



ASTROEDU

Peer-reviewed Astronomy Education Activities

AstroPoetry Writing

An activity combining English and science to encourage students to think about the night sky to help them write a poem related to astronomy.

Christie McMonigal, Astronomers Without Borders



 AGE 6 - 14	 LEVEL Primary, Middle School, Secondary
 TIME 1h30	 GROUP Individual
 SUPERVISED No	 COST PER STUDENT Low Cost
 LOCATION Does not matter	 CONTENT AREA FOCUS Astronomy


ASTRONOMY CATEGORIES
 The Sun, Planetary systems, Stars, The Milky Way, Galaxies


CORE SKILLS
 Communicating information


TYPE(S) OF LEARNING ACTIVITY
 Creative Expression, Fine Art focussed, Observation based, Fun activity


KEYWORDS
 Astronomy, Poetry, Star-gazing, Art

GOALS

- To gain a deeper appreciation for the night sky.
- To learn about the different parts of speech (nouns, adjectives).
- To use the above goals to write a poem connected to astronomy.

LEARNING OBJECTIVES

- To identify some of the constellations in the night sky.

- To describe features of the night sky using adjectives.
 - To write a poem about the sky and discuss it with others.
-



EVALUATION

- Students have written a poem about the sky.
 - Students can explain their poem to other students and teachers.
 - Ask students to volunteer to read out their poem to the class. Ask the rest of the class to put their hand up and suggest their favourite part of the poem.
-



MATERIALS

- Pen or pencil
 - Notepad
 - Sky chart :Download a printable sky chart for your hemisphere at: <http://www.skymaps.com/> or you could download a smartphone app:
 - For Android: <https://play.google.com/store/apps/details?id=com.google.android.stardroid>
 - For iOS: <https://itunes.apple.com/us/app/sky-map/id536492883?mt=8>
 - Stellarium software (optional): www.stellarium.org/
-



BACKGROUND INFORMATION

Basic understanding of the night sky:

We can see the moon, stars, and planets. Much more may be added to this section depending on the depth and level of the students. Many different astronomical topics and further explanation can be found at: <http://www.nasa.gov/education/materials/> and <http://stardate.org/astro-guide>

The Moon

The Moon can be very bright in the night sky, particularly when it is full. The Moon reflects the light of the Sun; it does not make its own light. The phases of the Moon depend on its position relative to the Earth and the Sun. Read: <http://www.universetoday.com/20289/phases-of-the-moon/> for more information.

Stars

Stars are huge luminous balls of gas. They are powered by nuclear fusion in their cores. The different colours of stars correspond to different temperatures: blue is the hottest; red is the coldest.

Planets

Planets are large bodies that orbit our Sun. They can be distinguished from the stars because their position changes slightly against the background stars from one night to the next, and their brightness varies in a regular cycle over a period of time. Venus, Mars, Jupiter and Saturn are most easily visible to the naked eye.

Constellations

The International Astronomical Union recognises a total of 88 constellations in the northern and southern skies. Constellations are patterns made by connecting stars. These patterns are often tied to stories and legends. Learn more about constellations here: <http://stardate.org/nightsky/constellations>.



FULL ACTIVITY DESCRIPTION

Preparation:

- You are encouraged to download the software Stellarium (get students involved if possible) and look for astronomical objects visible in the night sky at a given time, date and location.
- Print the sky chart, one per student, and note down the objects you would like to identify with your students. To help to identify the constellations and planets visible, you are encouraged to use a sky chart app on your smartphone. This helps identify what you are seeing just by pointing your phone to the sky.
- Before going outside, explain some of the objects that the students may see in the night sky. Please refer to the background information section.

Activity (description for students):

Step 1:

Go outside and look at the sky on a clear night. Before identifying any objects, list five objects you can see and write down what you know, think and feel about these objects.

Step 2:

Using the sky chart, identify a few objects. Next, select one object on which to base your poem.

This topic is what you want the reader to know more about after reading the poem. You can use the websites suggested in the background Information section or books to research the object selected. To most accurately portray your selection, you should have a basic understanding of what it is you are trying to depict through poetry.

Step 3:

To get some ideas flowing, write an adjective (describing word, e.g. beautiful, large, distant) before five to ten of the nouns below (the leader of the activity may choose to exclude or add objects from the list below as desired to fit the student audience):

___ stars __ red giant ___ white dwarf

___ open star cluster ___ globular star cluster
___ darkness _____ planet (select any of the 8 planets)
___ Moon ___ sky _____ shooting star / meteor
___ **comet** ___ **asteroid** ___ Kuiper Belt
___ **Nebula** ___ Planetary Nebula _____ supernova
___ spiral galaxy ___ barred galaxy _____ elliptical galaxy
___ *black hole* ___ neutron star _____ quasar

Step 4:

Write down three words to describe how looking at the night sky makes you think or feel.

Step 4:

Talk about different ways to tie together the facts you know about the astronomical object or topic and the things that you know, think or feel about the topic. For this step, you do not need to write the ideas as poetry, but focus on getting your ideas down on paper so that you can then reinterpret the ideas into a poem.

For example, watching the stars move across the sky above at night makes me think about how fast the Earth is rotating with me on it, and thinking about those speeds makes me realize how amazing it is that gravity lets us stay on the Earth and how small we truly are.

Step 4:

Using what you have done above as inspiration, now write a poem about the night sky.

The poem can be in any style you like and on any topic you like as long as it is related to astronomy. You can think of the poem as taking the reader on a journey through space and in the process he or she is learning about the amazing objects zooming by. Be creative!

Step 4:

Present your poem to other participants. Discuss your poem and what it means. How do the sky and the objects impact you? What is your object and how is it related to astronomy.

Step 4:

For some inspiration you may choose to share some historical and famous poems with your students. A select few are given below.

CANIS MAJOR

The great Overdog,
That heavenly beast
With a star in one eye,
Gives a leap in the east.
He dances upright
All the way to the west,

And never once drops
On his forefeet to rest.
I'm a poor underdog,
But tonight I will bark
With the great Overdog
That romps through the dark.

Robert Frost, 1928
The Oxford Anthology of American Literature, Volume II, (C) 1938 by
Oxford University Press, New York, Inc.

WHEN I HEARD THE LEARN'D ASTRONOMER

When I heard the learn'd astronomer,
When the proofs, the figures, were ranged in columns before me,
When I was shown the charts and diagrams, to add, divide, and measure them,
When I sitting heard the astronomer where he lectured with much applause in
the lecture-room,
How soon unaccountable I became tired, and sick,
Till rising and gliding out I wander'd off by myself,
In the mystical moist night-air, and from time to time,
Look'd up in perfect silence at the stars.

Walt Whitman, 1865 <http://www.poetryfoundation.org/poem/174747>

Modern examples of Astropoetry may be found at the online literary journal
called Astropoetica <http://astropoetica.com/> and the Astronomers Without
Borders astropoetry blog [http://astronomerswithoutborders.org/awb-programs/
arts-and-culture/astropoetry.html](http://astronomerswithoutborders.org/awb-programs/arts-and-culture/astropoetry.html).

Note: You can also conduct the activity inside by showing students astronomical
images, and then asking them to choose one to write a poem on.



CURRICULUM

Country	Level	Subject	Exam Board	Section
—	—	—	—	—
UK	KS3	Physics	-	Space Physics
UK	KS3	English	-	Writing
UK	KS2	Science	-	Earth and Space
UK	KS2	English	-	Writing: composition
UK	KS1	English	-	Writing: composition



ADDITIONAL INFORMATION

- The activity also can be conducted indoors through showing astronomical
images to students: <http://twanight.org/>

- The activity can be extended for participation in the annual astropoetry
- contest organised by Astronomers Without Borders: <http://astronomerswithoutborders.org/gam2015-programs/astroarts/1561-astropoetry-contest-for-gam2015.html>
-



CONCLUSION

Through the creative process of this activity, students learn to appreciate and be more aware of the night sky as well as learn more about astronomical topics. Through mentoring they may also gain grammatical skills and improve their communication skills to explain astronomical concepts to other students.

CITATION

McMonigal, C., 2015, *AstroPoetry Writing*, [astroEDU](#), , [doi:10.14586/astroedu/1414](https://doi.org/10.14586/astroedu/1414)

ACKNOWLEDGEMENT

Bob Eklund, Image credit: Gerry Lauzon, David DeHetre
