



## GEIGER COUNTER EDUCATIONAL ACTIVITY

CNTA uses Geiger counters for a variety of educational programs.



In a typical set-up, the student would be introduced to the idea of measuring radiation and shown the two similar looking plate pieces. One is radioactive, and one is not. Using the counter, figure out which one is.

Then, to introduce the idea of shielding, measure with the paper cup over the radioactive plate piece.

Measure with the metal cup.

What happens to the radiation measurement?

What else emits radiation we don't think about?

At what level is the radiation emitted harmful to a human being?



## **“GLOVEBOX” EDUCATIONAL ACTIVITY**

The gloveboxes are the newest addition to CNTA’s educational repertoire.



In one set-up the students are asked to open the marker, write their name on the piece of paper, close the marker, and rip the top page off the pad.

This simple exercise shows students how a daily task is much harder when working in restricted environments.

Another scenario asks students to build a simple 3 story house out of Lincoln Logs.

The discussion can include what uses we have for gloveboxes- in nuclear, in science, etc.



## NUCLEAR REACTOR SIMULATOR

The target is the simulation of what a neutron would find inside a nuclear reactor. The dart you shoot is the neutron.



If you hit water (a moderator) you get your dart back and another turn.

If you hit Boron-10 (neutron absorber) or U-238 (non-fissile), you lose your dart and your turn.

If you hit Uranium 235 (a fissile material) you get 3 darts to shoot again with. This scenario is the only way a chain reaction would continue.

This fun and simple interactive tool helps to explain to children how we can control a chain reaction and harness it to create power instead of simply having explosions.