

JANUARY

Makugihon

FEBRUARY

Mahigugmaon

MARCH

Matinabangon

APRIL

Matinahuron

MAY

Mahapsay og Malinpygo

JUNE

*Maabtik og Masunod sa
Ihsaklong Oras*

JULY

Maantigo og Maabilidad

AUGUST

*Maginhunahunaon
para sa Urban*

SEPTEMBER

Madaginoton

OCTOBER

Matinud-anon

NOVEMBER

Masaligan

DECEMBER

Maalampon



Republic of the Philippines
Department of Education
Regional Office IX, Zamboanga Peninsula



Zest for Progress

Zeal of



Science

Quarter 4 - Module 5
Compare the Planets of the Solar System



Name of Learner: _____

Grade & Section: _____

Name of School: _____



What I Need to Know

In this module, you will be able to learn the following:

- Identify and describe the inner planets of the solar system. **(S6ES-IVg-h6)**
- Compare and contrast the surface features, physical characteristics of the inner planet and their distance from the sun. **(S6ES-IVg-h6)**



What's In

Activity 1

Direction: Read the sentences below and choose the correct answer provided in the box.

Sun Moon . Earth
Rotation Revolution

- _____ 1. The movement of the Earth around the Sun.
- _____ 2. The closest star to Earth.
- _____ 3. The movement of Earth on its axis.
- _____ 4. It is our home planet.
- _____ 5. The only natural satellite that Earth has.



What's New

Planets

In the solar system, center is the sun
Terrestrial planets are the inner
Jovian planets are the outer
And I can recall all of them, one by one

Mercury is the fastest
Venus is the brightest
Earth is the bluish
Mars is the reddish

Jupiter has the fastest spinning
Saturn has its beautiful ring
Uranus is the coldest
Neptune is the farthest

Mercury, Venus, Earth and Mars are innermost
Jupiter, Saturn, Uranus and Neptune are the outermost
They are all beautiful
That makes them all wonderful

Activity 2

Direction: Answer the following questions based on the poem that you just read.

1. How many planets are mentioned in the poem?

2. What are those planets?

3. What planets are the terrestrial or innermost planets

4. What is the brightest planet?

5. What is the bluish planet?



What is it

The Solar System

The word planet comes from the Greek word *planetai* which means “wandering.” Planets are called as such because they are always moving. At present, there are eight planets in the solar system. All these planets rotate constantly around the Sun at different rates. Planets rotate on their axis as they revolve around the Sun. Planets have no light on their own. Instead, they reflect light from the Sun.

The planets on our solar system are divided into two groups. These are the **inner planets** and the **outer planets**. The inner planets are the four planets closest to the Sun.

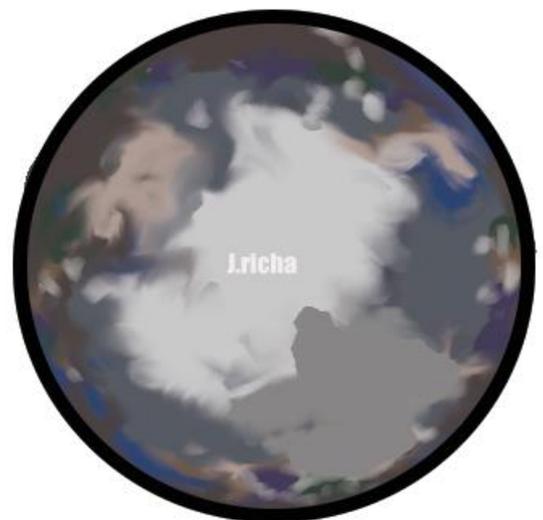
Terrestrial Planets

Mercury, Venus, Earth and Mars are the four inner planets. They are called terrestrial planets because, like Earth, these planets have a rocky surface.

Mercury

Mercury is the *nearest planet* to the Sun. It has an average distance of 58 million km from the Sun and an equatorial diameter of 4880 km. It takes 88 Earth days to complete its revolution and 59 Earth days to complete its rotation.

Mercury has a very thin atmosphere and has a surface temperature of 430°C during daytime and -180°C during nighttime. Its surface is full of craters much like the earth moves. Mercury has no moons and no ring around it.



Venus

Venus has almost the size and density as the Earth. It is the second closest planet to the Sun and has an average distance of 108 million km from it.

Venus is a rocky planet and has an equatorial diameter of 12,104 km. It has mountains, craters, and volcanoes on its surface. Its atmosphere is made up of mostly carbon dioxide which has a surface temperature that arises to more than 470°C. The thick layer of clouds in Venus' atmosphere reflect sunlight very well, making Venus the brightest object in the sky next to the Moon, as seen from Earth. It is often called *Evening Star* or *Morning Star*.

Venus rotates from east to west once every 243 Earth days and revolves around the Sun for 225 Earth days. Like Mercury, it has no moon ring around.



Earth

Earth is the only planet in the Solar System that can sustain life. It is known as the *blue planet* because it looks blue as seen from the outer space. Earth has an average distance of 149 million km from the Sun and has 12,742 equatorial diameters.

Earth's atmosphere is made up mostly of 77% nitrogen gas and 21% oxygen, and water. Its average surface temperature is 15°C. About 1/3 of the Earth's surface is land and 2/3 is water. The land part is divided into continents and various landforms like mountains and hills. The water part consists of various bodies of water like oceans and rivers.

It takes 365 1/4 days for the Earth to complete its revolution and 24 hours to complete its rotation. The earth has only one moon that revolves around every 27.3 days.



Mars

Mars is called the *red planet*. It looks red because of the presence of iron in its surface. Mars has an equatorial distance of 6788 km. Its average distance from the Sun is 227 million km.

Mars has a very thin atmosphere which consists of largely carbon dioxide and a small percentage of other gases. It has an average surface temperature of -63°C . It is also known for its volcanoes. It has one of the largest volcanoes in the solar system, the Olympus Mons.

Mars takes 687 Earth days to complete its revolution. Like Earth, it takes 24 days to complete its rotation. Mars has two moons.



What's More

Activity 3

Direction: Complete the chart of the planets by supplying what is asked. Choose your answer from the box beside it.

Planet	Average Distance from the Sun in Million kilometers
Mercury	
Venus	
Earth	
Mars	

149 million km
58 million km
227 million km
108 million km

Activity 4

Direction: Match column A to Column B. Write the letter of the correct answer on the space provided before the number.

Column A	Column B
<i>Planet</i>	<i>Surface Features</i>
_____1. Mercury	A. Rocky planet
_____2. Venus	B. Composed of land part and water part
_____3. Earth	C. Known for its volcanoes
_____4. Mars	D. Full of craters

Activity 5

Direction: Identify the planets that are described from the given physical characteristics below.

Physical characteristics

1. Has almost the size of the Earth

2. Looks red because of the presence of iron

3. Looks blue as seen from the outer space

4. Smallest planet in the solar system

Activity 6

Directions: Arrange the jumbled letters to form the correct names of the planets. Write their correctly spelled names in the boxes.

1. A R E H T

the only planet in the solar system that can sustain life.

2. A R M S

the red planet in the solar system.

3. E V U N S

brightest planet in the sky next to the moon.

4. R Y C U R E M

the nearest planet to the sun.



What I Have Learned

Activity 7

Direction: Supply the missing words to complete the passages below. Choose your answers from the box.

1.

solar system planetai Sun

The word planet comes from the word _____ which means “wandering.” At present, there are eight planets in the _____. All these planets rotate on their own axis as they revolve around the _____.

2.

Venus Earth Morning Star sun

_____ has almost the size and density of the Earth. It is the second closest planet to the _____. Venus is the brightest object in the sky next to the moon seen from Earth. It is called Evening Star or _____. It is also called twin planet of the _____.

3.

blue life moon

Earth is the only planet that can sustain _____. It is known as _____ planet because looks like blue as seen from the outer space. The earth has only one _____ that revolves around every 27.3 days.

4.

iron Mars moons

_____ is called red planet. It looks red because of the presence of _____ on its surface. Mars has two _____.



Assessment

A. Direction: Read the questions carefully and encircle the letter of the correct answer.

1. Which planet is called “the red planet”?
 - a. Mercury
 - b. Venus
 - c. Earth
 - d. Mars
2. Which planet that can sustain life?
 - a. Mercury
 - b. Venus
 - c. Earth
 - d. Mars
3. Which planet is called the Morning Star or Evening Star?
 - a. Mercury
 - b. Venus
 - c. Earth
 - d. Mars
4. What are the terrestrial planets in the solar system?
 - a. Mercury, Venus, Earth and Mars
 - b. Venus, Earth Mars, and Jupiter
 - c. Mercury, Earth, Mars and Jupiter
 - d. Mercury, Mars, Earth, and Uranus
5. They are called terrestrial planets because _____.
 - a. they are giant planets
 - b. all of them have rocky surfaces
 - c. these planets have the same sizes
 - d. they orbit far away to the sun

B. Direction: Read the sentences and provide the correct answer on the blank.

1. The word planet comes from the Greek word *planetai* which means _____.
2. Inner planets are called _____ because, like Earth, these planets have a rocky surface.
3. _____ planet is the twin planet of the Earth.
4. _____ is the nearest planet to the Sun.
5. The Earth has $365 \frac{1}{4}$ to complete its revolution and _____ hours to complete its rotation.

References:

Department of Education, Science Beyond Borders 6

Authors- Evelyn T. Sarte, Ednaliza R. Garcia, Mary Jean G. Dela Cruz, Harrold A. Arrazada

Editor- Lillia M. Rabago, PhD

Answer Key

What's In

Activity 1

1. Revolution
2. Sun
3. Rotation
4. Earth
5. Moon

What's New

Activity 2

1. Eight
2. Mercury, Venus, Earth, Mars
3. Jupiter, Saturn, Uranus, Neptune
4. Venus
5. Earth

What's More

Activity 3

1. 50 million km
2. 108 million km
3. 149 million km
4. 227 million km

Activity 4

1. D

2. A

3. B

4. C

Activity 5

1. Venus

2. Mars

3. Earth

4. Mercury

Activity 6

1. Earth

2. Mars

3. Venus

4. Mercury

What I Have Learned

Activity 7

1. planetary, solar system, sun
2. Venus, sun, Morning star, Earth
3. life, blue, moon

Answer Key

DEVELOPMENT TEAM

- Writer:** **RAMILYN D. CAITOM**
Teacher III
Buenavista Elementary School
- Editor:** **GERLEE JOY C. CABRIDO - TIII**
- Reviewer:** **MILA P. ARAO**
- Illustrator:** **JOMAR P. RICHA** – Teacher III

MANAGEMENT TEAM

DANNY B. CORDOVA, Ed.D, CESO VI
Schools Division Superintendent

MARIA COLLEEN L. EMORICHA Ed.D, CESE
Assistant Schools Division Superintendent

MARIA DIOSA Z. PERALTA
CID Chief

MARIA MADELENE P. MITUDA Ed.D
Education Program Supervisor - LRMDS

MILA P. ARAO
Education Program Supervisor - Science

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.”

