JANUARY Makugihon FEBRUARY Mahigugmaon Matinabangon APRIL Matinahuron MAY Mahapsay og Malimpyo JUNE Maabtik og Masunod sa Dksaktong Oras JULY Maantigo og Maabilidad AUGUST Maginhunahunaon para sa Uban SEPTEMBER Madaginoton OCTOBER Matinud-anon NOVEMBER Masaligan DECEMBER Maalampuon

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



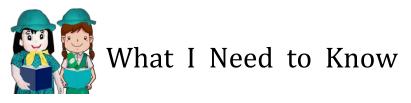
Science

Zest for Progress

Zeal of Partnership

Quarter 4 - Module 8 Constellation

Name of Learner: Grade & Section: Name of School:



Welcome to Science 5 Alternative Delivery Mode (ADM). This module will help you master the concept on identifying star patterns that can be seen at particular times of year (S5FE-IVi-j-9).

What do you see in the sky during night time? Do you know that there are patterns of stars? "Constellation" is the name we give to seeing patterns of stars in the night sky. "Stella" is the Latin word for star, and a constellation is a grouping of stars. In general, the stars in these groups are not close to each other in space, and they appear to be close when viewed on Earth.



Let's see how far have you remembered about stars.

Activity 1: Know Me!

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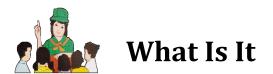
Directions: Identify the word/words being described in every number. Choose your answer from the words in the box.

star	blue	red	apparent	magnitude	1 light y	/ear
light year	Canis	major	brightness	Proxima C	entauri	Sun

- 1. It is the second star nearest to Earth.
- _____2. The brightest star as seen on Earth.
 - _____3. The distance light travels in one year.
 - _____4. It is the color of the hottest star.
- _____5. It is the star nearest to Earth.
- _____6. A giant ball of hot gases.
- _____7. It gives an idea of the size of a star.
- 8. The size of this star is 1, 975,000,000 kilometers in diameter.
- _____9. This is equal to about six trillion kilometers.
- _____10. Is it the color of the coolest star.

Activity 2: "TRUE OR FALSE" 10 Directions: Encircle the word TRUE if the statement is correct and box the word **FALSE** if the statement is not correct. 1. During ancient times, people used stars as their point of reference when traveling. FALSE TRUE 2. Stars have the same sizes, colors, temperature, distances from Earth and brightness. TRUE FALSE 3. The sun is more than one million times larger than the Earth. TRUE FALSE 4. The star nearest to the Earth is the Sun. TRUE FALSE 5. The color of the star doesn't help astronomers determine the temperature of the star. FALSE TRUE 6. Red is the color of the hottest star. FALSE TRUE 7. Blue is the color of the coolest star. TRUE FALSE 8. The second star closest to the Earth is the Proxima Centauri. TRUE FALSE 9. All stars are close to each other. TRUE FALSE 10. Polaris or the North Star is the brightest star in the constellation Ursa Min TRUE FALSE

2



Activity 3: "MY CONSTELLATION"

Directions: The sky is filled with stars tonight. Connect the stars to make your constellation. You can form any shape that you like, then complete the paragraph below. You don't have to use all the stars.



Iy constellation is called is in the shape of	
choose this shape for my constellation because	
	·

The International Astronomical Union (IAU) made a list of the official constellations. There were 88 constellations on the list and many of these constellations were discovered in the Ancient Greeks.

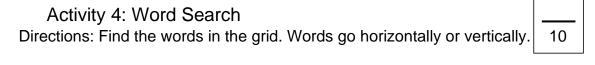
<u>**Ursa Major**</u> resembles a big bear and is the third-largest constellation in the night sky. It includes the Big Dipper, which comprises the seven stars- Alkaid, Alcor, Mizar, Alioth, Megrez, Phecdam Merak and Dhube.

<u>**Ursa Minor**</u>, or the little bear, contains a group of stars known as the Little Dipper. The dipper's handle serves as the little bear's tail and the dipper's cup, is the bear's thigh. The most famous star in Ursa Minor is the Polaris. It is also called the North Star since its position always points to the Earth's North pole.

Constellations named after Greek Mythology legends:

Cassiopeia consists of five stars that seem to form the letter W. It represents the queen Cassiopeia of Ethiopia's mythical kingdom.

Orion-is one of the most recognizable constellations in the night sky and is visible throughout the world. Three of its stars form its belt. On Orion's right shoulder is a red supergiant star called Betelgeuse. A bluish-white star called Rigel is found on Orion's left knee.



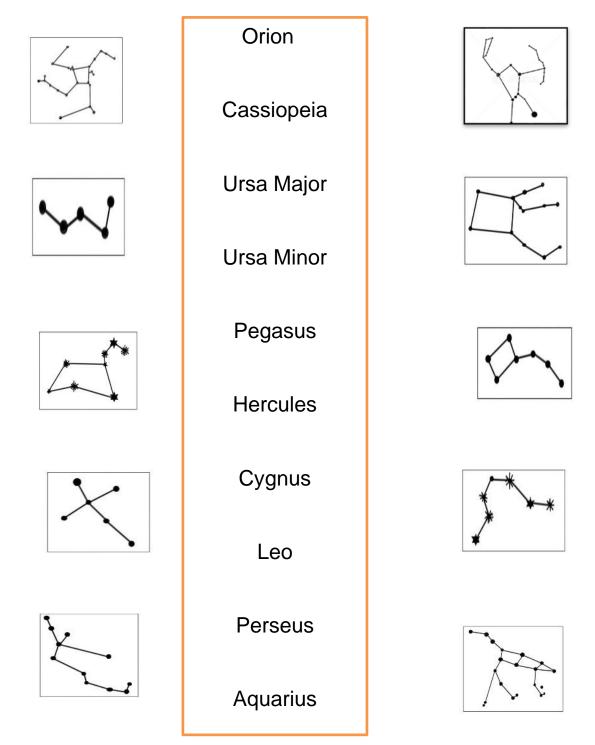
С	F	U	R	S	Α	Μ	I	Ν	0	R	D	F	Η	
Α	L	К	Α	I	D	F	J	К	L	R	Т	Y	U	Cassiopeia
S	G	F	В	Ε	Т	Ε	L	G	Ε	U	S	Ε	F	Orion Ursa Minor
S	Η	D	F	G	Η	Y	U	-	0	0	Ρ	Ε	D	Rigel Ursa Major
I	J	D	U	R	S	Α	Μ	Α	J	0	R	D	G	Polaris Alkaid
0	В	W	Е	R	Т	Y	U	-	0	Ρ	S	Μ	F	Megrez
Ρ	0	L	Α	R	I	S	0	D	Н	U	В	Е	D	Dhube Betelgeuse
Ε	В	D	F	I	S	D	R	S	D	С	V	G	R	
I	Μ	D	F	G	R	Т	I	W	Q	Α	D	R	F	
Α	Ν	D	С	Ε	F	G	0	S	D	G	Η	E	D	1
F	В	R	0	L	Ζ	Z	Ν	D	F	G	н	Z	S	



What's More



Activity 5: Constellation Matching **Directions:** Match the name of some famous constellations to its picture.





What I Have Learned



Activity 6: Complete Me

Directions: Fill in the blanks with the correct word/s to complete the paragraph.

A group of stars that form a certain pattern is called ______. The ______ or (IAU) made a list of the official constellations. There are already ______ constellations on the list and were discovered in the Ancient Greeks. The ______ resembles a big bear and is the third largest constellation in the night sky. ______ or the little bear contains a group of stars known as the Little Dipper. The dipper's handle serves as the little bear's tail and the dipper's cup, is the bear's thigh. The most famous star in Ursa Minor is the ______. It is also called the ______, since its position always points to the Earth's North pole. ______ consists of five stars that seem to form the letter W. _______ is one the most recognizable constellations in the night sky and is visible throughout the world. Three of the its stars form its belt. On Orion's right shoulder is a red supergiant star called ______. A bluish-white star called ______.

Activity 7: Let's Do Stargazing! **Directions:** Do a stargazing activity on a clear night.

Try to identify FOUR constellations.

Draw the four constellations on the space provided.



- I. Direction: Write the letter of the best answer on the space before the number.
 - ___1. What are constellations?
 - a. Constellations are moving.
 - b. Constellations are stars in the night sky.
 - c. Constellations are a group of stars that form patterns.
 - d. Constellations are a group of objects that move in the sky.
- ____2. Most of the constellations were discovered by ____?
 - a. Arabs
 - b. goddesses
 - c. discoverers
 - d. Ancient Greeks
- _____ 3. It consists of the five stars that seem to form the letter W.
 - a. Orion
 - b. Rigel
 - c. Betelgeuse
 - d. Cassiopeia
- _____ 4. Which constellation has a shape of the mythical hunter?
 - a. Orion
 - b. Pegasus
 - c. Ursa Minor
 - d. Cassiopeia
- ____ 5. It is a red supergiant star.
 - a. Orion
 - b. Polaris
 - c. Pegasus
 - d. Betelgeuse
- ____6. Rigel is called as the _____.
 - a. bluish star
 - b. reddish star
 - c. yellowish star
 - d. bluish-white star
- ____7. Which constellation has the North Star, Polaris?
 - a. Big Dipper
 - b. Cassiopeia
 - c. Ursa Major
 - d. Ursa Minor

- 8. Why is Polaris helpful in finding directions?
 - a. It can be seen both day and night.
 - b. It is the biggest star in the universe.
 - c. It is the most visible star in the night sky.
 - d. It is a fixed star which always points at the north.
- 9. Why do constellations look different in different seasons?
 - a. because the earth spins
 - b. because the earth rotates
 - c. because the earth revolves around the stars
 - d. because the earth moves closer to the stars

10. It is an international association of professional astronomers and it acts as a recognized authority for assigning designations and names to celestial bodies like the stars and constellations.

- a. International Astro United
- b. International Astronauts Union
- c. International Astronomical Union
- d. International Astronomical United
- II. Write: (2 pts each)
 - **T** if both statements are true
 - F- if both statements are false

 ${\bf I}$ -if the first statement is true and the second statement is false ${\bf M}\text{-}$ is the first statement is false and the second statement is true

- 1. A. Constellations are group of stars that form patterns.
 B. Constellations are believed to be a great help in the lives of some people.
- 2. A. The Big Dipper is a part of the constellation Ursa Minor.
 B. The Polaris is located in Ursa Minor.
- __ 3. A. The north polar constellation can be seen in the southern hemisphere.
 - B. The south polar constellation can be seen in the northern hemisphere.
- 4. A. Polaris is useful to sailors or travelers for finding directions.
 B. Aside from telling directions, stars can be used to know your past life.
- 5. A. There are 88 constellations identified by astronomers. B. Fifteen of these are zodiac constellations.

Answer Key

<u>Science 5 Quarter 4 – Week</u>

What's In Activity 1	What's In Activity 2	What's More Activity 5
 Proxima Centauri apparent magnitude light-year blue Sun star brightness Canis Major 1 light year red 	 True False True True False False False True False True False True True False True 	Orion Cassiopeia Ursa Major Pegasus Hercules Cygnus Leo Perseus Aquarlus

What I Have Learned Activity 6 Complete Me constellations International Astronomical	
Union 88	
Ursa Major	
Polaris	
North Star	
Cassiopeia	
Orion	
Betelgeuse	
Rigel	

Assessment Ι. II. 1. T 1. c 2. d 2. M 3. d 3. F 4. a 4. I 5. I 5. d 6. d 7. d 8. d 9. b 10. c

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 am 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 the new land that was to be their home and their children's forever.

This is the land they sought and found. Every inch of shore that their eyes first set upon, every hill and mountain that beckoned to them with a green and purple invitation, every mile of rolling plain that their view encompassed, every river and lake that promised a plentiful living and the fruitfulness of commerce, is a hollowed spot to me.

By the strength of their hearts and hands, by every right of law, human and divine, this land and all the appurtenances thereof – the black and fertile soil, the seas and lakes and rivers teeming with fish, the forests with their inexhaustible wealth in wild and timber, the mountains with their bowels swollen with minerals – the whole of this rich and happy land has been for centuries without number, the land of my fathers. This land I received in trust from them, and in trust will pass it to my children, and so on until the world is no more.

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 alien foe, that drove Diego Silang and Dagohoy into rebellion against the foreign oppressor.

That seed is immortal. It is the self-same seed that flowered in the heart of Jose Rizal that morning in Bagumbayan when a volley of shots put an end to all that was mortal of him and made his spirit deathless forever; the same that flowered in the hearts of Bonifacio in Balintawak, of Gregorio del Pilar at Tirad Pass, of Antonio Luna at Calumpit, that bloomed in flowers of frustration in the sad heart of Emilio Aguinaldo at Palanan, and yet burst forth royally again in the proud heart of Manuel L. Quezon when he stood at last on the threshold of ancient Malacanang Palace, in the symbolic act of possession and racial vindication. The seed I bear within me is an immortal seed.

It is the mark of my manhood, the symbol of my dignity as a human being. Like the seeds that were once buried in the tomb of Tutankhamen many thousands of years ago, it shall grow and flower and bear fruit again. It is the insigne 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 struggles for liberation from the imperialist yoke. But I know also that the East must awake from its centuried sleep, shake off the lethargy that has bound its limbs, and start moving where destiny awaits.

For I, too, am of the West, and the vigorous peoples of the West have destroyed forever the peace and quiet that once were ours. I can no longer live, a being apart from those whose world now trembles to the roar of bomb and cannon shot. For no man and no nation is an island, but a part of the main, and there is no longer any East and West - only individuals and nations making those momentous choices that are the hinges upon which history revolves. At the vanguard of progress in this part of the world I stand – a forlorn figure in the eyes of some, but not one defeated and lost. For through the thick, interlacing branches of habit and custom above me I have seen the light of the sun, and I know that it is good. I have seen the light of justice and equality and freedom, my heart has been lifted by the vision of democracy, and I shall not rest until my land and my people shall have been blessed by these, beyond the power of any man or nation to subvert or destroy.

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."

References

- Sarte, E. T., Garcia, E. R., Lopez, E. A., dela Cruz, M. G., & Arradaza H. A.(Copyright 2016). *Science Beyond Borders-Grade 5 LM*. Vibal Group, Inc. ISBN 978-971-07-3878-6
- Sarte, E. T., Garcia, E. R., Lopez, E. A., dela Cruz, M. G., & Arradaza H. A.(Copyright 2016). *Science Beyond Borders-Grade 5 TG*. Vibal Group, Inc. ISBN 978-971-07-3878-6

Development Team	Region IX Hymn
STRAVIAL	OUR EDEN LAND
Writer: Dianna D. Mauran, TIII Tuburan Central Elem. School Editor: Ma. Myra P. Sumastre, MT-1 Camp Abelon Elem. School	Here the trees and flowers bloom, Here the breezes gently blow, Here the birds sing merrily, And liberty forever stays,
Reviewer: Mila P. Arao Illustrator: Junelito M. Pamat Layout:Artist:	Here the Badjaos swam the seas, Here the Samals live in peace, Here the Tausogs thrive so free, With the Yakans in unity.
Management Team: Danny B. Cordova, EdD CESO VI SDS-Pag. City Div	Gallant men And Ladies fair, Linger with love and care,
Ma. Colleen L. Emoricha Ed.D. CESO VI ASDS	Golden beams of sunrise and sunset, Are visions you'll never forget. Oh! That's Region IX
Maria Diosa Z. Peralta CID Chief Ma. Madelene P. Mituda, EdD	Hardworking people abound, Every valley and dale Zamboangenos, Tagalogs, Bicolanos, Cebuanos, Ilocanos, Subanens, Boholanos, Illongos,
EPS-LRMDS Mila P. Arao EPS- Science	All of them are proud and true Region IX our Eden Land. Region IX, our Eden Land
ISABELA CITY	