

RET - Year II

- Supplement (\$20K) to the NSF CAVE Center grant obtained in May 2003
- **Auburn City Schools** - local public school system with 5 elementary schools, 1 middle school, 1 junior high and 1 high school



Diverse in income level, ethnic background, culture - approximately 33% African American and 30% low income

Our Winning Team of Teachers

- **Cynda Fickert**, math teacher at Auburn Junior High School (8th graders)



- **Mark Jones**, science teacher at Drake Middle School (6th and 7th graders)



One Week NASA Training

- Jointly funded by NASA / NSF
- Summary of five training sessions: ESD, soldering, crimping, surface mount, polymeric coverings, fiber optic cables
- Took place near Goddard Space Center in Maryland in June



NASA Soldering School



Time for Touring

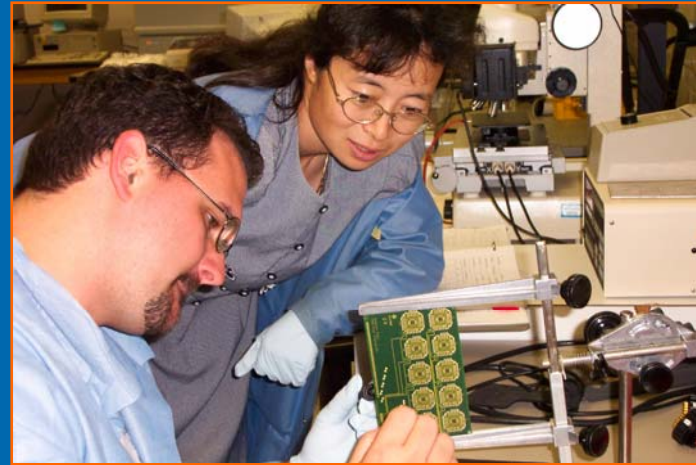


Play time...



Summer Work for CAVE

- Three Projects: lead free soldering, flip chip (CSAM), high temp
- Scanned TV3C underfill with acoustic microscope
- Soldered boards and tested for thermal shock
- Used skills learned at NASA



2003/04 School Year Activities

- NASA bought **120** soldering kits for the students to use this school year
- Mark is using the kits for a properties of matter (metal) conductivities and melting points unit for the middle school science students and (*added bonus*) has established an **Electronics Club**
- Cynda will use kits along with other materials to conduct a novel module on creating stained glass ornaments, measuring areas and angles – thus, combining **art, technology and geometry** for the junior high math students
- Both plan CAVE tours with their students this year

Some National Attention

- “Are you experienced?”, *Industrial Engineer Magazine*, vol. 35, no. 9, September 2003, 36-39
- Covered CAVE RET experience along with an RET experience in simulation at Florida International University
- *Industrial Engineer* magazine is the publication of the Institute of Industrial Engineers (IIE)
- Will present the RET at the American Society of Engineering Educators Southeast Meeting in April in Auburn

Summary

- Cynda and Mark furthered three CAVE projects this summer
- The young students are being engaged in electronics manufacturing aspects through novel active learning modules
- **WIN - WIN!!**

