

Kids do hands-on science at UAF summer academy

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Kids around the state will have the opportunity to get down and dirty with science this summer. The application period is now open for the 2016 Alaska Summer Research Academy (ASRA) at the University of Alaska Fairbanks.

"The idea behind the program is to expose middle school and high school students to science and to really get them involved and engaged in actually doing science rather than just learning about science," said Christa Mulder, a professor of ecology at UAF and the director of the ASRA program. "So, all of the modules and programs are ones where they are getting their hands dirty. They're working directly with scientists, either faculty at the university or affiliated scientists and graduate students."

The program runs for two weeks, from July 18 to 29, and is based in Fairbanks. Classes happen during the day and students are encouraged to participate in field work in the surrounding area.

Many of the classes offered focus on the Arctic ecosystem, like the 'Mapping Permafrost Adventures' course for middle schoolers and the 'Environmental Chemistry of the Arctic' course for high schoolers.

"We have a lot that are focused on the north because that is where we are and we want people involved in real science so we don't want to be talking about something we can't expose them to directly," said Mulder.

That doesn't apply, of course, to courses like the one about the planet Mars, though she wishes kids could visit the red planet for a few days for a hands-on space adventure.

It's important for students to learn about science in a context that's applicable to them, said Mulder, and learn how it affects where and how they live.

For students and scientists working in the far north, that means often addressing the issue of climate change and how it applies to their area of research.

"Anybody who works in the north has to contend with the fact that things are changing really rapidly, whether they work on plants or animals or environmental issues," said Mulder. "Other issues have to do with the fact that there's a lot of changes in human populations, in immigration and emigration, and social and cultural structures. There's a lot of need for people who are interested in those kinds of things, all of which are affected by the changing climate."

Classes for middle-school and high-school students are taught separately by faculty and scientists who are experts in the specific disciplines.

For high-school students, the program isn't necessarily aimed at directing students to go to college after they graduate, but to "spike their interest, so they can see the opportunities for that," said Mulder.

Middle school students at an earlier point in their educational track have the chance to explore new fields they might not have otherwise considered.

"I think exposure at that age is incredibly important because they're really open at that stage. They're not really rigid yet about how things should work. They're very open to just trying things," said Mulder. "Having had kids in the middle school module, I can tell you they come back really excited about what they can do and options for them."

Above all, she hopes students who apply and are accepted will learn to think of science as a field in which they don't just follow instructions, but ask questions and use their problem-solving skills to find answers.

"They have to figure it out themselves and I think that really makes kids think about how they can be creative and how they can use their skills and combine them with other people's skills to deal with emerging problems and issues," Mulder said.

The application deadline for the ASRA program is the end of March. Financial aid is available to some students who are unable to cover the cost of the program independently.

More information about the program can be found at www.uaf.edu/asra.

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