

Online Learning Lessons for 6th Grade

Directions: Please complete the following work below for each subject. This work will count toward your final grade and must be complete to get credit for attendance.

Student Name _____ FOR **4/24/2020**

ELA

Letter to the Future: You will write a (properly formatted) informal letter to your future self.

Parent Initials: _____

Math

All Math Classes: Watch the video lesson online or view the notes page on Combining Like Terms. Then complete the Quizizz: Combine Like Terms. Go to joinmyquiz.com and put in the code 001935. Use your first name and last initial. (Paper copy attached.)

Parent Initials: _____

Science

Outer Planets

Parent Initials: _____

History/Social Studies

None

Parent Initials: _____

Parent Signature: _____

If you have questions, please email your teacher.

Thank you!

Ms. Cook jcook@mcusd1.net

Ms. Couch scouch@mcusd1.net

Mr. Drenth rdrenth@mcusd1.net

Ms. McDermott smcdermott@mcusd1.net

Teacher Hours:
9:00 am - 11:30 am
12:30 pm - 2:30 pm

Outer Planets

Why are they called Gas Giants and what are some key characteristics?

The outer solar system is made up of four gas giants. They are Jupiter, Saturn, Uranus, and Neptune. Since they are so far away from the Sun they are able to hold onto their gas atmospheres and are made up mostly of gas but have solid rocky cores. Because they are so massive they have a greater gravity than the terrestrial planets. They also are much colder than the terrestrial planets since they are so far away from the Sun. They also all have rings, and many planetary satellites.





Basic facts:

Jupiter: This planet is the largest planet in our solar system. Its mass is twice as much as the other seven planets combined. Now that is massive. It is made up mostly of hydrogen gas and is known for its massive storm which is more like a hurricane that is the size of three Earths put together. Since it is made up of mostly gas it is able to spin around pretty quickly. In one Earth day Jupiter will have had three days, now that's fast. It also has the most planetary satellites. To date the number is at 67. It has the most gravity of all the planets.

Saturn: This planet is known for its many rings that circle it made of gas and ice. It is the least dense of all planets. In fact if you put Saturn in a tub of water it would actually float. It's amazing that something that massive could actually float. Crazy. Its atmosphere is mostly helium and hydrogen and its gravity pull could tear a comet apart if one got close enough.

Uranus: This planet does not reflect much light since it is so far from the sun. We know about it from our space probes that we sent out into space. The methane gas in its atmosphere is what gives it its greenish color. The rotation of Uranus is unique because it is so tilted it actually spins on its side. Its poles would be found in the same location as our equator, weird. This rotation causes one pole to be in complete darkness for half of its revolution. Could you imagine having night last half a year and day lasting the other half.

Neptune: This planet is the outermost planet in the solar system. Its blue color is caused by its methane gas in its atmosphere. There is a hurricane like storm that is the size of Earth. It has the fastest winds of any of the planets moving at more than 1,000km/h (a high wind on Earth is considered 100km/hr).

				
Distance from Sun	5AU	9 AU	19 AU	30 AU
Rotation (day/night)	9 hours	10 hours	17 hours	16 hours
Revolution (year)	11 Earth years	29 Earth years	83 Earth years	163 Earth years
Diameter (size)	142,984 km	120,536 km	51,118 km	49,528 km
Density	1.33 g/cm ³	0.69 g/cm ³	1.27 g/cm ³	1.64 g/cm ³
Gravity	236% of Earths	92% of Earths	89% of Earths	112% of Earths
Planetary Satellites	67	62	27	14

The planet information is current as of April 2015

Name: _____ Class: _____

Topic: Outer Planets Date: _____

Big Idea Question: Why are they called Gas Giants and what are some key characteristics?

Questions

What are some similar characteristics between all outer planets?

What is the difference between Jupiter and Saturn?

What is the difference between Uranus and Neptune?

Notes

Summary:



1. Comparing the planets: Fill in the data table

	1	2	3	4
Place the Planets in Order from Closest to the Sun to Farthest from the Sun				
Place the Planets in Order from Shortest Day to Longest Day				
Place the Planets in Order from Shortest Year to Longest Year				
Place the Planets in Order from Smallest Size to Largest Size				
Place the Planets in Order from Least Dense to Most Dense				
Place the Planets in Order from Least amount of Planetary Satellites to Most amount of Planetary Satellites				



2. Using Patterns: Compare the number of planetary satellites to the diameter, location from the Sun, and the density. Which characteristic do you think has the most influence on how many planetary satellites an outer planet will have? Explain your reasoning behind your answer.

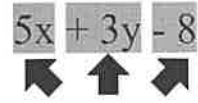
3. Why do you think the characteristic you chose in question 2 has more influence on the number of planetary satellites than the other characteristics?explain

4. Thinking beyond the table, what is another factor that could be influencing the number of planetary satellites the outer planets have?explain

Combine Like Terms

Page 1

Vocabulary:

$$\boxed{5x} + \boxed{3y} - \boxed{8}$$


terms

(numbers, variables, or the product of a number and a variable)

Page 2

Vocabulary:

$$\underline{5}x + \underline{3}y - 8$$

coefficients

(numerical factors of a term, or the number before a variable)

Page 3

Vocabulary:

$$5x + 3y - 8$$

variables

(symbols that represent numbers that are unknown or can change)

Page 4

Vocabulary:

$$5x + 3y - 8$$

constant

(a term that has no variable, or a number by itself)

To simplify an algebraic expression means to make it simpler.

In other words, rewrite the expression in the most compact way, without changing the **value** of the expression. It's like organizing the expression and making it neater!

Like terms have exactly the same variable factors

*** LIKE TERMS**

3x, -2x

-2, 5

$9n^2, 3n^2$ ~~$9n, 3n^2$~~

100, 1

4n, 5n

3xy, 4yx

NOT LIKE TERMS

3x, 3y

-2, 5x

9n^2, 2n

2a^2b, 3ab^2

Example:

$$\begin{array}{c} (4a) + (7) + (2a) \\ 6a + 7 \\ \boxed{6a + 7} \end{array}$$

Example:

$$\underline{4x} + 3 - \underline{3x} + 8 + 2$$

$$x + 13$$

$$\boxed{x + 13}$$

Page 9

Example:

$$3v + 4 + 5v + 3$$

$$\boxed{8v + 7}$$

Page 10

Example:

$$3z + 5 - 2z + 1$$

$$z + 6$$

$$\boxed{z + 6}$$

Page 11

Example:

$$4c + c - 2c$$

$$5c - 2c$$

$$\boxed{3c}$$

Page 12



Combine Like Terms

12 Questions

NAME : _____

CLASS : _____

DATE : _____

1. $2f + f$

a) $3f$

c) f

b) $2f$

2. Simplify the expression: $2x + 1 + 7x$

a) $10x$

c) $9x + 1$

b) 10

d) $9 + 1x$

3. Simplify the expression: $7v + 2 + 12 + 2v$

a) 23

c) $9 + 14v$

b) $23v$

d) $9v + 14$

4. $5a + 2a + 2a$

a) $9a$

c) $7a$

b) $8a$

5. $3b + b - 2b$

a) $3b$

c) $2b$

b) b

6. $6x + 2x + 1 + 4$

a) $8x + 5$

c) $4x - 2$

b) $2x - 3$

d) $8x + 12$

7. $6x + 2x + 1 + 4$

a) $8x + 5$

c) $4x - 2$

b) $2x - 3$

d) $8x + 12$

8. $11 + 6x - 2x$

a) $8x + 11$

c) $4x$

b) $4x + 11$

d) $15x$

9. $5x + 3x - 9$

a) $7x - 9$

c) $8x - 9$

b) $17x$

d) $-x$

10. $8y + 5 - 2y$

a) $6y + 5$

c) $10y + 5$

b) $11y$

d) $15y$

11. $12n + 7 - 9n$

a) $28n$

c) $21n + 7$

b) $10n$

d) $3n + 7$

12. Simplify the expression: $2x + 1 + 7x$

a) $10x$

c) $9x + 1$

b) 10

d) $9 + 1x$