Constellation Guide Book

People like to look at the stars at night. They want to see the constellations. Many people use constellation guides to help them find the constellations. These guides also include information about each constellation.

Your assignment is to make a guide to fall constellations. You have an information sheet you can use. It has facts that will help you write about the constellations.

Here is your assignment:

- Make a half-book about fall constellations.
- Come up with a good title!
- Design an interesting cover. Remember, a good cover helps people notice your book.
- Make a table of contents.
- At the top half of each page, you will draw a picture of your constellation.
- On the bottom half of each page, include information and facts about the constellation below the picture. (You may select 14 of the 16 constellations)

You will need four sheets of paper to make your half-book.

How to Make a Half-Book

Fold a sheet of paper (8 1/2" _ 11") in half.

1. This book can be folded vertically like a hot dog or...

2. ...it can be folded horizontally like a hamburger. (A hamburger fold will work best but you can use a hot dog fold if you want!)

3. When you have finished, staple your book together.
The Constellations of Autumn
Aquila

The Aquila Constellation is one of 88 constellations in space. Symbolized as an eagle, the constellation has been associated with many mythologies, including Chinese, Hindu and Greek. Here are some important Aquila constellation facts.

Facts About the Constellation Aquila

- **Symbolism:** The Eagle
- **The best time to view:** September
- **Nearest star:** Altair (alpha Aquilae, 16.72 light years)
- **Brightest star:** Altair (alpha Aquilae, 0.77 apparent magnitude)
- **Aquila Neighboring Constellations:** Sagittarius, Scutum, Serpens Cauda, Hercules, Sagitta, Delphinus, Capricornus, Aquarius
- **Meteor showers:** June Aquilids, Epsilon Aquilids
- **Mythology:** In Hindu mythology, the Aquila constellation is identified as Garuda, a half-eagle-half human deity. The constellation has always been associated with a winged, short-necked bird or an eagle. Classical Greek mythology also identifies constellation Aquila as an eagle which was sent by Zeus to carry Ganymede, the shepherd boy, who is also identified as constellation Aquarius. Greek myth associates the origin of the constellation with the eagle Ethon.
- **Historical importance:** The Aquila constellation was popularly known as Vultur Volans, or the flying vulture, among Romans. The constellation is also described by Ptolemy as one of the 48 constellations. Currently, the International Astronomical Union defines Aquila as one of the 88 constellations in space. It is also mentioned in the astronomical charts of Aratus (3rd century BC) and Eudoxus (4th century BC).

Andromeda

The Andromeda constellation, also called the “Chained Maiden,” is named after Princess Andromeda in Greek mythology. The Andromeda galaxy is a spiral galaxy, just like the Milky Way. Here are some more interesting facts & pictures about the constellation Andromeda.
Andromeda the Constellation: Facts

★ **Symbolism:** Chained Maiden, Princess of Ethiopia
★ **The best time to view:** November
★ **Nearest star:** Ross 248 (Ross 248 is 10.32 light years away)
★ **Brightest star:** Alpheratz (visual magnitude of 2.06)
★ **Mythology:** In Greek mythology, Andromeda was the princess of Ethiopia. She was the daughter of Cepheus and Cassiopeia, rulers of Ethiopia. The Greek god of the sea, Poseidon, unleashed a sea monster (probably a Cetus) to teach the boastful Cassiopeia a lesson. The only way to stop the monster from destroying Ethiopia was to sacrifice Andromeda’s life. She was chained to the rock by the sea, but later rescued by Perseus. Perseus killed the monster and married Andromeda. Their child, Perses, was the ancestor of the Persian Kings. Andromeda is hailed as one of the most daring mythical heroines.
★ **History Behind the Constellation Andromeda:** The Andromeda constellation is included in the ancient star catalogs of Ptolemy, Aratos of Soli and Eudoxos of Knidos. The M31 Andromeda galaxy is the most illustrious deep sky object in the Andromeda constellation. It is a spiral galaxy, just like the Milky Way. It was first observed by Al-Sufi in 964 AD. He described it as a “little cloud.” In the 1920s Edwin Hubble came to the conclusion that the galaxy was beyond the Milky Way.
★ The Constellation Andromeda is near to the celestial North Pole. People living in the southern hemisphere can rarely see the constellation, though it can sometimes be observed there during the spring.

Aries

It’s not the showiest constellation in the Zodiac, but Aries carried some deep significance for past cultures. It’s also got some features of interest for us today.

**The Facts**

★ **Image of:** A jumping or running ram
★ **Time best visible:** in December
★ **Rank in constellation size:** 39th
★ **Brightest star:** Alpha Arietis, also known as Hamal or El Nath, with an apparent magnitude of 2.0.
**Nearest star:** Teegarden's star (SO025300.5+165258), about 12.6 ± 0.2 light-years away

**Mythology:** In Greek mythology, Aries was a flying ram that saved the brother and sister Phrixus and Helle from being sacrificed to stave off famine (it was a setup by their stepmother, who hated the two). Helle fell off during the flight and drowned, but Phrixus made it to safety. Phrixus then sacrificed the ram to show his gratitude ... to Zeus, rather than to the ram. The sacrificed ram's fleece might also have been the golden fleece sought by Jason and the Argonauts.

**Historical significance:** Aries was once the constellation through which the sun passed at vernal equinox. While the vernal equinox has since moved into the constellation Pisces, it's still sometimes called the "First Point of Aries."

**Symbolic significance:** In ancient Greek culture, the horn (such as the one on a ram) was a symbol for renewal, which Aries once ushered in during the vernal equinox.

**A ram to many.** While past cultures might have had different names for other constellations, many agreed that Aries was the ram, including the Babylonians, Egyptians, Persians and Greeks.

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**Auriga**

Auriga constellation lies in the northern hemisphere. Its name means charioteer in Latin. It got the name because its major stars form a shape similar to that of the pointed helmet of a charioteer.

Auriga was first catalogued by the Greek astronomer Ptolemy in the 2nd century. It contains Capella, the sixth brightest star in the sky.

**FACTS, LOCATION & MAP**

- **Auriga is the 21st biggest constellation in the night sky,**
- **The neighboring constellations are** Camelopardalis, Gemini, Lynx, Perseus, and
The brightest star in the constellation is Capella, which is also the sixth brightest star in the sky.

Auriga is usually depicted as a charioteer, holding the reins of a chariot with his right hand and carrying a goat and its two young on his left arm.

In mythology, Auriga is most frequently identified with Erichthonius, king of Athens and son of the fire god Hephaestus. Erichthonius was raised by the goddess Athena, who taught him many skills he wouldn't have ordinarily learned. He was the first man to tame and harness four horses to a chariot, imitating the chariot of the Sun god. Zeus was impressed and later placed Erichthonius among the stars. Erichthonius is usually credited for the invention of the four-horse chariot, the quadriga.
In another myth, Auriga represents Hephaestus himself, the lame god, who built the chariot so that he could travel anywhere he wanted, whenever he wanted, without difficulty.

The star Capella is associated with Amalthea, the goat who was foster-mother to Zeus. The name Capella is Roman and means 'she-goat.' The star is located on the Charioteer's left shoulder.

Cassiopeia

- **Symbolism**: The seated queen
- **Brightest star**: Schedar
- **Nearest Star**: Achird
- **Bordering constellations**: Camelopardalis, Cepheus, Perseus, Lacerta, Andromeda
- **Best visible**: November
- **Mythology**: Cassiopeia was the wife of Cepheus and the mother of Andromeda. Because she thought herself more beautiful than the daughters of Nereus, a god of the sea, she challenged the anger of the god Poseidon. To punish her, her daughter was chained to a rock on the coast as a sacrifice for a sea monster. Andromeda was saved from death by Perseus. To learn humility, Cassiopeia was banned to the sky hanging half of the time head downward.
- The famous supernova SN1572, also known as Tycho's star was observed in Cassiopeia.
Cepheus

Cepheus, an otherwise unremarkable king, sits at the pantheon of the mythological royal family at the heart of the famous Andromeda-Perseus story. How did this faint constellation change the way we look at the universe?

The Facts

★ The Image of: King Cepheus, mythological King of Ancient Ethiopia and descendant of the nymph Io a favorite of Zeus.
★ Symbolism: The King/King Cepheus

★ Brightest star: Alderamin
★ Bordering constellations: Cygnus, Lacerta, Cassiopeia, Camelopardalis, Draco, Ursa Minor
★ Best visible: November
★ Mythological Background: 1) Although a faint constellation, Cepheus stands out as the royal patron in the famous Andromeda story. His wife, Cassiopeia, brags about the beauty of their daughter Andromeda. This upsets Neptune, who sends Cetus to devour the family. Cepheus strikes a deal and saves the family by offering Andromeda as a sacrifice to Cetus. But, before the sea serpent can eat the princess, our hero Perseus, fresh from slaying the evil Medusa, arrives on the winged Pegasus to save the day. The tale goes on, but it doesn't include any more constellations.
★ 2) China associated this constellation with the Inner Throne of the Five Emperors.
★ 3) Not all mythology has a kingly reference. Arabian nomads called this group of stars "Al Aghnām" (the sheep) while at least one Arab astronomer named it "Al Radīf" (the follower).
★ Cepheus is one the circumpolar constellations because it can be seen by most of the northern hemisphere all year.
Cetus

Cetus constellation is located in the northern sky. It is also known as the Whale. The constellation was named after Cetus, the sea monster from the Greek myth about Andromeda, the princess sacrificed to the monster as punishment for her mother Cassiopeia's vanity and boastfulness.

The constellation Cetus lies in the region of the sky called the Water, along with several other constellations with names evocative of water: Eridanus (the river), Aquarius (water bearer), Pisces (the fish), etc. It was catalogued by the Greek astronomer Ptolemy in the 2nd century.

FACTS, LOCATION & MAP

Cetus is the fourth largest constellation in the sky.

Cetus belongs to the Perseus family of constellations, along with Andromeda, Auriga, Cassiopeia, Cepheus, Lacerta, Pegasus, Perseus, and Triangulum.

MYTH

Cetus represents the sea monster from the Greek myth of the princess Andromeda, whose boastful mother Cassiopeia angered the sea god Poseidon and the Nereids (sea nymphs) by claiming that she was more beautiful than any of them. To appease the sea god and the nymphs, Cassiopeia and her husband, King Cepheus, had to sacrifice their young daughter to Cetus, a sea monster sent by Poseidon to punish the king and queen, or watch the monster ravage their land.

Andromeda was chained to a rock and left to the sea monster, but to her good fortune, the hero Perseus was passing by just as Cetus was about to devour her. Perseus rescued the princess and killed Cetus. He and Andromeda were later married.

Cetus was commonly depicted by the Greeks as a hybrid creature. It had forefeet, huge jaws, and a scaly body like a giant sea serpent. Even though the constellation is also known as the Whale, the mythical creature in the depictions does not in fact look like a whale.
Cygnus

Constellation Cygnus is one of the 88 modern constellations recognizable in the northern summer and autumn. It is identified as a swan or some kind of a stellar bird, in most mythologies. Here are some facts about Cygnus constellation.

History & Other Fun Facts on Constellation Cygnus

★ Symbolism: The Northern Cross or the Swan
★ The best time to view: September
★ Nearest star: 61 Cygni (11.4 light years away)
★ Brightest star: Deneb
★ Constellations bordering Cygnus: Lyra, Cepheus, Draco, Pegasus, Vulpecula, Lacerta
★ Mythology: The Greek mythology identifies Cygnus with several different legendary swans. Zeus disguised himself as a swan to seduce the beautiful Leda. Orpheus, as well as King Cycnus, were transformed into a swan. According to researchers, Cygnus may have originated on the Euphrates, as clay tablets reveal a stellar bird of some kind. The Chinese mythology connects Cygnus with the mythological lovers Zhi Nu and Niu Lang (Qi Xi). Cygnus has also been associated with “Roc,” a huge mythical bird found in the story of Sinbad the sailor (Thousand and One Nights).
★ History of Cygnus Constellation: Cygnus is Latin for Swan. The Greeks identified Cygnus simply as “Ornis” (Bird), but it was the Romans who adopted Greek myths to name it Cygnus and explained its meaning to the world. To the Arabs, the constellation is identified as a hen. According to the first century astronomer, Ptolemy, the constellation Cygnus was among 48 constellations, and today it remains one of the 88 modern constellations.

Cygnus Constellation: Little Known Facts

★ The Cygnus X-1 (Cyg X-1) is a popular galactic X-source in the Cygnus constellation. Discovered in 1964 during a rocket flight, the Cyg X-1 is accepted as a black hole candidate by astronomers and scientists. It is estimated to have a mass about 8.7 times the mass of the sun.
Draco

Draco, or the Dragon, is a constellation in the northern hemisphere. It was first charted by the Greek astronomer Ptolemy in the 2nd century. In ancient Egypt, the constellation was called Tawaret, after the vigilant, protective goddess of the northern sky, whose body was depicted as part-human, part-lioness, part-crocodile and part-hippopotamus.

In Greek mythology, the constellation Draco was identified with the dragon Ladon, which had a hundred heads and was in charge of guarding the Garden of the Hesperides, the orchard of the goddess Hera where golden apples that gave immortality grew. When Hercules was given the task to steal the apples, he enchanted Ladon with music and put him to sleep before stealing the apples. Hera later placed the dragon among the stars.

Draco is also associated with the dragon that guarded the Golden Fleece and was killed by Jason, as well as with the dragon killed by the Phoenician prince Cadmus before he founded the city of Thebes in Boeotia in Greece. In early Christian mythology, Draco was identified with the serpent that tempted Eve in the Garden of Eden.

Its tail star, Thuban, was the North Star 5,000 years ago.

Eridanus

Quick Facts

Name: Eridanus  
meaning: eh-RID-ah-nuss  
Viewing Season: Late Fall/Winter  
Best Seen In: December
Eridanus was one of the original 48 constellations first drawn by Ptolemy, but its date of actual origin is unknown. It has been thought to be the river of tears wept by the Heliades at the death of their brother Phaethon. Phaethon was hurled by Jove into the river after he attempted to drive the chariot of the sun.

However, Eridanus is a southern constellation and doesn’t fit well with this particular myth. Some think it refers to the Nile; such references as Eratoshenes, Germanicus and Hyginus all refer to Nilus in this area of the sky.

The Euphrates river may be a better fit; both rivers are similar, in that they wind and both have two major branches in them, and both have references to connecting heaven and hell. In ancient times, the Nile was known as Ioma, or Iauma, the Sea, whereas the Euphrates was known as Pura, or Purat, the River. To the Arabs, however, the constellation was associated with Nar, or Nahar, which translated to the Nile.

Neighboring Constellations: Cetus, Lepus, Orion, Taurus, Phoenix

Lepus

Lepus is the Latin term for hare. Discovered as early as in the 4th century BC, this constellation is placed beside Orion, creating a link between the two in mythology. Below are some interesting facts about constellation Lepus.

The Facts

★ **Image of:** A hare
★ **Time best visible:** December
★ **Rank in constellation size:** 51st
★ **Brightest star:** Alpha Lepus (Arneb), with an apparent magnitude of 2.58
★ **Nearest star:** GI 229, about 19 light-years away
★ **Mythology:** As the Lepus is positioned right under the Orion constellation, it is sometimes represented as the hare, chased by the hunter Orion.
★ **Historical significance:** Discovered by Audectus Methonidas in the 4th century BC, and later included by Ptolemy as early as the 1st century as one of the 48 constellations in his book “the Almagest”.
★ **Name Meaning:** Lepus is the Latin term for Hare or a jackrabbit. Should not be confused with the Lupus constellation.
Lyra

Lyra is a constellation in the northern hemisphere. It was introduced by the Greek astronomer Ptolemy in the 2nd century. The constellation is associated with the ancient Greek myth of Orpheus, the great musician killed by the Bacchantes. Orpheus carried with him the first lyre ever made, invented by Hermes and given to him by the god Apollo. After Orpheus' death, Zeus dispatched an eagle to fetch the lyre from the river into which it had fallen and then turned both into constellations in the sky. The lyre became the constellation Lyra and the eagle became Aquila. The constellation is sometimes depicted as an eagle or a vulture carrying a lyre and was also once known as Aquila Cadens ("falling eagle") or Vultur Cadens ("falling vulture").

The constellation Lyra is best visible during the month of September.

The brightest star in Lyra is Vega, the second brightest star in the northern hemisphere and fifth brightest star in the sky. Lying only about 25 light-years away, Vega was the first star outside our solar system to have its photograph taken.

Pegasus

Pegasus is a constellation in the northern hemisphere. It is the seventh largest constellation in the sky. It was named after the mythological winged horse and introduced by the Greek astronomer Ptolemy in the 2nd century.

In Greek mythology, Pegasus leapt from the body of the Gorgon Medusa, the monster whose gaze turned people into stone, when Perseus decapitated her. It was tamed by the hero Bellerophon, son of the Corinthian king Glaucus and grandson of Sisyphus. Bellerophon was helped by the goddess Athena. In Greek mythology, he is best known for slaying the Chimaera, a monster that breathed fire and had the head of a lion, body of a goat and tail of a serpent. When Bellerophon tried to ascend to Olympus on Pegasus to join the gods, he fell. Pegasus, however, made it and stayed with Zeus, carrying the god's thunder and lightning. It was Zeus who placed the horse among the stars.
Pegasus is best visible during the month of October.

Pegasus belongs to the Perseus family of constellations, along with Cassiopeia, Cepheus, Andromeda, Perseus, Cetus, and Auriga.

Constellations directly bordering Pegasus are Andromeda, Cygnus, Delphinus, Aquarius and Pisces.
Perseus Constellation Facts

Perseus constellation location is not very difficult to determine, as it lies in the main path of the Milky Way. It can be located to the north of Taurus constellation and west of Cassiopeia constellation. Perseus constellation is also home to the annual Perseid’s meteor shower, which takes place around the end of second week of August. This meteor shower makes it easier to locate the constellation in clear sky in August. Other deep sky objects located in the Perseus constellation include Little Dumbbell Nebula, California Nebula, Alpha Persei Cluster and the second brightest object in the Universe - SN 2006gy (Supernova).

Major Stars in Perseus Constellation
Among the various stars in Perseus constellation, the most famous one is Algol. In Arabic language, Algol means the Ghoul or the Demon Star. This star is regarded as the eye of gorgon Medusa. Though the star is not the brightest in this constellation, it is considerably luminous with its brightness ranging between 2.12m and 3.39m. Another important star in the Perseus constellation is the Mirfak, meaning the elbow. It is 5,000 times brighter and 62 times bigger, in terms of diameter, than the Sun. One of the brightest stars in the universe, Mirfak, lying at a distance of ca. 590 light-years, has a brightness of around 1.79m.

The best time to see Perseus is in the early evenings during autumn and winter. You can easily make out the human figure with a triangular body, legs and hands. In one hand, he appears to be holding the weapon, while in the other he appears to be holding Medusa’s head. Identifying Algol, which is believed to be the eye of Medusa, can make it easier for you to locate Perseus constellation.

Pisces

Did you know that the constellation of Pisces is the twelfth and last zodiac constellation?

The Facts

Image of: A pair of fishes
Time best visible: November
Rank in constellation size: 14th
Brightest star: Eta Piscium (Kallat Nunu, with an apparent magnitude of 3.6)
Nearest star: Van Maanen's star, about 14.1 light-years away

Mythology: In Greek mythology, Pisces is a representation of Aphrodite and her sons who transformed into fishes to escape from Typhon. Their tails are tied together so that they don't lose one another.

Symbolic significance: The star Beta Piscium has the Arabic name Samaka (for "the fish").

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Taurus

Taurus, the Bull, is a constellation in the Zodiac with a fascinating mythology which appears in cave drawings.

About The Taurus

★ Image of: A bull
★ Time best visible: January

★ Rank in constellation size: 17th
★ Brightest star: Aldebaran
★ Nearest star: 10 Tau, 44.7 light years away
★ Meteor showers: Taurids (late October - early November) and Beta Taurids (early June - mid July, a "daytime shower" peaking after sunrise)
★ Mythology: In Greek mythology, Taurus represents the white bull that sired the Minotaur with king Minos' wife, Pasiphaë. The Minotaur was a monster with the head and tail of a bull and body of a man. It was kept in a labyrinth where it devoured Athenian youths given as sacrifice, until it was killed by Theseus.
★ Historical significance: The identification of the constellation Taurus with a bull may date back to prehistoric times. A cave painting at the Lascaux caves Hall of Bulls may be of the constellation Taurus.
★ Taurus in other cultures: The Chinese called this constellation the White Tiger of the West, one of the four great Chinese constellations. The Chinese also call it the Great Bridge. To the ancient Egyptians, it represented the god Osiris, the god of the dead and of the afterlife and father of Horus, the god of the living.