

8th grade Science Notes Week 6

8th Anchor Questions Week 6 (Oct. 7-11)

Questions Due: Assigned daily
Assessment date: none

- 1. What is the universe composed of?**
- 2. What evidence exists for the Big Bang? What does "red shift" show about the Universe?**
- 3. List the three types of galaxies according to shape**
- 4. What is the size range of galaxies?**
- 5. What are nebulae made up of?**
- 6. Explain the how our solar system formed**

Astronomy- is the study of space- ALL OF IT

Universe- includes ALL matter, energy and forces

Galaxies are the key unit that make up the universe

Astronomy Intro

Big to small:

Universe- all matter, energy and forces. Made up of **Galaxies**

Galaxies- made of millions of stars

Stars- massive objects, made of gases that **PRODUCE** their own light

Some stars have objects orbiting them (planets, asteroids, etc.)

Our star- **SUN** is one of those stars

Universe: The Big Bang

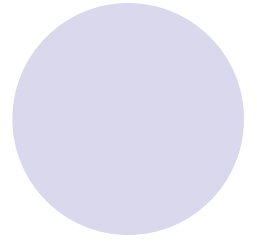
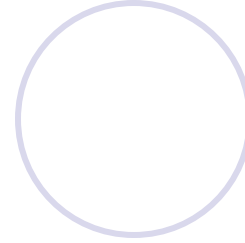
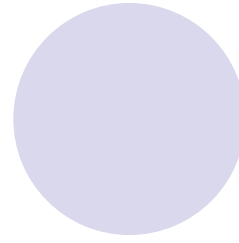
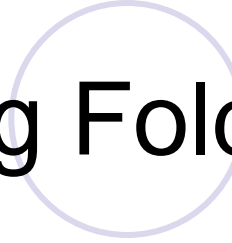
Key Vocabulary:

Light year- It is a measure of distance. It is the distance that light travels in one year. One light year is equal to:

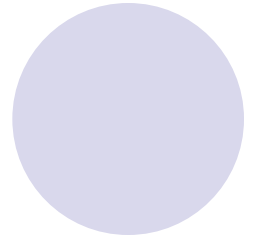
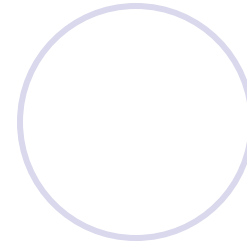
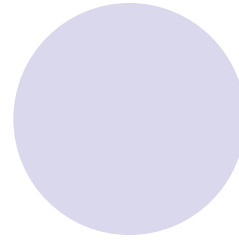
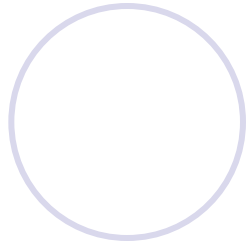
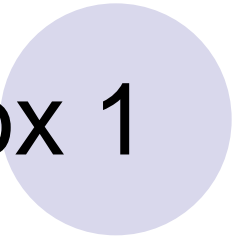
9,460,800,000,000
kilometers!

Expansion (also known as inflation)- is the constant “spreading out” of all the galaxies in the Universe

Big Bang Foldable



Box 1



All was in one point

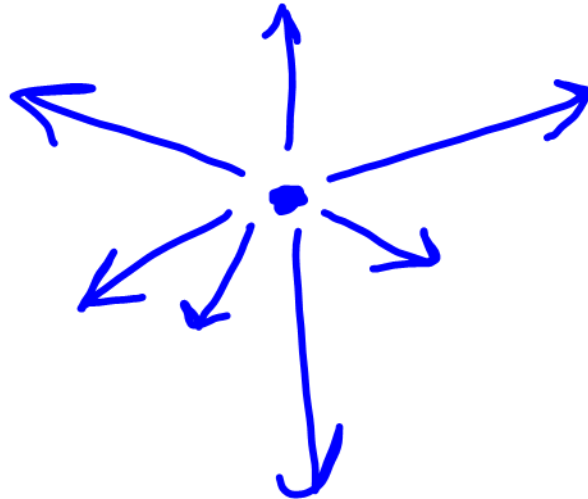


Hot, small, massive

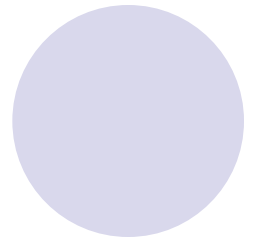
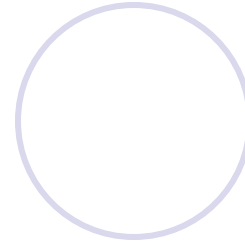
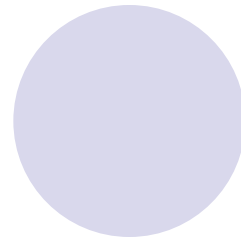
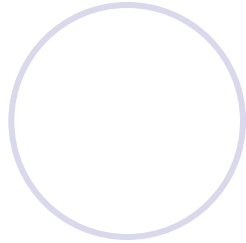
**No atoms, molecules- NO MATTER
14 BILLION y.a.**

Box 2

“Explosion” occurs stuff shoots out in all directions (but not evenly). Still, no matter exists



Box 3



Basic Subatomic particles form:

electrons (-)

Protons (+)

Neutrons

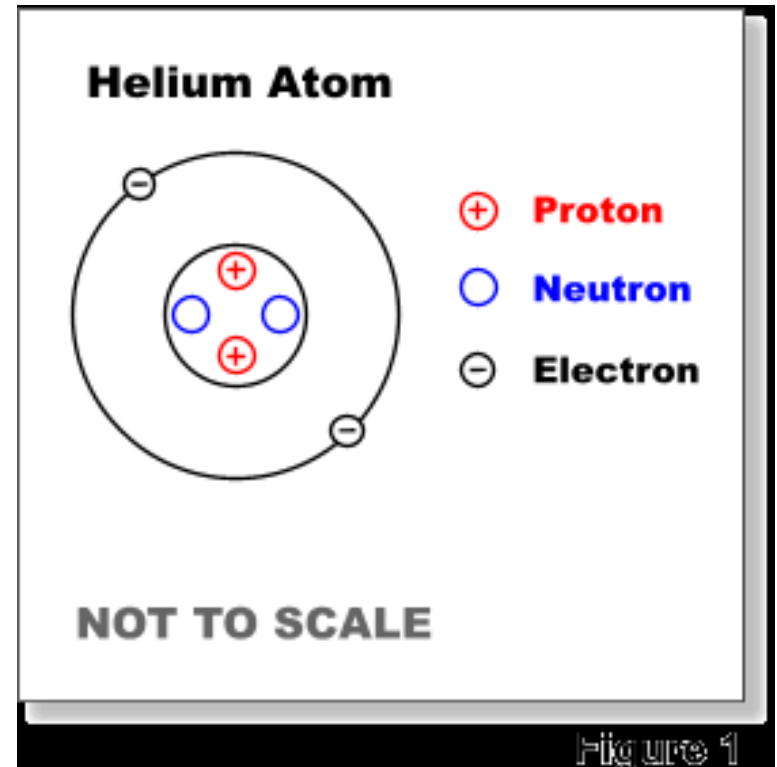
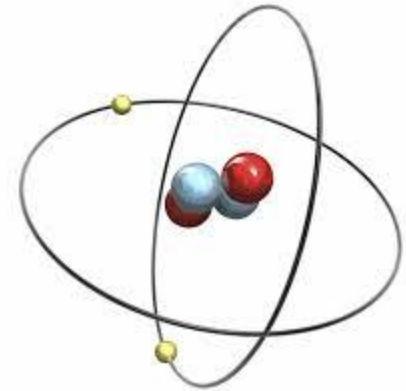
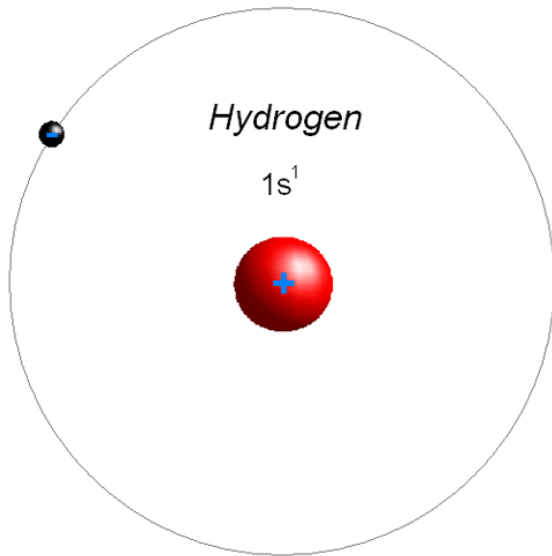


Figure 1

Box 4

First atoms/elements form:
The two smallest atoms-
hydrogen (H) and helium (He)



Box 5

Enough atoms were around
so...the bunch of atoms
could be pulled together (by
gravity) to form stars



Box 6

Millions of stars in an area
were held together by gravity
and formed GALAXIES



Galaxies: Three types



There are basically three types of galaxies:
Elliptical-are basically all bulge with no disk. They can range from spherical to elongated, football-like shapes

C-notes

Galaxies: Three types



Spiral- are spiral-shaped. Spiral galaxies have three main components: a bulge, disk, and halo

C-notes

Galaxies: Three types



Irregular
galaxies have
no regular or
symmetrical
structure.