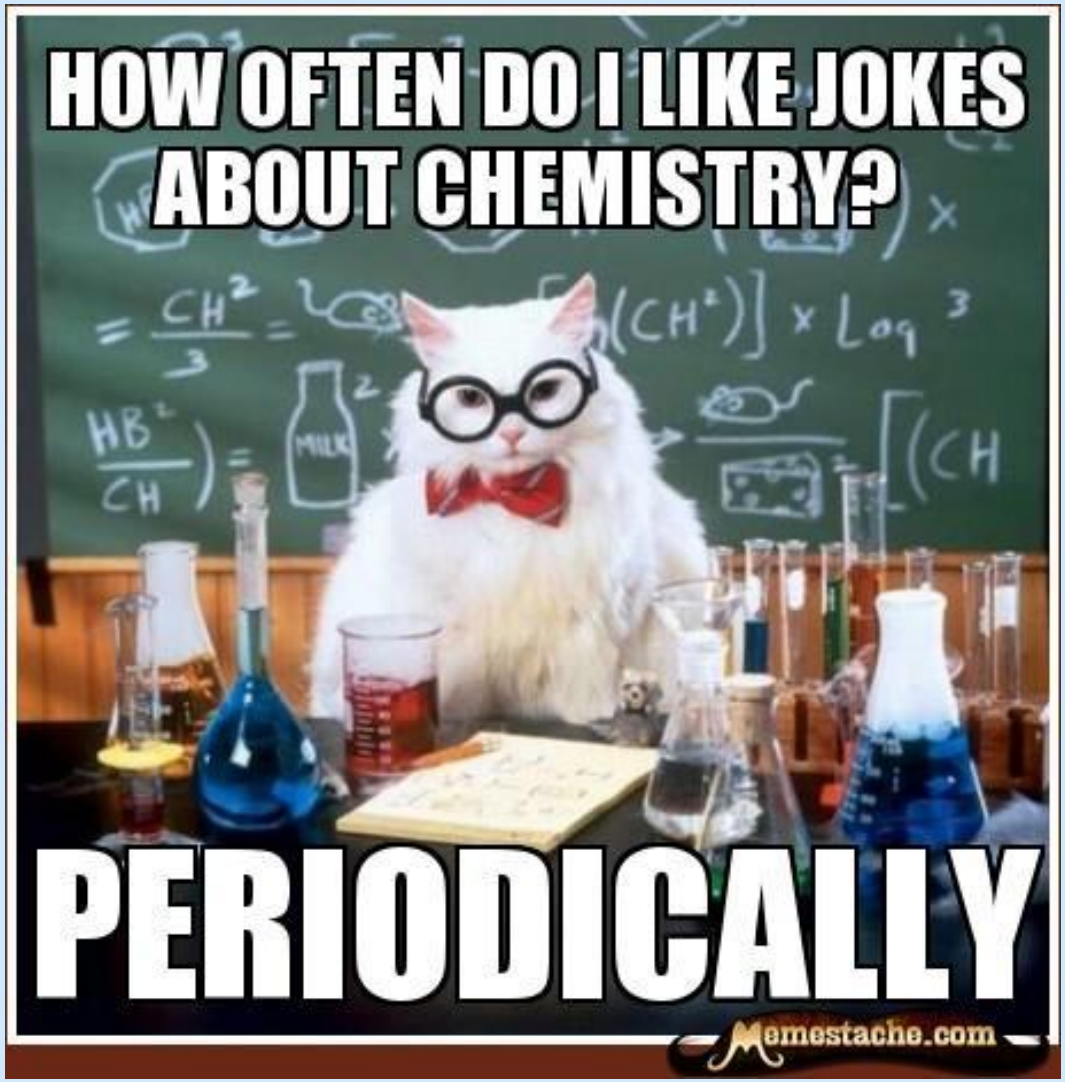
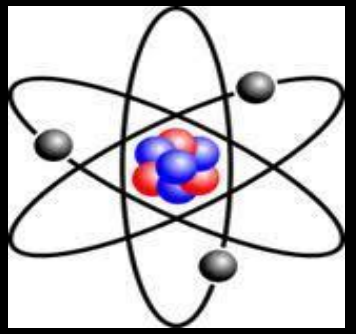

HOW OFTEN DO I LIKE JOKES ABOUT CHEMISTRY?
PERIODICALLY
Memestache.com



Atoms and Elements

Group Members:

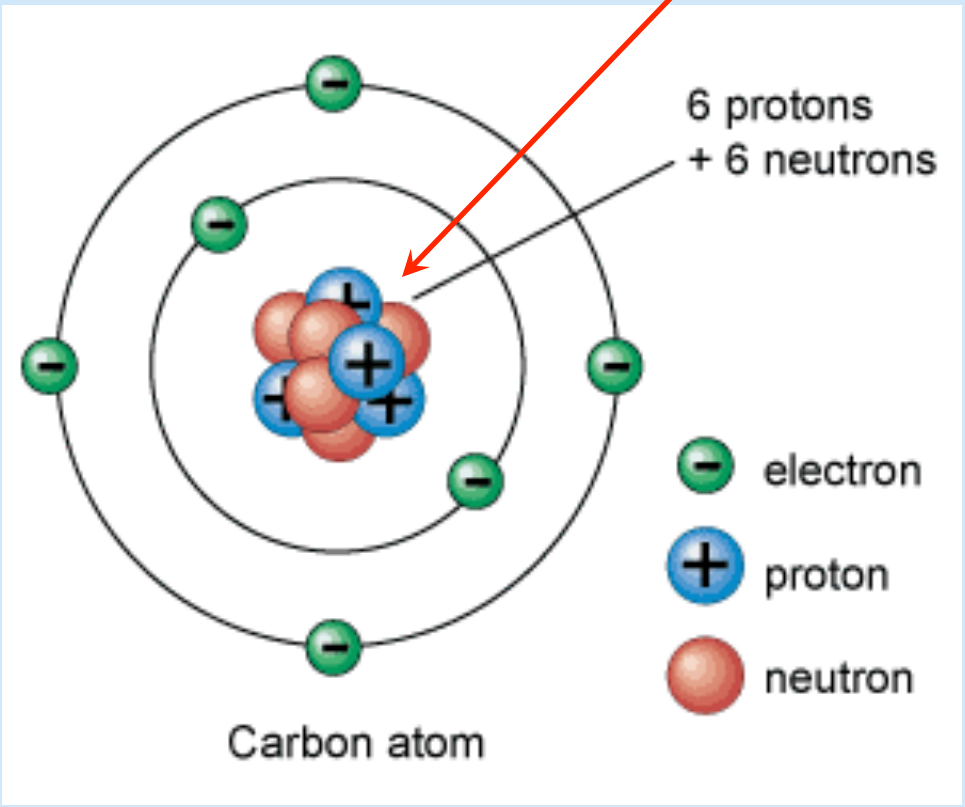
- Share what you know with each other
- Ask questions & Brainstorm
- Come up with your best answers as a team – help each other

Group Members – Scratch paper

- Discuss how to represent an atom
- Draw a model of an atom
  - Inside the nucleus (name & charge):
    - The two primary subatomic parts:
      - _____ charged: _____
      - _____ charged: _____
  - Subatomic part “orbiting” the nucleus:
    - _____ charged: _____

Individually – Save in Notes

- Draw & label the <u>nucleus</u> and the subatomic parts of an atom; Include their charge



<u>Note</u>:
Protons & Neutrons are relatively large. Electrons are relatively small (1/1836th)

Group Members – Scratch paper

- Discuss what these mean:
  - Atomic number
  - Atomic mass
  - Isotope
  - Electrically neutral

Individual – Save in Notes:

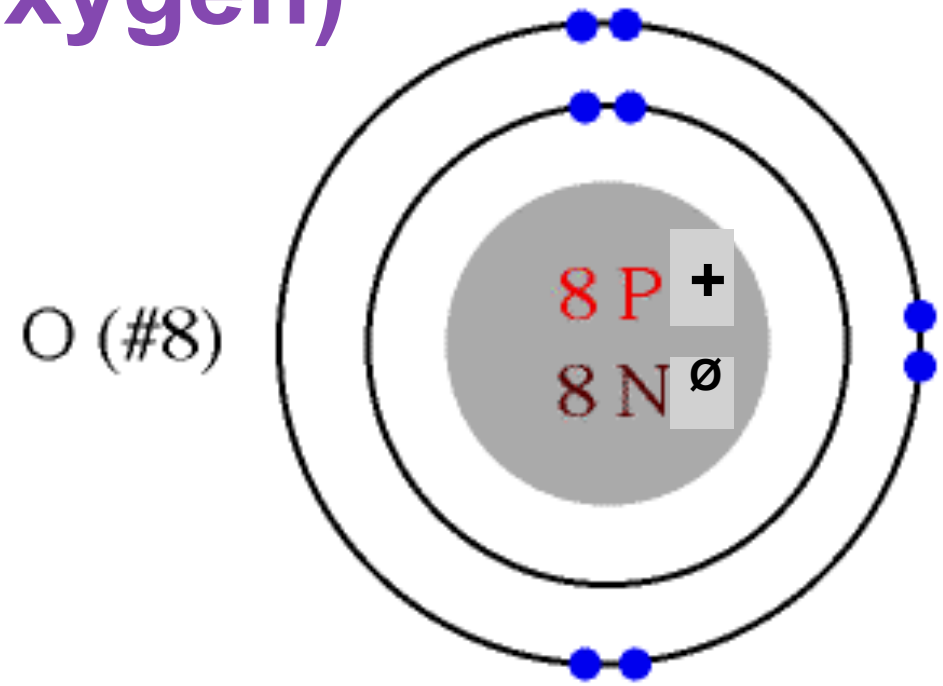
- ***How did you do?***
- Atomic number = An element's ***identity***, the ***number of protons***. Different for each element.
- Atomic mass: Average of the number of ***protons and neutrons***. (Also, the molar mass.)
- Isotope: The same element (same number of protons) but a ***different number of neutrons***
- Electrically neutral: The ***same*** no. of p^+ and e^-
  Ex: Carbon ++++++ & – – – – – – = Ø charge

Save in Notes

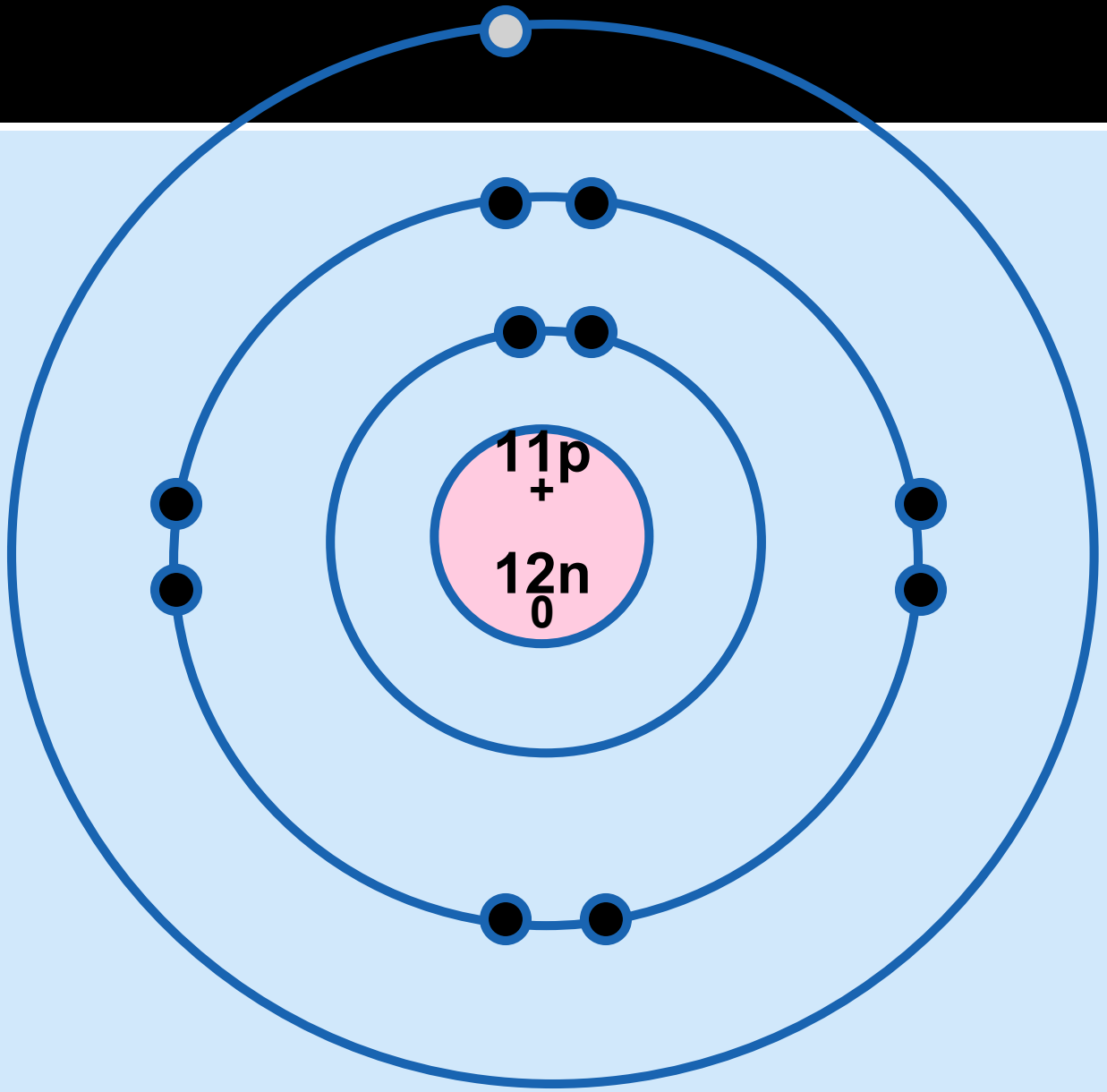
- Bohr model (1913) Niels's Theory:
  - Electrons exist in orbitals
  - For our purposes, max. no e^- per energy level is 2, 8, 8,…
  - Full & happy!
  - When they absorb energy they move to a higher orbital
  - As they fall from a higher orbital to a lower orbital, they release energy as a photon of light

Save in Notes

Bohr model (oxygen)



Sodium - Atomic #11



2,8,1,0

Save in Notes

- An atom that gains one or more electrons will have a _____ charge. ***Why?***
- An atom that loses one or more electrons will have a _____ charge. ***Why?***
- An atom that gains or loses one or more electrons is called an _____.

Complete “Atomic Number” handout

- Due – Correcting tomorrow

- ATOMIC NUMBER handout - Show me!