

Greetings from the Facility for Rare Isotope Beams ([FRIB](#)) and the National Superconducting Cyclotron Laboratory ([NSCL](#)) at Michigan State University! Our laboratory cares very much about sharing our nuclear research with the public, and we hope that you or someone you know might be interested in our updated remote-education offerings!

**Check out our laboratory's page of [digital education resources for nuclear science](#)!** The resources include a game, YouTube videos, and downloadable activities.

The following remote-education opportunities ([see flier](#)) are available by appointment for groups of 10+:

- **Virtual tour** - a live 60-minute presentation where the speaker “guides” you through our research spaces by viewing photospheres. It can be combined with an activity listed below.
- **Talks** - a live 60-minute presentation that can be combined with an activity listed below.
  - **FRIB Research** - an overview of what NSCL has done, what FRIB will do better, and the goals of nuclear science
  - **Careers in Science** - how physicists, chemists, mathematicians, plumbers, welders, machinists, computer scientists, and many more are needed to make cutting-edge science work
  - **(Almost) 14 Billion Years of Nuclei** - explore what we know about the origins of the 92 naturally-occurring elements from Big Bang nucleosynthesis to recently-discovered neutron-star mergers (this can include the sequence of activities below)
  - **Fantastic Nuclei and Where to Find Them** - discover how our researchers are producing the kinds of nuclei only found in stars and recreating stellar reactions with next-generation accelerators
  - **Meet a Scientist** - talk directly with one or more nuclear researchers to discuss how they got into the nuclear field and what they're working on now
- **Activities** - hands-on simulations using household items!
  - **Introduction to Isotopes** (30-60 minutes, depending on detail) - building and naming nuclei with a simple model, then learning to read the chart of nuclides - participants will be provided with materials that they can print, but it is not required
  - **Detecting and Modeling Invisible Nuclei** (15-20 minutes) - learning to measure through indirect observations, comparing evidence with models
  - **How the Universe Made the Elements** (90+ minutes, includes “14 Billion” talk above, recommended for participants to complete “Introduction to Isotopes” first) - sequence of activities demonstrating how to fill the periodic table of elements - participants will be provided with materials that they can print, but it is not required

Contact [visits@frib.msu.edu](mailto:visits@frib.msu.edu) if you have any questions or to make an appointment for any of the above. You're also welcome to request other alternatives, and we will try to accommodate you!

Thank you,  
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P.S. My friends in MSU Engineering asked me to share their [upcoming Preview Week event](#) as well!