Galaxy Classification Lab

(tap screen to begin)

What is a galaxy?

What is a galaxy?

A cluster of billions of stars held together by gravity.

LAST

NEXT

What is a galaxy?

Every point of light in this photo is an entire galaxy.

LAST

NEXT

What is a galaxy?

There are thought to be 100-200 billion galaxies in the Universe.

LAST

NEXT

With so many galaxies, astronomers needed to come up with a way of classifying, or organizing them for easier study.

LAST

NEXT

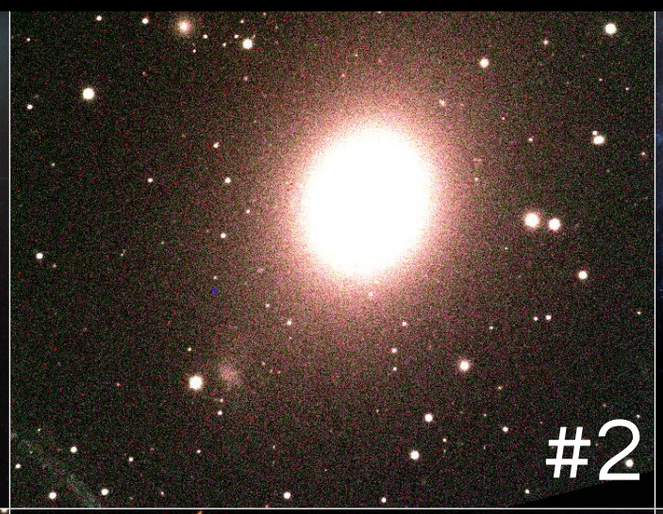
You are going to see photos of 12 galaxies. Please examine the photos and come up with a way to classify them. Describe your classification scheme and complete the classification on your lab sheet.

LAST

NEXT

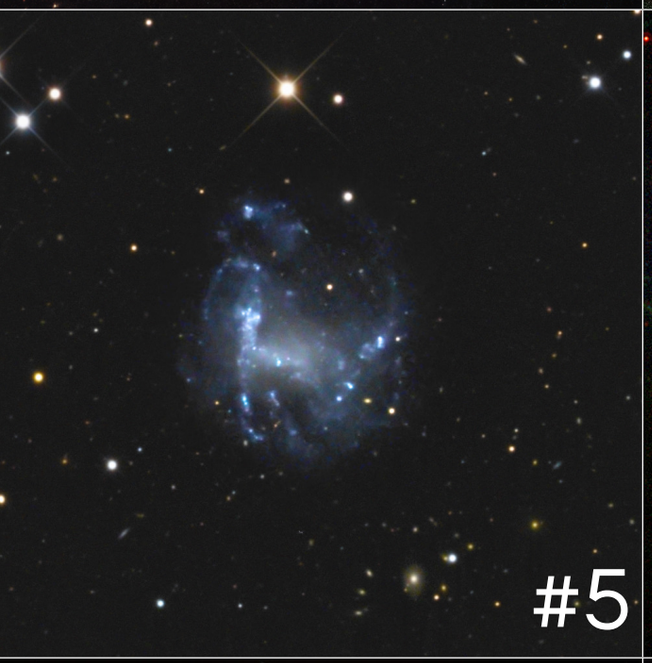
Tap on each image to see a larger version. When you are done, tap here.


#1


#2

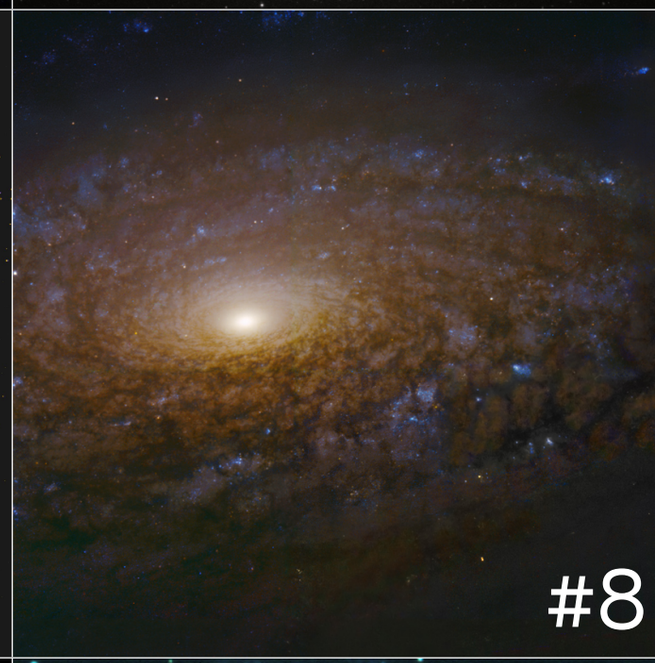

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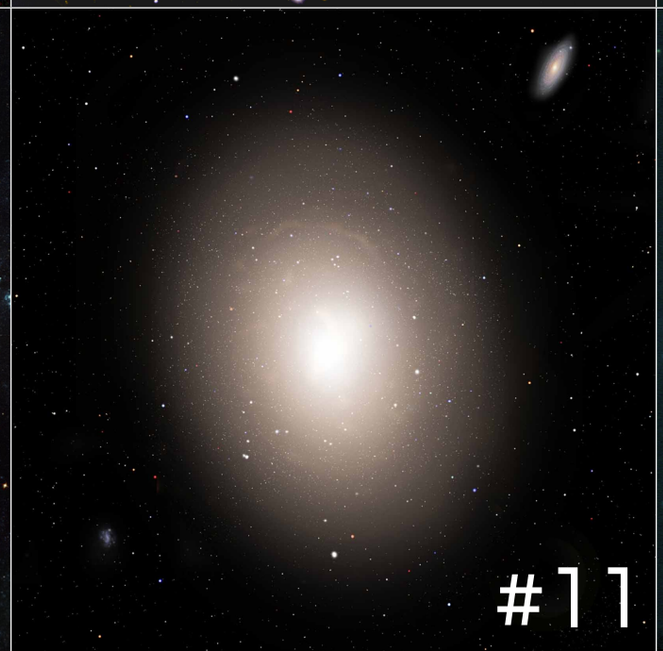

#6


#7


#8


#9


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#11


#12

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What galaxy do we live in?



NEXT

What galaxy do we live in?



We live in a spiral galaxy called the Milky Way.

LAST

NEXT

What galaxy do we live in?



Our galaxy is through to have formed soon after the Big Bang with an approximate age of 13.6 billion years.

LAST

NEXT



This is NOT a photo of the Milky Way, rather it shows another galaxy that we believe to be similar to ours.

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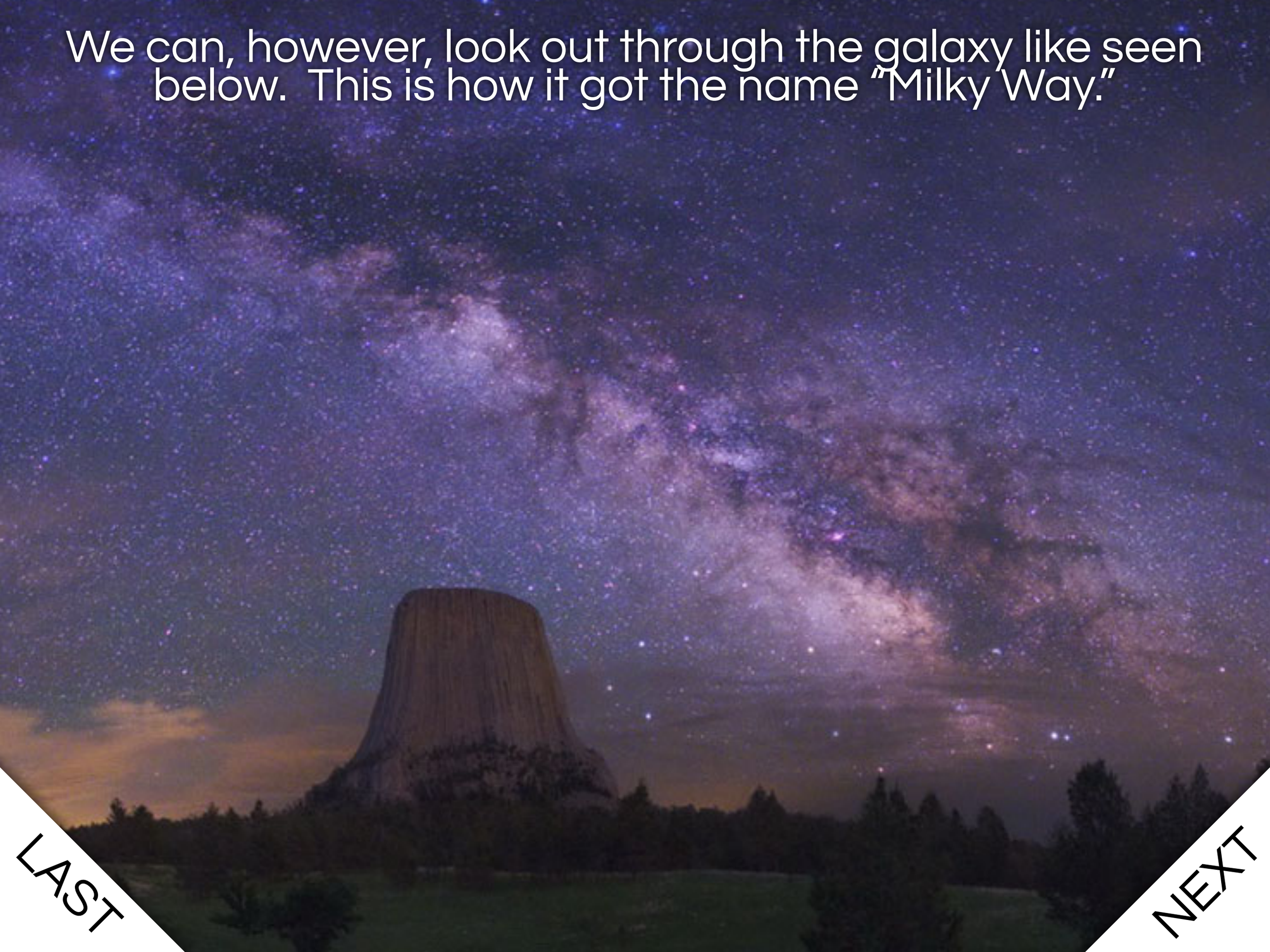


We cannot see our galaxy because we are currently unable to get outside of it, the distances are too great.

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NEXT

We can, however, look out through the galaxy like seen below. This is how it got the name "Milky Way."



LAST

NEXT



LAST

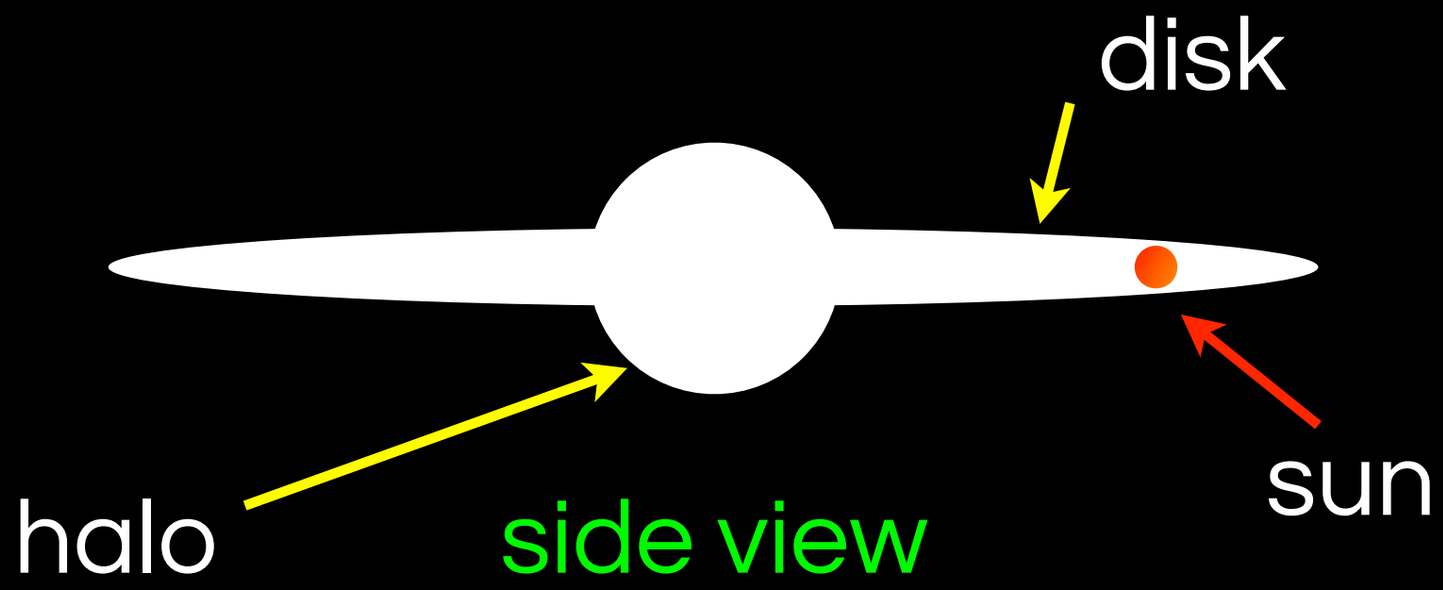
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The Sun and our Solar System is located in one of the spiral arms, out away from the center of the Milky Way Galaxy.

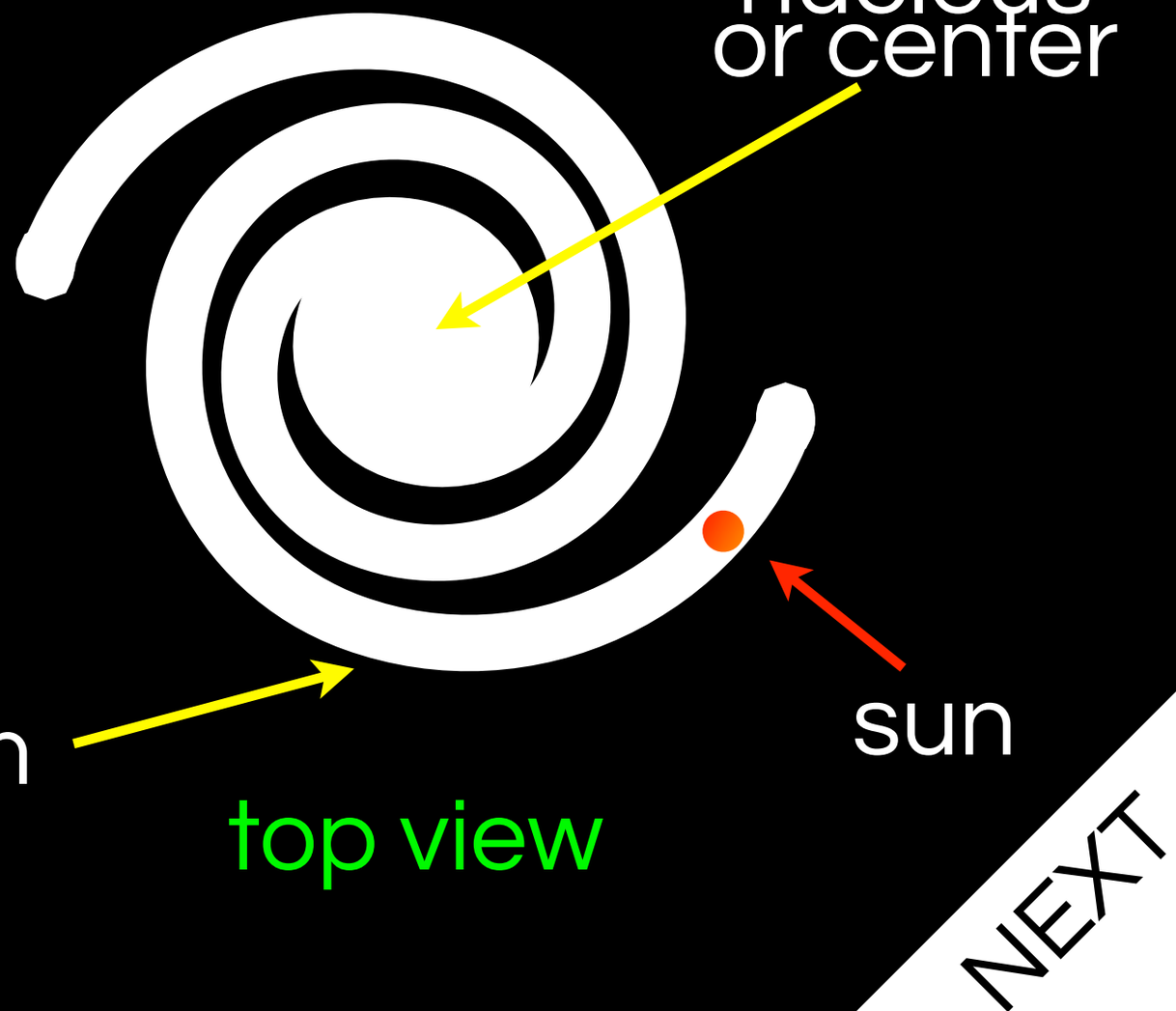


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NEXT



100,000 light years



LAST

NEXT

Please answer the following Regents questions

LAST

NEXT

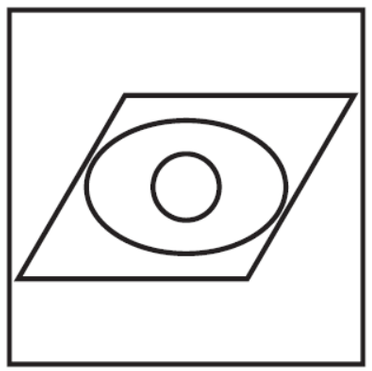
1. In which sequence are the items listed from least total mass to greatest total mass?

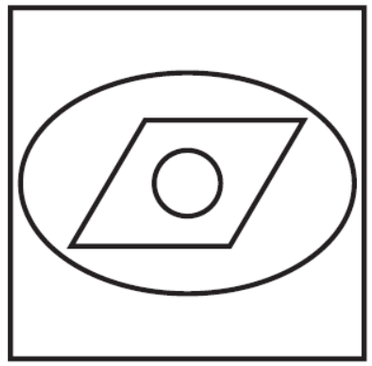
   A) solar system, Milky Way, universe
   B) Milky Way, solar system, universe
   C) universe, Milky Way, solar system
   D) Milky Way, universe, solar system

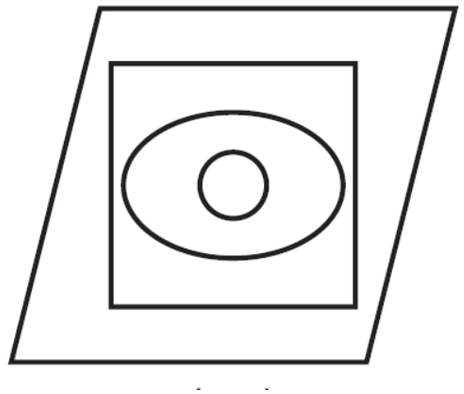
2. The symbols below are used to represent different regions of space.

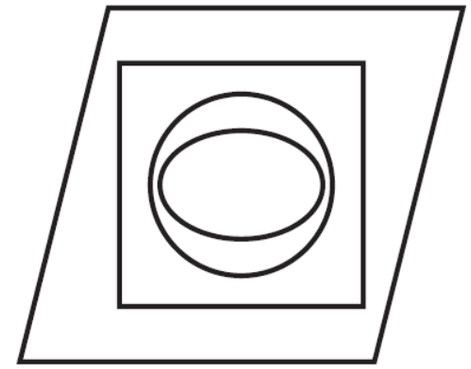
Universe =  Earth =  Galaxy =  Solar system = 

Which diagram shows the correct relationship between these four regions? [If one symbol is within another symbol, that means it is part of, or included in, that symbol.]

A) 

B) 

C) 

D) 

LAST

NEXT

3. Which sequence correctly lists the relative sizes from smallest to largest?

A) our solar system, universe, Milky Way Galaxy
B) our solar system, Milky Way Galaxy, universe
C) Milky Way Galaxy, our solar system, universe
D) Milky Way Galaxy, universe, our solar system

4. The diagram below represents the shape of the Milky Way Galaxy.



The Milky Way Galaxy is best described as

A) elliptical
B) irregular
C) circular
D) spiral

LAST

NEXT

5. Which celestial feature is largest in actual size?

A) the Moon

B) Jupiter

C) the Sun

D) the Milky Way

LAST

NEXT

6. The Milky Way galaxy is best described as

A) a type of solar system
B) a constellation visible to everyone on Earth
C) a region in space between the orbits of Mars and Jupiter
D) a spiral-shaped formation composed of billions of stars

7. The Sun's position in space is best described as the approximate center of

A) a constellation
B) the universe
C) the Milky Way galaxy
D) our solar system

LAST

NEXT

8. In which list are celestial features correctly shown in order of increasing size?

A) galaxy → solar system → universe → planet

B) solar system → galaxy → planet → universe

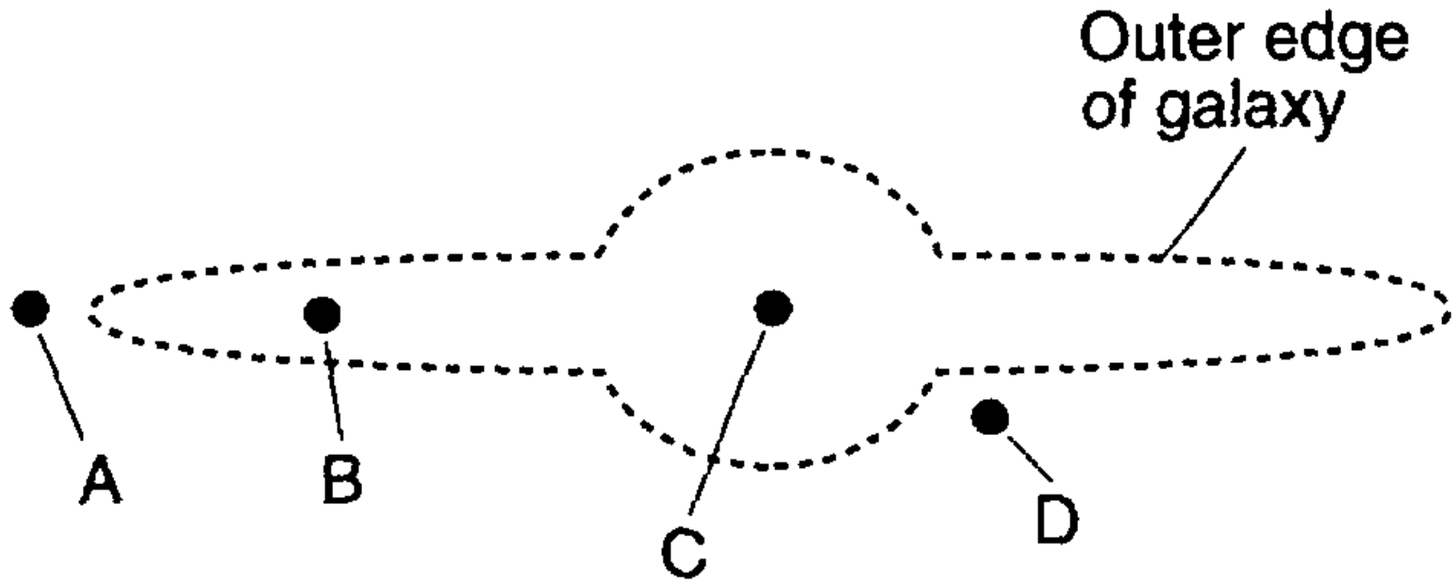
C) planet → solar system → galaxy → universe

D) universe → galaxy → solar system → planet

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9. The diagram below represents a side view of the Milky Way Galaxy.



(Not drawn to scale)

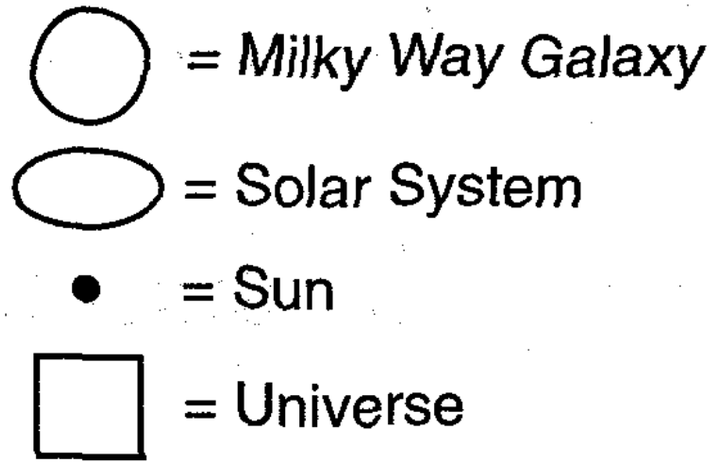
At approximately which position is Earth's solar system located?

A) *A* B) *B* C) *C* D) *D*

LAST

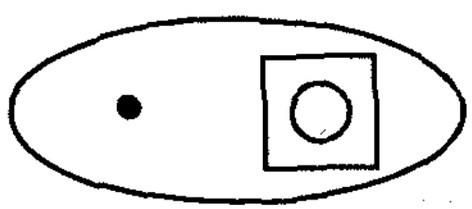
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10. The symbols below represent the Milky Way galaxy, the solar system, the Sun, and the universe.

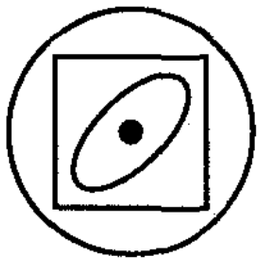


Which arrangement of symbols is most accurate?

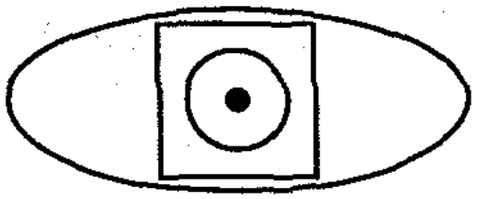
A)



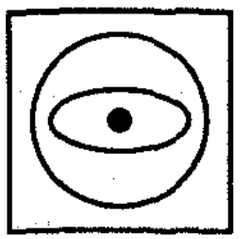
B)



C)



D)



LAST
NEXT

11. Which statement best describes galaxies?

A) They are similar in size to the solar system.

B) They contain only one star but hundreds of planets.

C) They may contain a few hundred stars in a space slightly larger than the solar system.

D) They may contain billions of stars in a space much larger than our solar system.

12. Billions of stars in the same region of the universe are called

A) solar systems
B) asteroid belts
C) constellations
D) galaxies

LAST

NEXT

You're Done

Back to the start