

# North African Astronomy: Morocco

مَغْرِب

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# Introduction

This unit is designed to educate students about astronomy and Moroccan folklore having to do with astronomy.

Many of the legends and myths presented are from several groups of people collectively known as “Berbers.”

When possible the names are presented in both Arabic and Berber.



# Stars

Arabic: *Nijma*. Berber: *itri* (plural *itran*).

There are many legends about how certain stars got up in the sky.

One tells of two sisters who admired their father so much that upon his death they were inconsolable.

Allah realized that they would no longer live normal lives, so he placed them as two stars of equal brightness in the sky.



Image reproduced from Sky & Telescope.



# The Milky Way



At the left is a galaxy named M83. A galaxy is a collection of stars which all rotate about the center of the galaxy. It takes about 4 billion years for a star to circle the center once.



The Milky Way is our galaxy. Since we are inside our galaxy, it looks a bit different from other galaxies we see. It appears as a faint band of stars across the sky.

# The Path of Straw

Arabic: *Mjarr k-kebs or sarraq t-t'ben.*

Berber: *ihuwan uwalim.*

تَبَّة

In Morocco the Milky Way is called “The Path of *Teben*”. *Teben* is straw.

A thief stole straw from his neighbor. As punishment Allah made a hole in his sack. Thus bits of straw scattered on the ground, leaving a trail leading to the thief.

Allah placed a path of straw in the sky (the Milky Way) to remind people of the consequences of stealing. If the Milky Way is very bright, thieves will not attempt to steal. If the Milky Way is faint, the thieves think they will not get caught.



# Polaris

نَالْجَمُّ الْقُطْبِيّ ۚ نَجْمٌ لِّلْقُطْبِ نَوْجَمٌ الْقُطْبُ ۚ نَالْجَمُّ الْقُطْبِيّ ۚ

Arabic: 'Smiya.

Polaris is known as the North Star. It is very close to the North Celestial Pole. Our Earth rotates on its axis once every 24 hours.



When looking towards the North, you can watch the stars rotate over several hours. The star which appears to be at the center is Polaris. It appears not to move over the course of the night.



# Ursa Major

The great bear or the Big Dipper.  
Arabic: *banath u na'sin*. Berber: *tigdwin*.

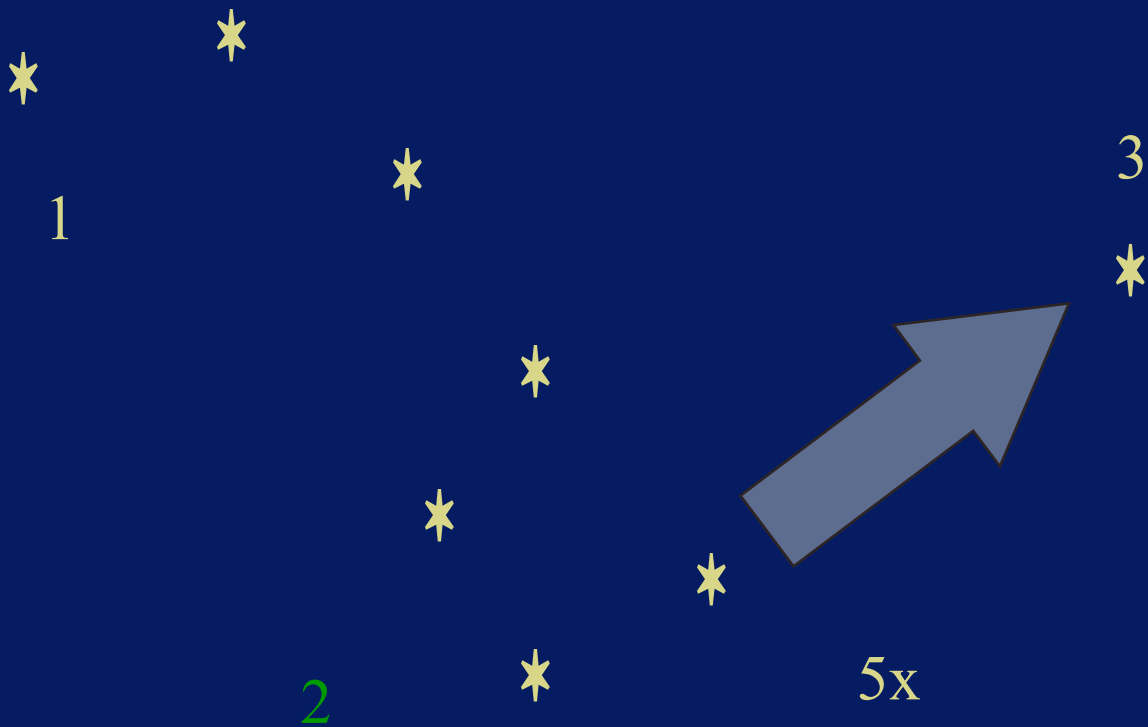


The Big Dipper is a prominent constellation in the Northern Skies. In Morocco, if *tigdwin* is not in the correct position travelers will postpone their journey. *Tigdwin* is useful for finding the North Star- *'smiya*.

# Method of Finding Polaris/'Smiya

## Methodology of Celestial Navigation

- *Tigdwin* = The Big Dipper
- '*Smiya* = Polaris = The North Star



# The Pleiades

Arabic: *Thriyya*.



The Pleiades are a cluster of stars located in the constellation of Taurus. They are easy to find in the night sky, especially during winter. In Morocco, they watch for the Pleiades around October each year.

*“Ida tal’ath t-thriyya ‘and l-asa armi l-ful be l-kemsa”* – If the Pleiades rise at suppertime, throw the beans with a handful. Thus, *Thriyya* rising marks the time for planting beans.

# Comets

Arabic: *Nijma be d-denba*.

Comets are dirty balls of frozen gasses and particles left over from the formation of our solar system.

Like planets, they travel around the Sun.

As they get closer to the Sun, the comet loses gas and dust which creates a tail.

In Morocco, comets are thought to be a bad omens foretelling drought, heat waves, and death.



Comet Hyakutaki  
March 1997



# Other Terms

Crescent Moon – *El Helel* - هِلَال

Full Moon – *Kamarr*

New Moon – *A Sohoof*

Chams – *the Sun* - شَمْس

Felek – *the scientific study of the stars*

(*astronomy*) - عِلْمُ هَلَايَاة

Noujoum – *stars* - نَجْمَنُجْمَاة

Nijma – *a star* - كَوْكَب

Majarrda – *constellations* - بُرُج

Moon - قَمَر

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Special thanks to Jerry Schad for permission to use his photographs: [www.skyphoto.com](http://www.skyphoto.com).

