

# Field Inquiry Research Experience F.I.R.E. Up

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**Field Inquiry Research Experience, F.I.R.E.,** is a field and remote sensing research project for middle/secondary and undergraduate students along with current and future earth science and life science teachers.

**F.I.R.E. Up for the Classroom** will begin with the recruitment of twenty teachers. They will be trained using the GLOBE Program. Teachers will learn how to use GLOBE's basic Remote Sensing Lessons to implement in their own classrooms. Teachers will also use any additional equipment used in the Summer Program. They will learn how to implement ground truthing techniques and GIS mapping.



The teacher's classroom will be supported to assist with the implementation of F.I.R.E. Up for the Classroom. Teachers will be provided with equipment, supplies and access to a mobile computer lab. Buses and substitutes will also be provided as required.



Teachers will be asked to take their students out three times to use GLOBE lessons and FIRE-Up exercises. Teachers will ask their students to record data and enter the data on the GLOBE Program Data Management system and develop a GIS remote sensing project using the mobile computer lab.

**Student Showcase** will be planned for May. Students will be asked to share their GIS remote sensing projects in breakout sessions. Community members, school officials, parents and interested personnel will be invited to participate.

**F.I.R.E. Up for the Summer** will invite students from the participating classrooms. The three week experience will allow students to work on a project that has been identified and supported by agencies that will "Value and Use" the work of the students. Students will be given additional training. Students use the training to complete the tasks assigned to the participants. Students

will also develop a GIS Remote Sensing Project that will follow the scientific method.

Students earn four college concurrent credits plus high school elective science credit. Students will leave the experience with strong resume items.

**F.I.R.E. Up for the University** will provide undergraduates and pre-service teachers with remote sensing and GIS training. This will be accomplished through course work developed by University Faculty. These courses will also be made available to community members desiring GIS/Remote sensing training.



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Great minds • Great hearts • Great futures.

Summer University Internships will be developed for students wishing to pursue GIS/Remote sensing training and work.

**Evaluation** will occur at all three levels. Teachers will be asked to submit participation reports that indicate the number times they were able to work outside of the classroom, with how many students, and number of field contact hours. Previous work by the Facilitators set the expectation that teacher participation will be about 92%. Classroom supported field trips will exceed 100% of the

required three trips.

The summer program will be evaluated based on criteria being met and the quality of work that is "Valued and Used." The Student GIS/Remote sensing projects will be judged for quality and accuracy.

University Programs will monitor student participation and performance. The participation by other community groups will be followed as indicators of success of the F.I.R.E.-Up for University.

