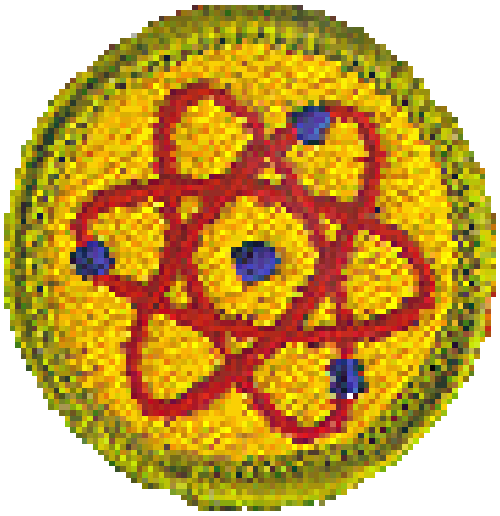
Atomic Energy Merit Badge



Name _____

Troop _____

REQUIREMENT 1. Write a good definition for each of the following:
Be prepared for a test on these words.

alpha particle _____

_____

atom _____

_____

atomic weight _____

_____

atomic number _____

_____

background radiation _____

_____

beta particle _____

_____

curie _____

_____

fallout _____

_____

half-life _____

_____

ionization _____

_____

isotope _____

_____

neutron _____

_____

neutron activation _____

_____

nuclear energy _____

_____

nuclear reactor _____

_____

particle accelerator _____

_____

radiation _____

_____

radioactivity _____

_____

roentgen _____

_____

X-ray _____

_____

REQUIREMENT 3. Make a drawing showing how nuclear fission happens. Label all details.

3b. Draw a second picture showing how a chain reaction could be started and stopped. Show what is meant by "critical mass".

REQUIREMENT 4. Choose five of the following people. Explain who they were and what each discovered.

Be prepared for a quiz on the five you choose.

Henri Becquerel _____

_____

Niels Bohr _____

_____

Marie Curie _____

_____

Albert Einstein _____

_____

Enrico Fermi _____

_____

Otto Hahn _____

_____

Ernest Lawrence _____

_____

Lise Meitner _____

_____

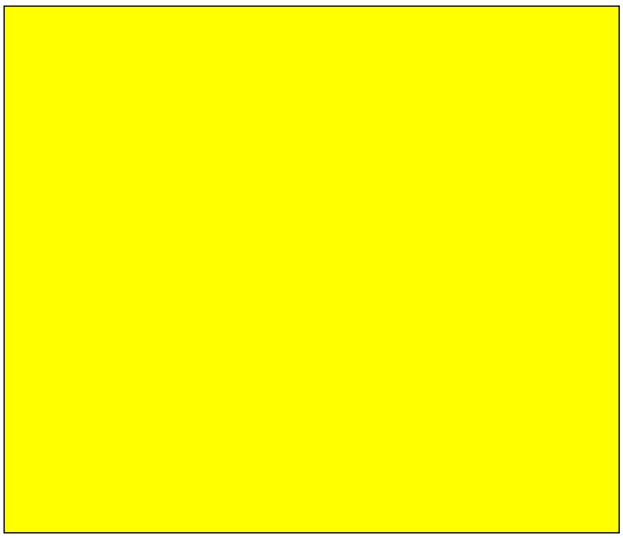
William Roentgen _____

_____

Sir Ernest Rutherford _____

_____

REQUIREMENT 5. Draw and color the radiation hazard symbol. Explain when it should be used. Explain when it should not be used.



USE IT: _____

DON'T USE IT: _____

REQUIREMENT 6g. Visit a place where X ray is used. Draw a floor plan of the room in which it is used. Show where the unit, the person who runs it, and the patient would be when it is used. Describe the radiation dangers from X ray.

Radiation dangers from X rays:

_____

_____