdue faculty and graduate students during the school year to support implementation of new classroom activities and curricula

Upon funding by the National Science Foundation, the RET program would run for three years, beginning in June or July 2016. Teachers typically would participate for one year but may do so for two consecutive years, if they choose.

Each teacher will be paid an $8000 stipend, plus $2000 per year for developing high school instructional materials. Additional funds will be provided to conduct the research at Purdue or Tuskegee.

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