

Name: \_\_\_\_\_

Hour: \_\_\_\_\_ Date: \_\_\_\_\_

## Chapter 25.3

### The Universe

#### The Milky Way Galaxy

- ⊙ A galaxy is a group of stars, \_\_\_\_\_, and gases held together by gravity.
  
- ⊙ \_\_\_\_\_ of the Milky \_\_\_\_\_
  - > The \_\_\_\_\_ Way is a large \_\_\_\_\_ galaxy whose \_\_\_\_\_ is about 100,000 \_\_\_\_\_ - \_\_\_\_\_ wide and about \_\_\_\_\_ light-years \_\_\_\_\_ at the \_\_\_\_\_.
  
- ⊙ \_\_\_\_\_ of the Milky Way
  - > \_\_\_\_\_ telescopes \_\_\_\_\_ that the Milky \_\_\_\_\_ has at least \_\_\_\_\_ distinct spiral \_\_\_\_\_, with some \_\_\_\_\_.

#### Types of Galaxies

- ⊙ \_\_\_\_\_ Galaxies
  - > About \_\_\_\_\_ percent of all \_\_\_\_\_ are \_\_\_\_\_ galaxies.
  - > They have \_\_\_\_\_ diameters of 20,000 to 125,000 \_\_\_\_\_-years and contain both \_\_\_\_\_ and \_\_\_\_\_ stars.
  - > Many spiral \_\_\_\_\_ look like a pinwheel.
  
  - > \_\_\_\_\_ spiral \_\_\_\_\_, like the Milky Way, have a \_\_\_\_\_ through their \_\_\_\_\_.
  
- ⊙ Elliptical Galaxies
  - > About \_\_\_\_\_ percent of \_\_\_\_\_ are classified as \_\_\_\_\_ galaxies.
  - > \_\_\_\_\_ galaxies range in shape from \_\_\_\_\_ to \_\_\_\_\_.
  
- ⊙ Irregular Galaxies
  - > Only \_\_\_\_\_ percent of the known \_\_\_\_\_ have \_\_\_\_\_ shapes and are \_\_\_\_\_ as irregular \_\_\_\_\_.
  - > In addition to \_\_\_\_\_ and \_\_\_\_\_, one of the major \_\_\_\_\_ among different \_\_\_\_\_ of galaxies is the \_\_\_\_\_.

\_\_\_\_\_ of stars. \_\_\_\_\_ galaxies contain  
\_\_\_\_\_ stars.

● Galaxy Clusters

➤ A galaxy cluster is a system of galaxies containing \_\_\_\_\_  
to \_\_\_\_\_ of member galaxies.

Hubble's Law

● The universe is \_\_\_\_\_.

● Hubble's law is a law that \_\_\_\_\_ that the \_\_\_\_\_ are  
\_\_\_\_\_ from the \_\_\_\_\_ Way at a \_\_\_\_\_ that  
is proportional to their \_\_\_\_\_.

● To help \_\_\_\_\_ the nature of the \_\_\_\_\_, imagine a loaf of  
\_\_\_\_\_ bread \_\_\_\_\_ that has been set out to \_\_\_\_\_ for a  
few hours. As the dough \_\_\_\_\_ in \_\_\_\_\_, so does the \_\_\_\_\_  
between all the \_\_\_\_\_. Those \_\_\_\_\_ located \_\_\_\_\_  
apart \_\_\_\_\_ away from each other more \_\_\_\_\_.

The Big Bang

● The big \_\_\_\_\_ theory \_\_\_\_\_ that at one time, the entire  
\_\_\_\_\_ was \_\_\_\_\_ to a dense, \_\_\_\_\_, supermassive  
\_\_\_\_\_.

● Then, about \_\_\_\_\_ billion years ago, a violent \_\_\_\_\_ occurred,  
\_\_\_\_\_ this \_\_\_\_\_ in all \_\_\_\_\_.

The Big Crunch?

● The future of the \_\_\_\_\_ follows two possible paths:

1. The \_\_\_\_\_ will \_\_\_\_\_ forever.
2. The outward \_\_\_\_\_ will \_\_\_\_\_ and gravitational  
\_\_\_\_\_ will follow.

● The \_\_\_\_\_ currently \_\_\_\_\_ by most \_\_\_\_\_ is an  
\_\_\_\_\_ universe with \_\_\_\_\_ ending point.

● However, \_\_\_\_\_ used to \_\_\_\_\_ the \_\_\_\_\_ of the universe  
have substantial \_\_\_\_\_.