



Zest for Progress  
Zeal of

6

Science

Quarter 4 - Module 8  
How Do Planets Differ?



Name of Learner: \_\_\_\_\_

Grade & Section: \_\_\_\_\_

Name of School: \_\_\_\_\_

- JANUARY  
*Makugihon*
- FEBRUARY  
*Mahigugmaon*
- MARCH  
*Matinabungan*
- APRIL  
*Matinahuron*
- MAY  
*Mahapsay og Malinpyo*
- JUNE  
*Maabtik og Musunod sa  
Oksaklong Oras*
- JULY  
*Maantigo og Maabilidad*
- AUGUST  
*Maginhumanunon  
para sa Uban*
- SEPTEMBER  
*Madagineton*
- OCTOBER  
*Matinud-anon*
- NOVEMBER  
*Masaligan*
- DECEMBER  
*Maalampon*



## What I need to know

This module was designed and written with you in mind. It is here to help you master the concept. With the extent of this module, it allows to be used in acquiring new information. The language used recognizes the multiple intelligence of the students. The lessons are arranged to follow the quality sequence of the course.

After going through this module, you are expected to:

- Describe the characteristics of the outer planets in the solar system showing their relative size and their distance from the sun.
- Construct a model of a solar system (outer planets) showing the relative size of the planets and their distances from the sun.



## What's In

**Score**

10

Hey kid! Are you excited to learn new lesson? Come on, answer the activity?

## ACTIVITY 1: “Choose Me”

Directions: Determine which planet is being described in each sentence. Choose your answer from the choices in the box. Write only the letter of your answer on the line provided before each number.

a. Jupiter      b. Saturn      c. Uranus      d. Neptune

- \_\_\_\_\_ 1. It is the largest of the Jovian planets.
- \_\_\_\_\_ 2. The sixth planet from the sun.
- \_\_\_\_\_ 3. It has the biggest and most visible rings.
- \_\_\_\_\_ 4. It is the planet farthest from the sun.
- \_\_\_\_\_ 5. It is considered Neptune’s twin planet.
- \_\_\_\_\_ 6. It is the biggest planet in the solar system.
- \_\_\_\_\_ 7. Its ring rotates up and over the planet.
- \_\_\_\_\_ 8. It is famous for its Great Red Spot.
- \_\_\_\_\_ 9. This planet has 13 moons.
- \_\_\_\_\_ 10. It is the second biggest planet in the solar system.



## What's New

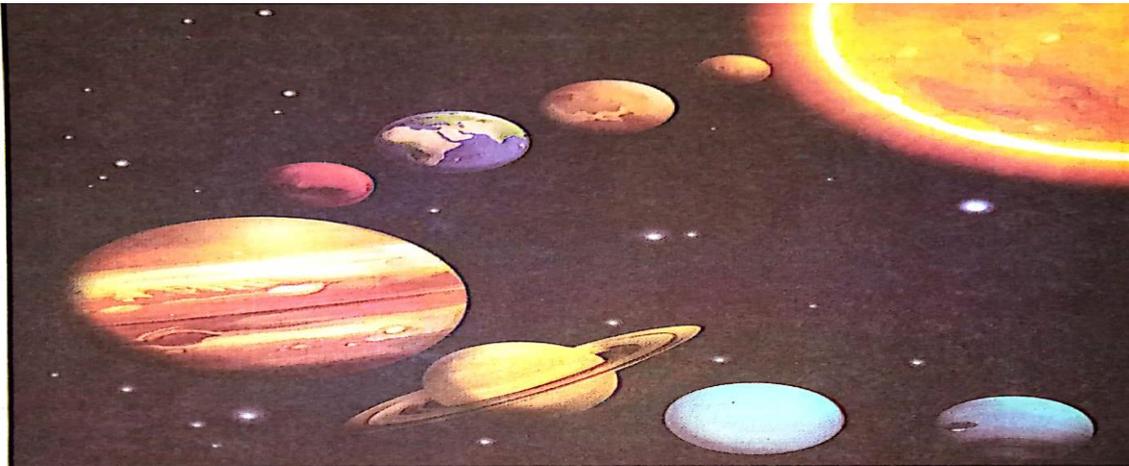
Hey kid! Welcome  
to the next activities?

### ACTIVITY 2: "Name It"

Planets are large round objects that revolve around the sun. The solar system consists of eight planets and classified into inner and outer planets. Study the diagram below and answer each question that follows.

**Score**

5



1. As shown on the illustration above, which planet have rings?

\_\_\_\_\_

2. What are some characteristics of outer or Jovian planets?

\_\_\_\_\_

3. What is the second largest planet?

\_\_\_\_\_

4. What are the identified outer planets?

\_\_\_\_\_

5. How would you describe Jupiter?

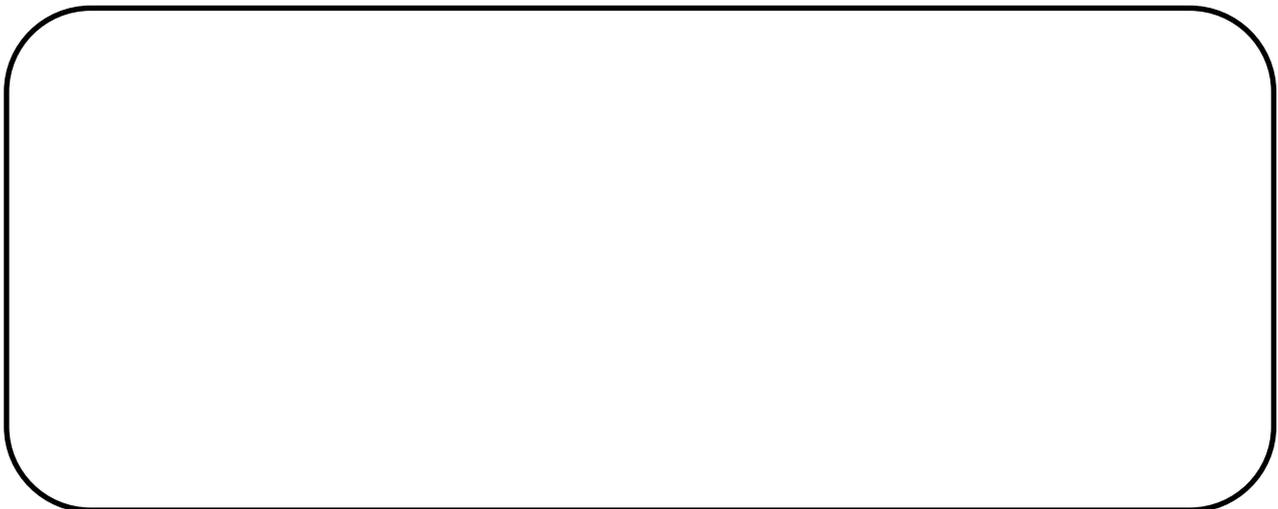
\_\_\_\_\_

### ACTIVITY 3: “Let’s Measure”

Score
<hr/>
10

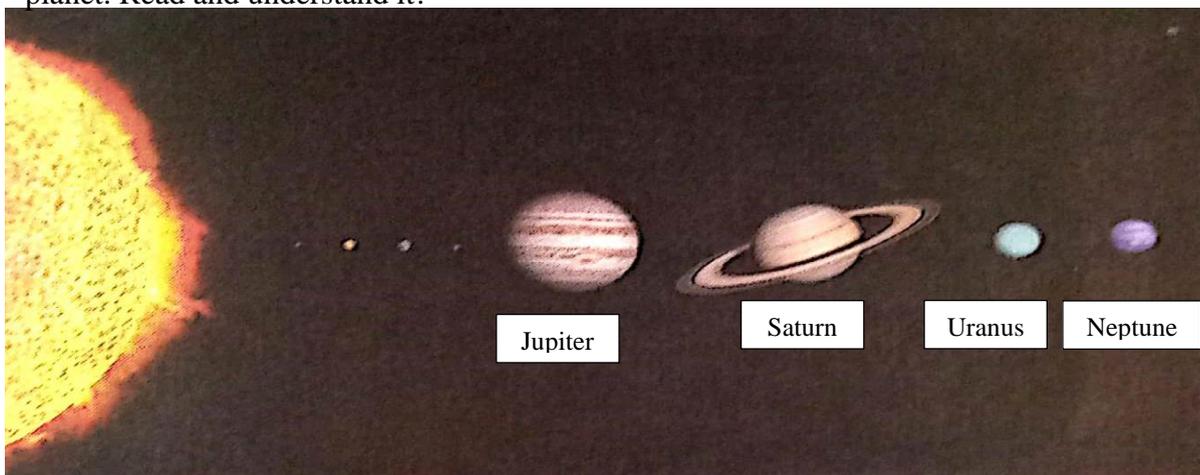
- I. Observe the chart of the solar system below.
- II. Compare the sizes and their distance from the sun.
- III. On the box below the chart, make an illustration of how the outer planets may look like in relation to its distance from the sun.

Planet	Approximate Distance from the sun (millions of km)	Approximate Diameter (km)
1. Jupiter	778	142, 984
2. Saturn	1,427	121, 536
3. Uranus	2,871	51, 118
4. Neptune	4,498	49,528



#### What is It

In addition to your learning, here is the brief explanation about the characteristics of outer planet. Read and understand it!



## The Outer Planet

Jupiter, Saturn, Uranus and Neptune are considered Jovian planets. They are known the gas giants, or huge planets made of gas, because they do not have solid surfaces. These planets, especially Jupiter and Saturn, are made up of gaseous substance, which consist mainly of hydrogen. Helium and hydrogen compounds such as methane and ammonia also make up Jovian planets. However, scientists believe that these planets are not composed entirely of gas. Uranus and Neptune are also made up of frozen water.

Jupiter, which was named after the chief Roman god, is the largest of the Jovian planets and in the solar system as well. It is covered with mostly hydrogen and helium clouds. Jupiter has the Great Red Spot that covers a diameter of about three times that of the Earth. Has 63 known moons, and its four largest moons are called Io, Europa, Callisto, and Ganymede. Ganymede is the biggest satellite of Jupiter and also the biggest among the satellites of all the planets in the solar system.

Saturn, the second largest planet, is named after the Roman god of agriculture. It is the sixth planet from the sun. Out of 62 moons discovered in Saturn, only 53 moons are officially named. Titans, Atlas and Calypso are some of these moons. Titan is Saturn's biggest satellite.

Uranus, the seventh planet from the sun, was named after the Roman god of the sky. Uranus also has hydrogen, helium, and ice in its atmosphere; hence, scientist call it an ice giant. Uranus has 27 moons and some of them are named Miranda, Ariel, and Titania.

Neptune, which was named after the Roman god of the sea, is the smallest of the gas giants. Scientist consider Uranus and Neptune twin planets because both are about the same size. Triton is its most unusual moon because it orbits Neptune in opposite direction from east to west.

Planets	Average Distance from the Sun	Temperature	Time to revolve around the sun	Time to make a complete Rotation	Equatorial Diameter	Number of Moons
Jupiter	774 million km	-149 <sup>0</sup> c at cloud tops	12 years	10 hours	142 984 km	63
Saturn	1.4 billion km	-176 <sup>0</sup> c at cloud tops	29 years	10 hours	120 536 km	62
Uranus	2.9 billion km	-215 <sup>0</sup> c	84 years	17 hours	51 118 km	27
Neptune	4.5 billion km	-214 <sup>0</sup> c	165 years	16 hours	49 532 km	13



## What's More

You have come a long way in your module! Now answer the following activities. Good luck!

Score

5

### ACTIVITY 4: "Fill It"

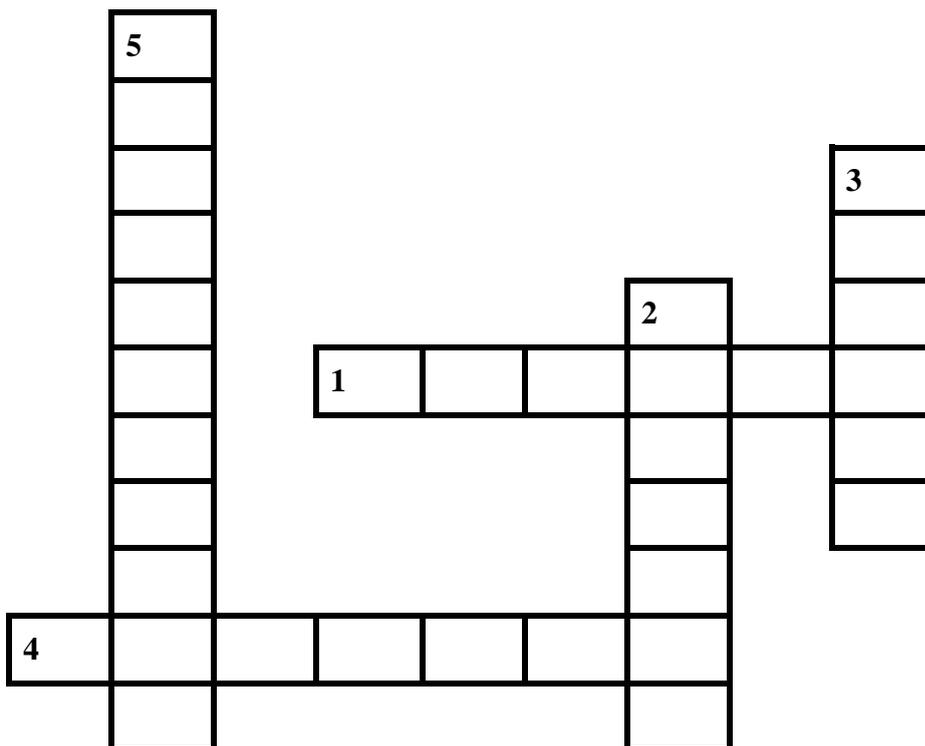
Directions: Using the clues provided, answer the CROSSWORD PUZZLE below.

#### Across

1. The planet name after the Roman god of agriculture
3. Has 27 moons

#### Down

2. Has the Great Red Spot
4. The fourth largest planet by diameter and third largest by mass
5. It is defined as a central sun with its accompanying planets, asteroids, meteors, satellites





## What I Have Learned

Amazing! You have reached this page.  
Now complete this activity. Come on!

**Score**

5

## ACTIVITY 5: “Complete Me”

Direction: Complete the table below. Fill in the correct answer.

Planets	Average Distance from the Sun	Temperature	Time to revolve around the sun	Time to make a complete Rotation	Equatorial Diameter	Number of Moons
Jupiter	774 million km	-149 <sup>0</sup> c at cloud tops	2.)_____	10 hours	142 984 km	63
Saturn	1.4 billion km	-176 <sup>0</sup> c at cloud tops	29 years	3.)_____	120 536 km	62
Uranus	1.)_____	-215 <sup>0</sup> c	84 years	17 hours	4.)_____	27
Neptune	4.5 billion km	-214 <sup>0</sup> c	165 years	16 hours	49 532 km	5.)_____



## What I Can Do

*(Note: This activity is a continuation of last week’s activity.)*

Directions: Construct a model of a solar system with the outer planets showing their relative sizes and distances from the sun. You can use Styrofoam balls or cardboard for the planets; and barbeque stick to show their distances from the sun.

The following are the suggested color and size of the planets:

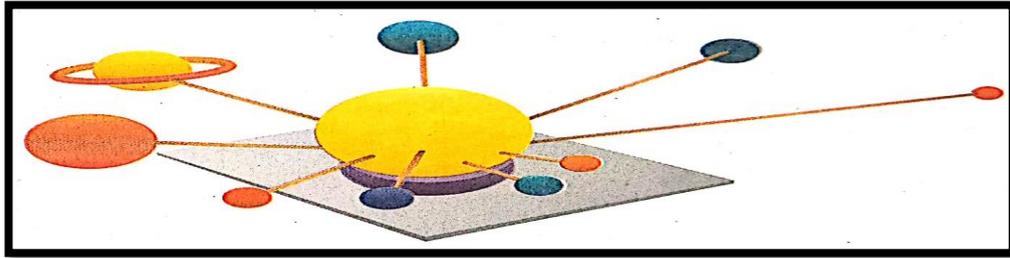
- ✚ Jupiter (brownish with red spot) 10cm
- ✚ Saturn (yellow with red ring) 8 cm
- ✚ Uranus (green) 10 cm
- ✚ Neptune (blue) 8 cm
- ✚ Sun (yellow) 25 cm

Name each of the planet correctly.

The following is the scale to be used to show the planets’ distance from the sun.

Distance from the Sun	Equivalent in inches
251 - 1150 million km	12 in
1151 – 2050 million km	14 in
2051 – 2950 million km	16 in
2951 – 3850 million km	20 in
3851 – 4750 million km	22 in

Sample Output:



RUBRICS				
	Points			
	5	4	3	2
<b>Correctness</b>	All the planets are in correct order, distinct physical features were shown correctly.	All the planets are in correct order, few physical features are shown.	Some of the planets are not in correct order, no physical features are shown.	Planets are not in correct order; no physical features are shown.
<b>Originality/ Creativity</b>	Work shows best effort.	Work shows a lot of effort.	Work shows a little effort.	Work shows no effort
<b>Proportion</b>	All of the planets are correctly proportioned	Most of the planets are correctly	There's a couple of mistakes with the proportion of the planets	Planets are not correctly proportioned.
<b>Distance</b>	Distances of all planets are correct based on the given scale.	Distances of most planets are correct based on the given scale.	There's a couple of mistakes with the distance of the planets based on the given scale.	Distances of the planets are all incorrect based on the given scale.



## Assessment

Hey kid! You are about to end this fun module. But take this assessment to evaluate if you understand your lesson. Good luck!

Directions: Encircle the letter of the best answer.

- Which is the second largest planet?
  - Jupiter
  - Saturn
  - Uranus
  - Neptune

2. Which is the biggest planet?
  - a. Mars
  - b. Earth
  - c. Venus
  - d. Jupiter
3. What planet is about the same size as Uranus?
  - a. Venus
  - b. Jupiter
  - c. Earth
  - d. Neptune
4. How many are the outer planets?
  - a. 4
  - b. 5
  - c. 6
  - d. 7
5. Among the 8 planets of the solar system, which are the outer planets?
  - a. Jupiter, Earth, Venus, Mars
  - b. Mercury, Saturn, Uranus, Earth
  - c. Venus, Saturn, Mercury, Neptune
  - d. Jupiter, Neptune, Saturn, Uranus
6. About how many Earths will take to stretch across Jupiter?
  - a. 100
  - b. 1000
  - c. 1,300
  - d. 1,500
7. Which of these planet has the fastest period of rotation?
  - a. Venus
  - b. Saturn
  - c. Jupiter
  - d. Uranus
8. What is Jupiter's nickname?
  - a. Arcs
  - b. Gas Giant
  - c. Coldest Planet
  - d. Ringed Planet
9. How many moons does Uranus have?
  - a. 20
  - b. 27
  - c. 30
  - d. 32
10. Which is known for its Great Red Spot?
  - a. Venus
  - b. Earth
  - c. Jupiter
  - d. Saturn

# References

**Books:**

1. Science in our World 6 p. 309  
Author Norma M. Abracia, Ed.D

## ANSWER KEY

Activity 1 "Choose Me"	1. a
	2. b
	3. a
	4. d
	5. c
	6. a
	7. c
	8. a
	9. d
	10. b
Activity 2 "Name It"	1. Saturn
	2. Gas giants and do not have solid surfaces.
	3. Saturn
	4. Jupiter, Saturn, Uranus, Neptune
	5. The largest of the Jovian planets.
Activity 3 "Let's Measure"	Answers may vary
	10. c
	9. b
	8. b
	7. c
	6. c
	5. d
	4. a
	3. d
	2. d
	1. a
Assessment	
Activity 4 "Fill It"	1. Saturn
	2. Jupiter
	3. Uranus
	4. Neptune
	5. Solar system
Activity 5 "Complete Me"	1. 2.9 billion km
	2. 12 years
	3. 10 hours
	4. 51 118 km
	5. 13

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## Region IX: Zamboanga Peninsula Hymn – Our Eden Land

Here the trees and flowers bloom  
Here the breezes gently Blow,  
Here the birds sing Merrily,  
The liberty forever Stays,

Here the Badjaos roam the seas  
Here the Samals live in peace  
Here the Tausogs thrive so free  
With the Yakans in unity

Gallant men And Ladies fair  
Linger with love and care  
Golden beams of sunrise and sunset  
Are visions you'll never forget  
Oh! That's Region IX

Hardworking people Abound,  
Every valleys and Dale  
Zamboangueños, Tagalogs, Bicolanos,

Cebuanos, Ilocanos, Subanons, Boholanos, Ilongos,  
All of them are proud and true  
Region IX our Eden Land

Region IX  
Our..  
Eden...  
Land...

## I Am a Filipino, by Carlos P. Romulo

I am a Filipino—inheritor of a glorious past, hostage to the uncertain future. As such I must prove equal to a two-fold task—the task of meeting my responsibility to the past, and the task of performing my obligation to the future.

I sprung from a hardy race, child many generations removed of ancient Malayan pioneers. Across the centuries the memory comes rushing back to me: of brown-skinned men putting out to sea in ships that were as frail as their hearts were stout. Over the sea I see them come, borne upon the billowing wave and the whistling wind, carried upon the mighty swell of hope—hope in the free abundance of new land that was to be their home and their children's forever.

I am a Filipino. In my blood runs the immortal seed of heroes—seed that flowered down the centuries in deeds of courage and defiance. In my veins yet pulses the same hot blood that sent Lapulapu to battle against the first invader of this land, that nerved Lakandula in the combat against the alien foe, that drove Diego Silang and Dagohoy into rebellion against the foreign oppressor.

The seed I bear within me is an immortal seed. It is the mark of my manhood, the symbol of dignity as a human being. Like the seeds that were once buried in the tomb of Tutankhamen many thousand years ago, it shall grow and flower and bear fruit again. It is the insignia of my race, and my generation is but a stage in the unending search of my people for freedom and happiness.

I am a Filipino, child of the marriage of the East and the West. The East, with its languor and mysticism, its passivity and endurance, was my mother, and my sire was the West that came thundering across the seas with the Cross and Sword and the Machine. I am of the East, an eager participant in its spirit, and in its struggles for liberation from the imperialist yoke. But I also know that the East must awake from its centuried sleep, shake off the lethargy that has bound his limbs, and start moving where destiny awaits.

I am a Filipino, and this is my inheritance. What pledge shall I give that I may prove worthy of my inheritance? I shall give the pledge that has come ringing down the corridors of the centuries, and it shall be compounded of the joyous cries of my Malayan forebears when first they saw the contours of this land loom before their eyes, of the battle cries that have resounded in every field of combat from Mactan to Tirad Pass, of the voices of my people when they sing:

“I am a Filipino born to freedom, and I shall not rest until freedom shall have been added unto my inheritance—for myself and my children and my children's children—forever.”