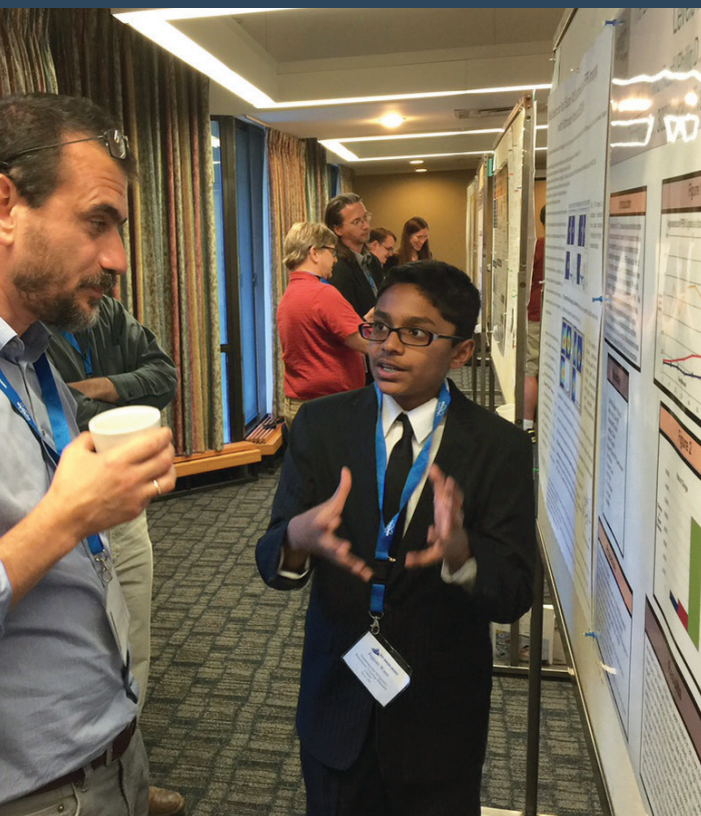


“As I have worked in many research labs over the years, I have realized how rare it is for students to get such freedom to explore when they are young. Dr. Morse encouraged us to design our own project aims, hypotheses, and experiments. Being responsible for a full project drove home lessons about the scientific method that I have used since then, and getting to create and test my own hypotheses sparked a passion for research and scientific discovery that I have followed eagerly.”

H. C. (MD/PHD. STUDENT)



The Steppingstone MAGnetic Resonance Training (SMART) Center

The SMART Center is a well-equipped scientific facility designed for students to formulate and carry out their own research projects. Equipment includes several research-grade magnetic resonance spectrometers as well as standard tools such as pH meter, spectrophotometer, glassware, sub-milligram balance, pipettes, and more.



REEF (PHILIP D., II) MORSE
SMART CENTER DIRECTOR

The SMART Center was conceived by Dr. Reef (Philip D., II) Morse, Professor Emeritus of Chemistry at Illinois State University, Dr. Art Heiss formerly of Bruker Bio-Spin, and Kiyo Morse, Founder of Steppingstone School, to give students the opportunity to develop research

skills with equipment usually reserved for graduate students and post-doctoral fellows.

There is no other facility like this in the world available for student research.



STEPPINGSTONE SCHOOL
School for Gifted Education

For more information, application materials,
and program dates go to:
www.steppingstoneschool.org/smart-center-home



STEPPINGSTONE SCHOOL
School for Gifted Education

SMART
CENTER

**THIS COULD
BE YOU!**

Training

- ❑ Basic principles of magnetic resonance
- ❑ Learn how to use the SMART Center's research-grade magnetic resonance instrumentation
- ❑ Lab techniques and skills such as measuring volume and weight, devising solutions, serial dilutions, sample preparation, and keeping a lab notebook
- ❑ Experimental design and data-analysis training



Directed Research

- ❑ Develop individual research projects
- ❑ Continual mentorship from Dr. Morse
- ❑ Opportunities for presentations (science fairs, conferences) and publications

Nothing like the SMART Center exists anywhere else in the world.

The SMART Center program uses the scientific mentoring methodology found in Steppingstone School and is adaptable to students over a wide range of age and experience. The student, rather than the professor, drives the research and develops an independent research project that provides opportunities for direct interaction with the international scientific community.

Students start with a one-week training course in which they learn about magnetic resonance, spectroscopy, instrument usage, gathering and analyzing data, and the basics of experimental design. Most importantly, students practice asking questions in such a way that they can obtain answers through their own efforts.

Upon completion of the training course, students have self-directed access to the laboratory equipment.

With mentored guidance they can pursue their research ideas and, ultimately, present their research not only to other students but also to the international scientific community.



Benefits

- ❑ Ignite your passion for science
- ❑ Practice critical thinking and problem solving
- ❑ Strengthen your personal resume
- ❑ Interact with the larger scientific community



For more information, application materials, and program dates go to:
www.steppingstoneschool.org/smart-center-home

Email: reef@steppingstoneschool.org Phone: 248-957-8200



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