

ASTRONOMY HOMEWORK PACKET

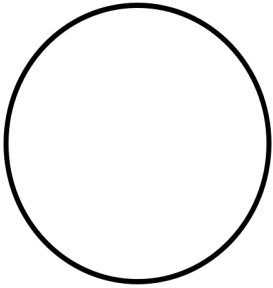
Name:

Due:

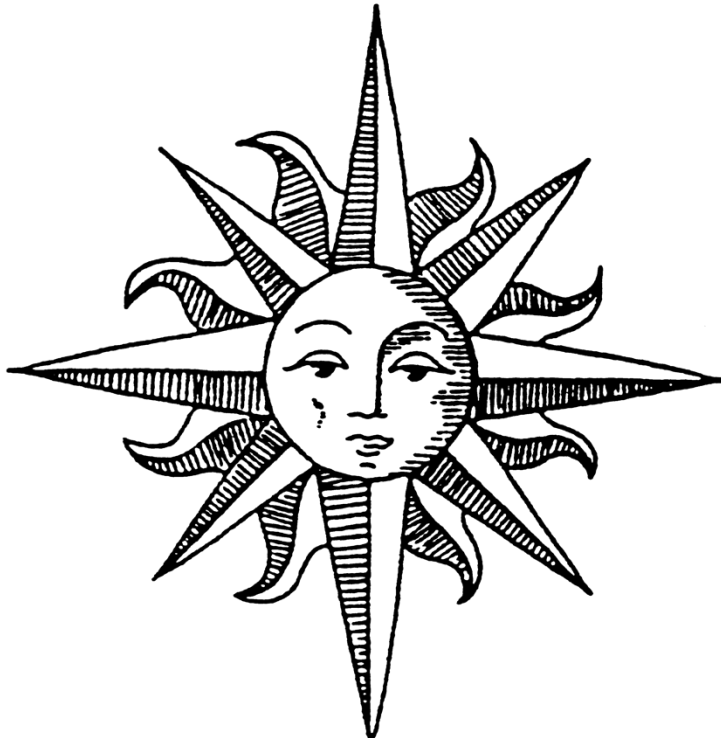
Use this space to describe... (Check diamond when done)

- ◇ The order and names of planets.
- ◇ Other bodies in our solar system.
- ◇ Distances, relative size to each other

M
V
E
M
-
J
S
U
N



Please list ten factoids about the sun around the picture below. Color to your taste!



Fusion

Free Neutrons

ENERGY

Free Neutrons

ENERGY

Free Neutrons

Free Neutrons

Hydrogen Hydrogen

Helium

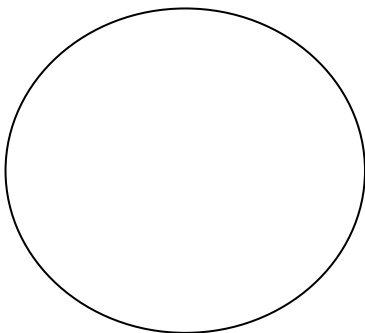
Hydrogen Hydrogen

◇ Where does the energy in our solar system come from? ◇ A strong answer will use the picture on the left for details.

Use the boxes below to DRAW and DESCRIBE the life cycle of a generic star. You can pick its future!



--	--	--	--

If the Circle is a Super Red Giant then draw our sun next to it in the space below.



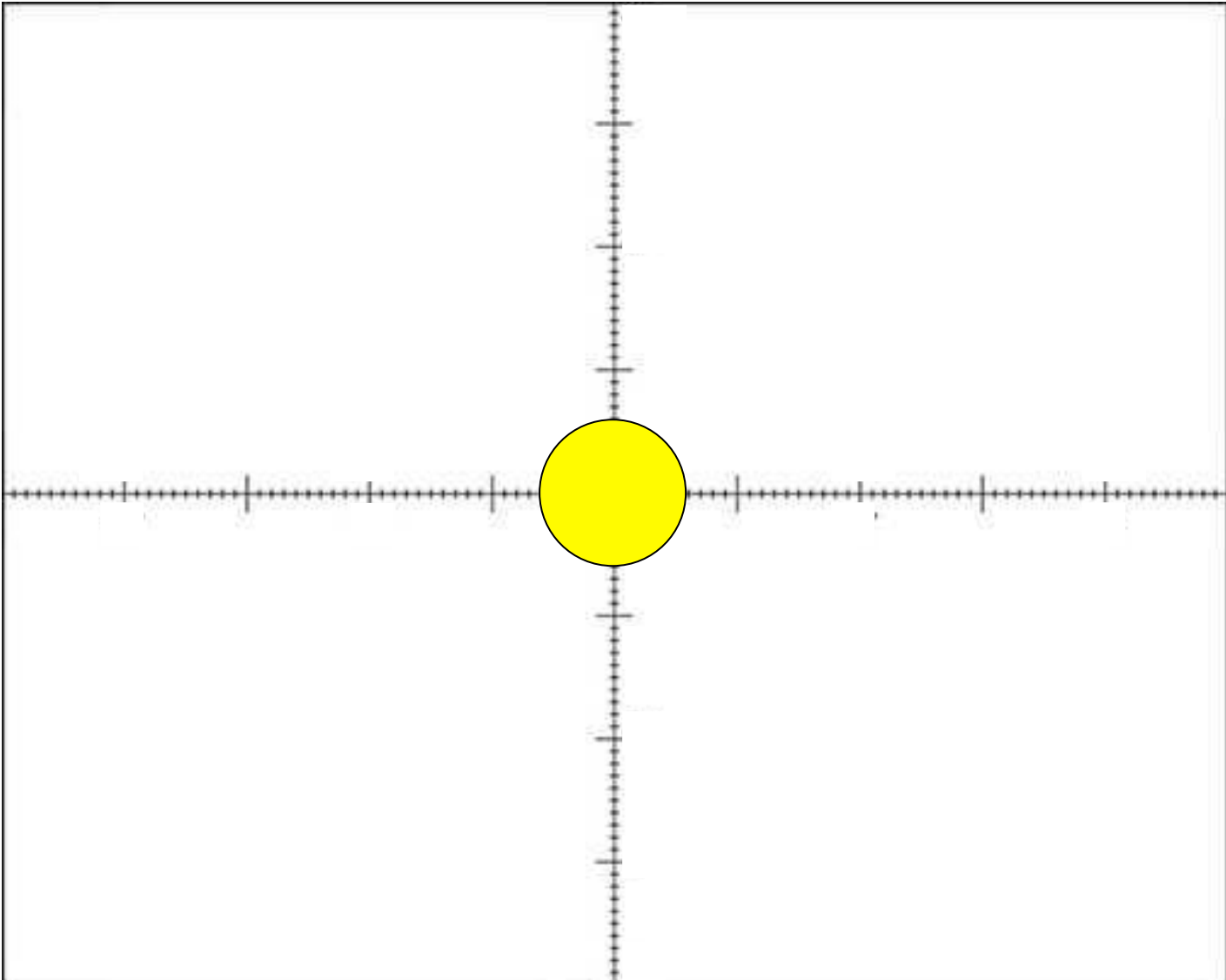
◇ What is an exoplanet? ◇ Provide some information about any exoplanet below.
 Visit <http://exoplanets.org>
 (Do this question at Part V not now.)

Please use your knowledge of a solar and lunar eclipse by drawing a visual in the boxes below.

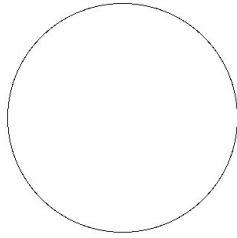
<p>Solar Eclipse</p> 	<p>Lunar Eclipse</p> 
--	--

Provide information about the inner planets below next to each planet.

- ◇ Sketch of all the planets
- ◇ Size
- ◇ Composition
- ◇ Rotational Period
- ◇ Year
- ◇ Moons
- ◇ Temperature
- ◇ Neat facts that you know.

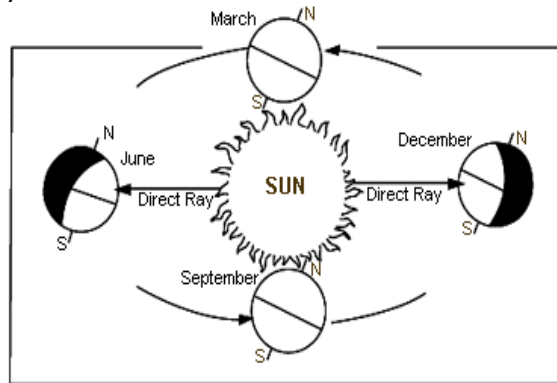


Please draw the axis of the earth below as it spins around our solar system on the elliptical plane.

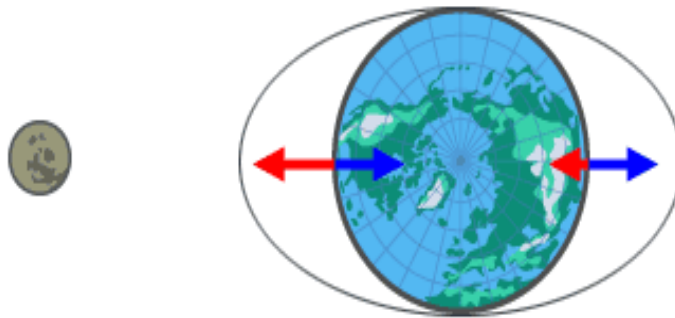


Provide some information about our home planet earth below.

Why does this axis cause a change in the seasons? Use the picture to help you.



- ◇ Please describe how the earth, moon, and sun create tides.
- ◇ How many tides do we have a day? The picture below can help you.
- ◇ What will the tide be at 12:15 PM on the 4th of July of this Year?



◇ Please provide information about our moon. ◇ Please include information about the Apollo Missions.

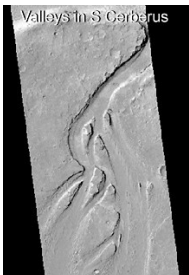


◇ Use the boxes below to draw and describe the phases of the moon. ◇ Make sure you label them correctly.

--	--	--	--	--	--	--	--

◇ Circle what phase the moon will be On July 4th of this year?

Tell me all that can about this planet and these pictures.



Valleys In S. Corberus

NASA/JPL/MSSS MOC image M21-01914

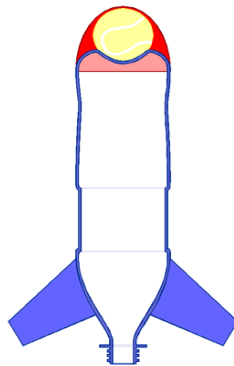
Why doesn't the Earth have as many craters as other planets?



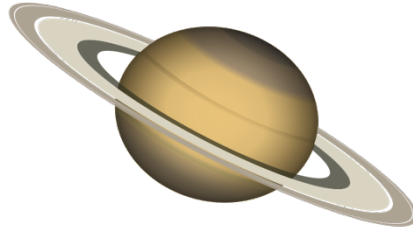
- ◇ Describes earth's violent past with regard to impact events?
- ◇ What may the future bring us?
- ◇ What is the difference between an asteroid, meteor, and meteorite?



◇ Please describe the parts of a rocket below. ◇ What are some parts of a basic rocket and how do they work?



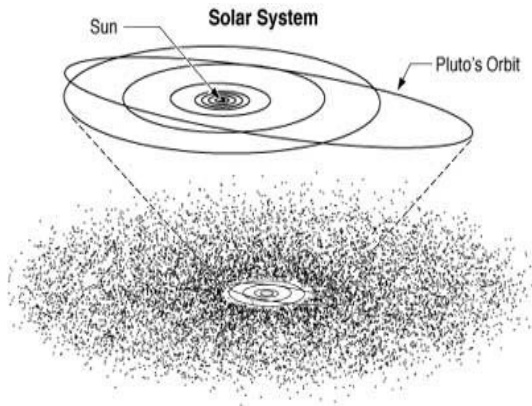
◇ Please provide some information about the outer planets below. ◇ Size, ◇ rotational period, ◇ year, ◇ moons, ◇ composition, ◇ temp. ◇ Other facts.



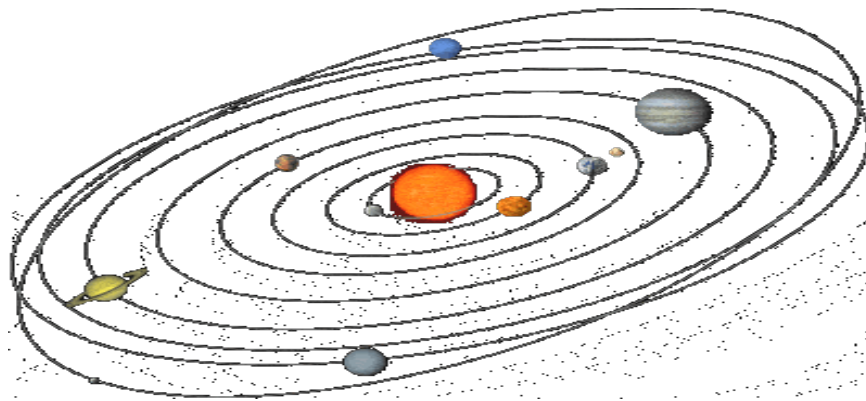
This is after Saturn but
before Neptune








- ◇ Should Pluto be reinstated as a planet instead of a Dwarf Planet?
◇ Use your knowledge of the 70,000 objects in the Kuiper Belt within your answer.



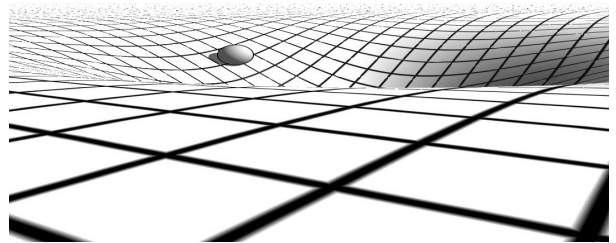
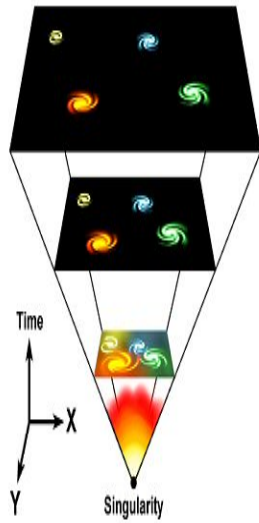
Please draw a typical orbit of a comet in our solar system. Provide a few pictures showing the tail. Label the objects in the solar system as well.



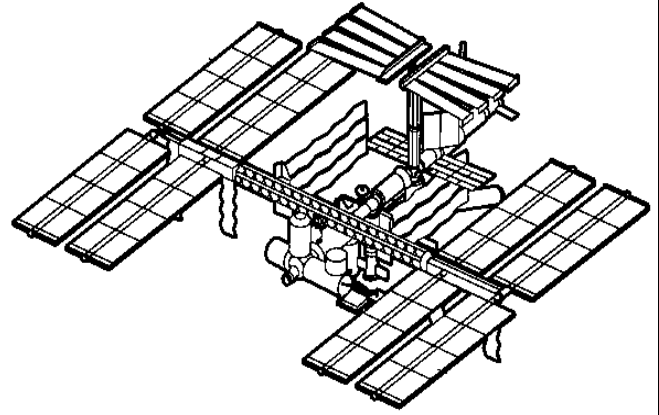
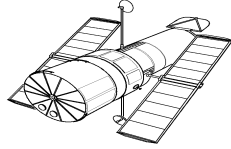
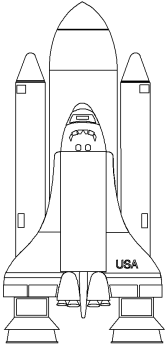
Venus					Saturn	Uranus	
-------	---	---	---	---	--------	--------	---

What is the Big Bang Theory?
Evidence?

Describe the picture below as best as you can? Think multi-dimensional!



- ◇ Please name and provide information about the pictures below.
- ◇ Who owns them?
- ◇ What do they do?
- ◇ What are some of their parts?
- ◇ How do they use or get energy?



Name the terms / planet / other associated with the following words. If you don't know what some of the terms are...look them up!

Phobos and Deimos _____

Water Exists in all three states of matter _____

Spirit, Opportunity, and Curiosity are there _____

Io and Europa _____

Giant Red Spot _____

Hottest Planet in the Solar System _____

Tethys, Telesto, Calypso, Titan _____

Symbol for Men _____

Symbol for Women _____

Olympus Mons _____

Valles Marineris _____

Has two Ice Caps _____

Apollo Missions visited here _____

A very long day _____

Largest Planet in our Solar System _____

Has the most moons _____

Is made up of 70,000 objects _____

Now considered a Dwarf _____

Chunks of a comet recently hit this planet _____

I am after Saturn but before Neptune _____

Has lakes of liquid methane _____

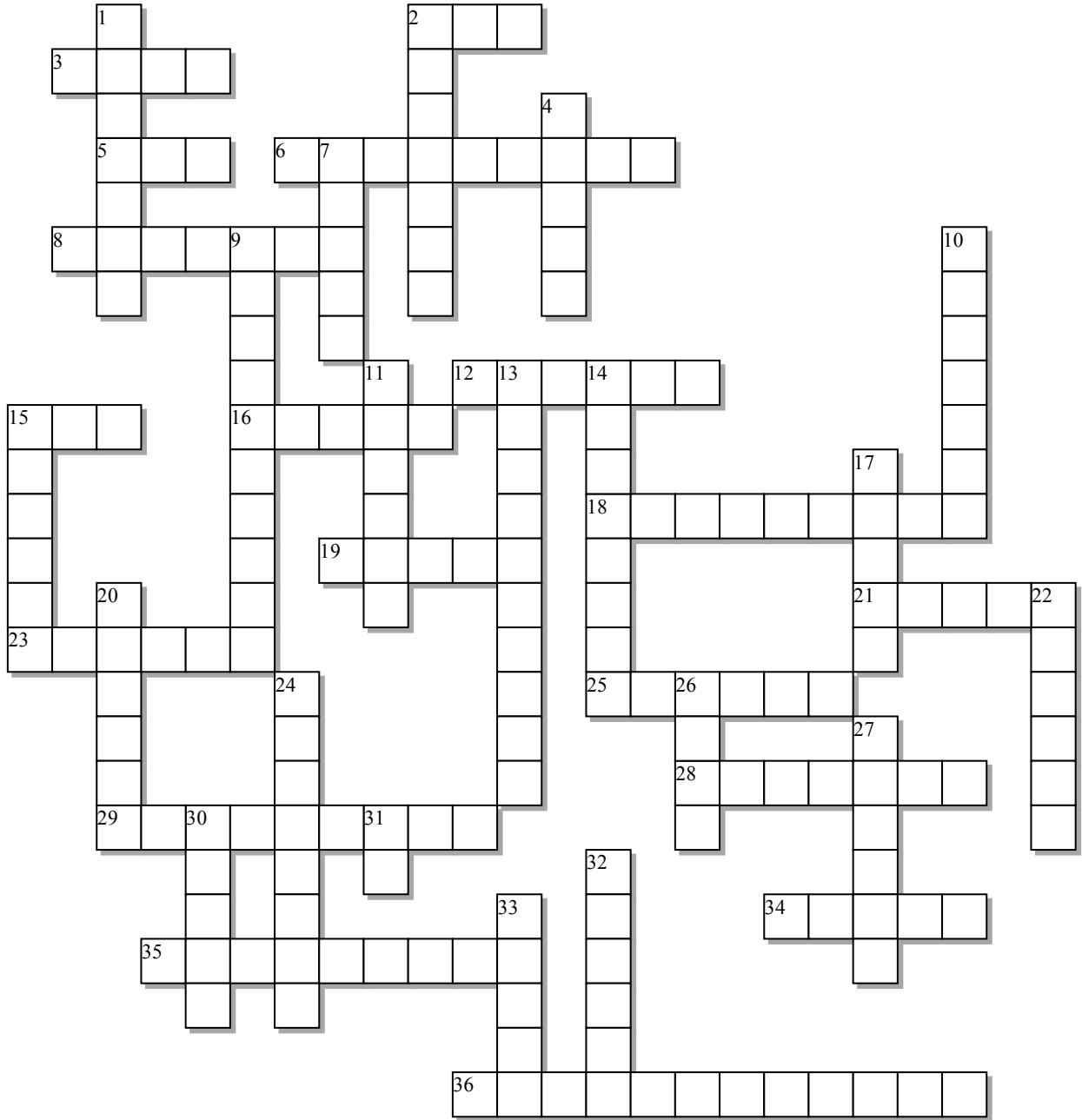
T H T F A R C E C A P S P E L F A I R S
 O R B I T S R T S P M E M I E V R E S O
 N T O D S P S A E A R I G O O T I Q H R
 S S F I R A U O T I T H L N O R O U E E
 R O T O E C N E G S T E R K U N B I C D
 A L E R M E O E P Y Y E L A Y B O N A G
 S A C E O S E N E O P R T L L W N O P I
 L R L T N H T A S U C N A E I S A X S A
 U W I S O U R R S T E S F N O T M Y P N
 P I P A R T A H E C E R E L I M E A E T
 O N S P T T O N A G A L A L W B T U E G
 A D E O S L A M A W S R L Y E S E R D A
 L R D G A E I L D R S A E A T T O O N L
 U E I E E X A E A Y I L N L T I R R C I
 B T T E O X T S S I R A L O P I V A E L
 E A A R I I A T M O S P H E R E O A S E
 N R P E H U E L O H K C A L B O K N R O
 R C S W Q M M U N I V E R S E S C T A G
 A N D R O M E D A G A L A X Y R O N P G

Words associated with Astronomy Topics can be found in the word search above. Please circle and then record **at least 15** in the boxes below. There are 49 words total.

1)	2)	3)	4)
5)	6)	7)	8)
9)	10)	11)	12)
13)	14)	15)	16)
17)	18)	19)	20)

Astronomy Topics Unit Crossword

Name: _____



Possible Answers:

Asteroids, Astronomical, Astronomy, Bang, Blackhole, Comet, Earth, Full, Galaxy, Giant, Gravity, Hubble, Hydrogen, Io, ISS, Jupiter, Kuiper, Lunar, MC2, Mercury, Meteorite, Nebula, Neptune, Neutron, Notation, Orbit, Plasma, Quasar, Relativity, Relativity, Saturn, Solar, Spring, Sun, Tides, Titan, Uranus, Venus

ACROSS

- 2 - $E=mc^2$
- 3 - Phase of the moon between waxing gibbous and waning gibbous
- 5 - International Space Station abbreviation
- 6 - A region of space resulting from the collapse of a star with an extremely high gravitational field.
- 8 - Type of star leftover when a large star collapses. (Creates Black hole)
- 12 - 3rd largest planet, mostly made of methane that absorbs red and reflects blue
- 15 - By far the largest object in our solar system
- 16 - Largest moon on Saturn
- 18 - Natural science that deals with the study of celestial objects
- 19 - The path (usually elliptical) of one celestial body in its revolution around another.
- 21 - This planet has a strong EM field that protects it.
- 23 - Large group of stars, gas, and dust that constitute the universe. By a large group, we mean hundreds of billions.
- 25 - Large cloud of gas and dust which can form stars and galaxies
- 28 - Outermost gas giant, made of some molten Rock, methane, water, ammonia
- 29 - Rocky and metallic objects that orbit the Sun but are too small to be considered planets.
- 34 - Gas Giant: A large, massive, low-density planet composed primarily of hydrogen, helium, methane, and ammonia in either gaseous or liquid state.
- 35 - Space matter that has fallen to the earth's surface from outer space.
- 36 - AU = Astronomical Unit, Distance from earth to the sun. (93 Million Miles, 150 Million Kilometers)

DOWN

- 1 - Largest Planet in the solar system. (63+ moons)
- 2 - Closest planet to the sun in our solar system
- 4 - Type of eclipse when the moon passes between the Sun and the Earth so that the Sun is wholly or partially obscured
- 7 - Type of eclipse when the earth interrupts light shining on the moon
- 9 - General Relativity: A theory of the structure of spacetime.
- 10 - The force of attraction between all masses in the universe.
- 11 - This planet could float in water, second largest in solar system
- 13 - Special Relativity: The laws of physics are equally valid in all frames of reference moving at a uniform velocity.
- 14 - Scientific Notation: A method for expressing, and working with, very large or very small numbers.
- 15 - The type of tide when the moon and sun are aligned (larger tide)
- 17 - A frozen mass (3-5 mile diameter) that travels around the sun in a highly elliptical orbit.
- 20 - This state of matter is electrically charge particles and makes up our sun.
- 22 - Name of a space telescope
- 24 - The is made up mostly this element
- 26 - Big Bang Theory: The cosmic explosion that is hypothesized to have marked the origin of the universe.
- 27 - Gigantic grouping of powerful stars.
- 30 - Tides are the rising of Earth's ocean surface caused by the gravitational forces of the Moon and the Sun acting on the oceans.
- 31 - Moon of Jupiter that looks like a rotten orange.
- 32 - Asteroid Belt: A disk-shaped region of minor planets outside the orbit of Neptune.
- 33 - Earth's sister planet, very hot.