

LEARNING THE CONSTELLATIONS

Following are six charts which present a good approach for learning your way around the heavens. Learn the constellations and they will become old friends and the night will be more interesting.

A chart for each season uses a geometric figure of bright stars to identify a group of constellations. Two additional charts for important and easily traced areas of the sky are also included.

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	Chart 2	Spring Diamond
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	Chart 4	Summer Zodiac
	Chart 5	Fall Square
	Chart 6	Circumpolar

Start by choosing the chart that applies to the current season. Stars rise in the East and set in the West. These charts will be in the East during early months listed and West during late months listed. The circumpolar chart is year round – Hold the current date up about 9:00 pm.

Don't just find the constellations – memorize them and the stars (most of which are first magnitude) along with them.

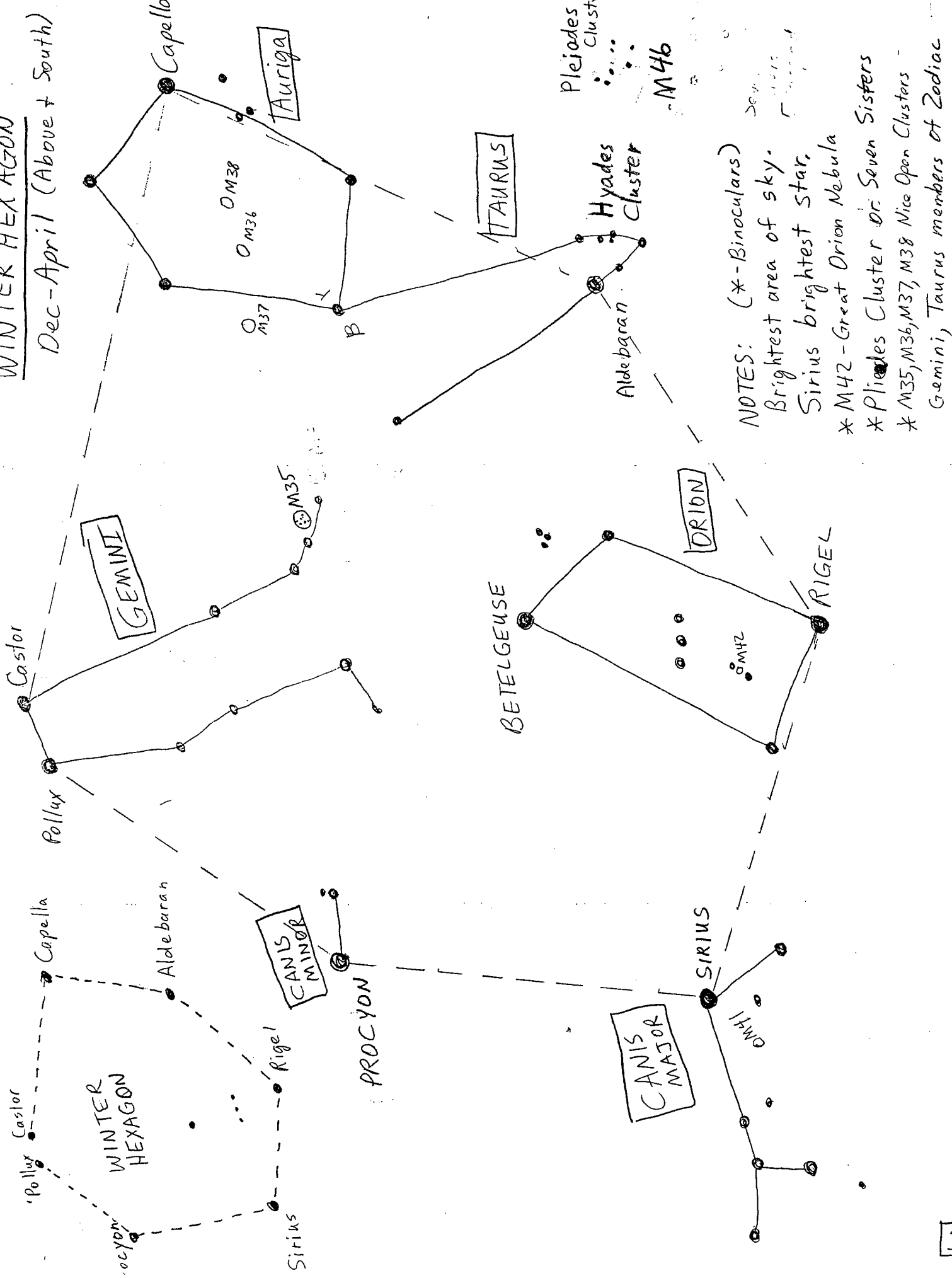
Notes have been made on interesting objects visible in binoculars or a small scope and a quiz to aid learning and enjoyment of the Winter Hexagon. See notes on observing at bottom of this quiz.

Hopefully these charts will aid you in finding your way in the night sky.

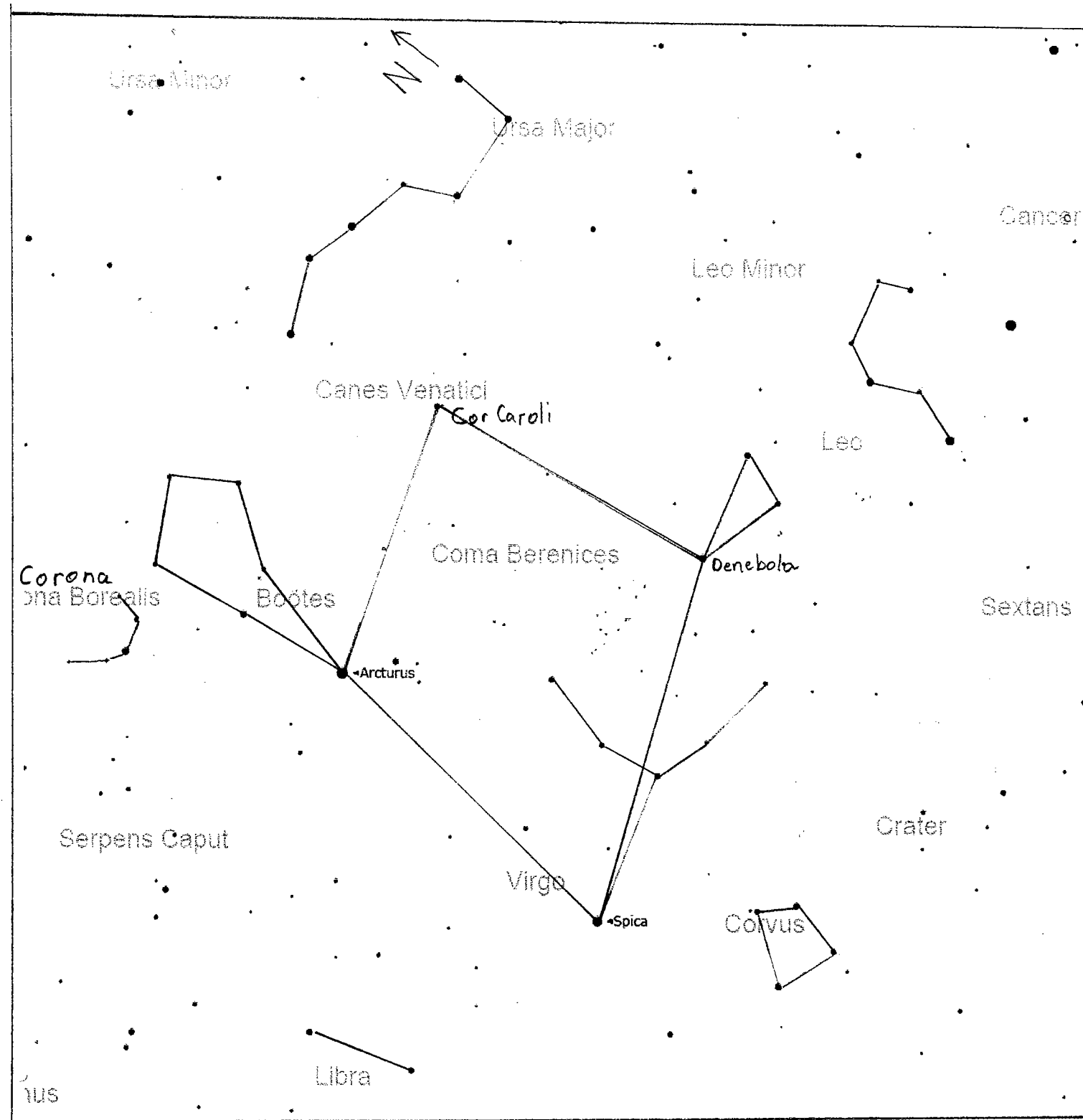
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May 2007

WINTER HEXAGON

Dec-April (Above + South)



- NOTES: (* - Binoculars)
- Brightest area of sky.
 - Sirius brightest star.
 - * M42 - Great Orion Nebula
 - * Pleiades Cluster or Seven Sisters
 - * M35, M36, M37, M38 Nice Open Clusters
 - Gemini, Taurus members of Zodiac



Spring Diamond Visible March to July in the evenings

Arcturus 2nd brightest star in Northern Hemisphere and 4th brightest overall. About 37 light years away.

Cor Caroli Nice double star for small scopes. Note colors. Mag 2.9 and 2.95.

Spica – Mag 1.0, 275 light years away, 2300 times as luminous as our sun.

Virgo has a rich history with the Egyptians, Greeks, and Romans worth reading about.

Denebola – The Lion’s Tail. Magnitude 2.14 and about 43 light years away.

Cancer, Leo, Virgo, and Libra in Zodiac/Ecliptic

Small dots in Coma Bernices are galaxies

Summer Triangle

Visible May to October

Vega 5th brightest star located in Lyra, First star photographed. 27 light years away.

Deneb mag 1.26 is one of the largest stars known. The tail of

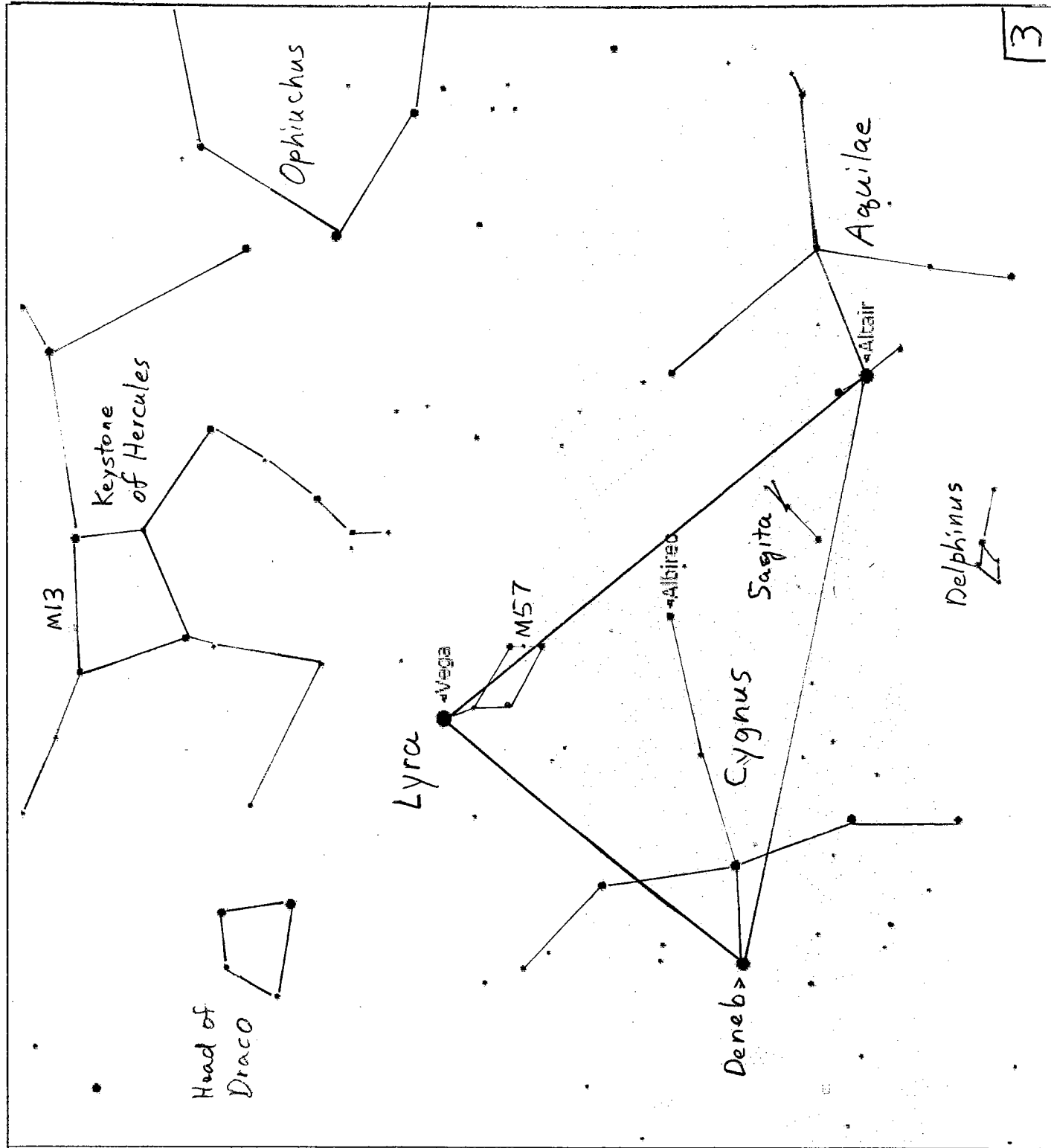
Cygnus the swan. It is estimated to be 1600 light years away.

Altair is in the tail of Aquilae the Eagle. It is the 12th brightest star mag .77 at 16 light years away.

Albireo, The head of the swan is a beautiful double star in a small scope.

M57 the ring nebula is the ring left from an exploded star.

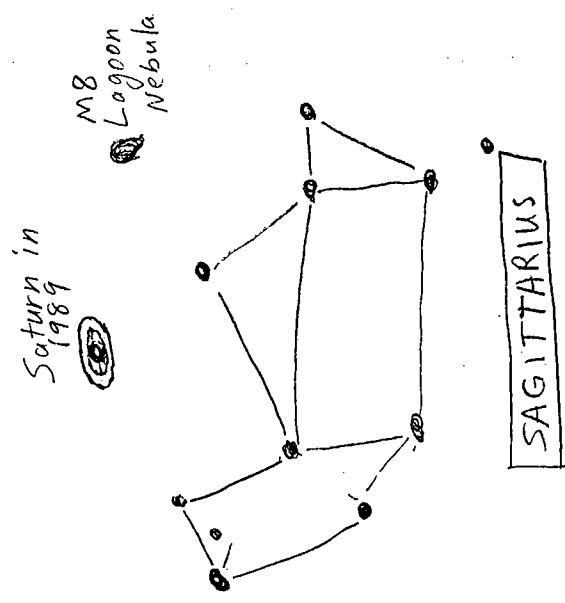
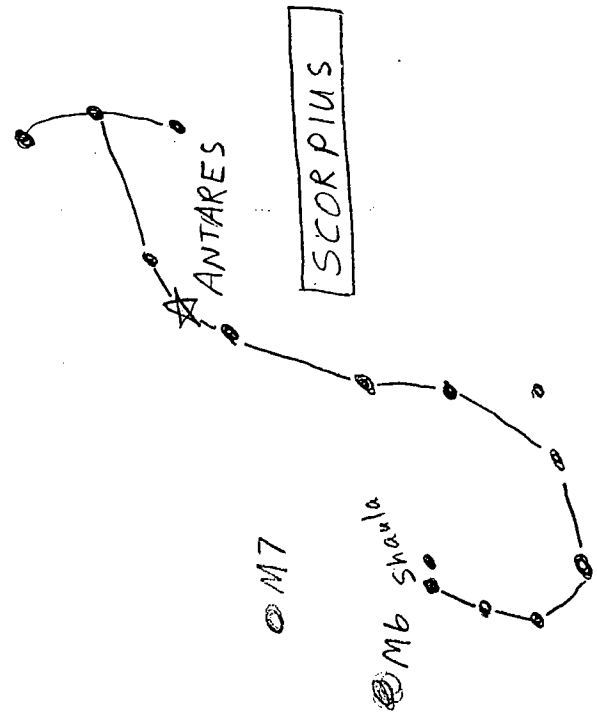
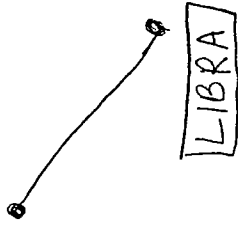
Milky Way splits as it goes through **Cygnus** & **Aquilae**, These two birds seem to be flying down the Milky Way



SOUTHERN SUMMER CONSTELLATIONS

June - September

South



NOTES:
ANTARES is a red star and means Mars like.
It is 500 times as big as the sun.
M6 + M7 are beautiful open clusters in a small telescope
Try for M8, the Lagoon Nebula in binoculars or telescope
The Milky Way runs between Sagittarius + Scorpius.
Sagittarius, Scorpius, and Libra are in Zodiac.

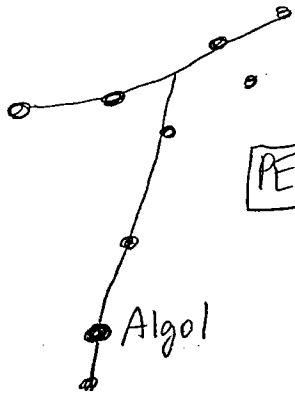
Algol in Perseus 2.3 to 3.5
 Magnitude. 2.87 day cycle.
 Mira in Ceti 1.7 to 9.6 mag.
 331 day cycle.

FALL-GREAT SQUARE
OF PEGASUS

Aug to Dec (Above & North)

Notes:

M31 & M33 are spiral galaxies
 easy in binoculars. M31 is
 the famous Andromeda Galaxy.
 Count the stars you see in the
 Great Square. Draw them in.
 Look for the Perseid Meteor shower
 August 10-12 after midnight
 Pisces & Aries are in the Zodiac.
 Add Cetus the whale below Pisces
 and you have the characters
 in Clash of the Titans. Cepheus
 the King and Cassiopeia are
 above Perseus.



PERSEUS

Algol

ANDROMEDA

M31

TRIANGULUM

M33

PEGASUS

ARIES

PISCES

CETUS

○ Mira

June 1 July 1 Aug 1 Sept 1

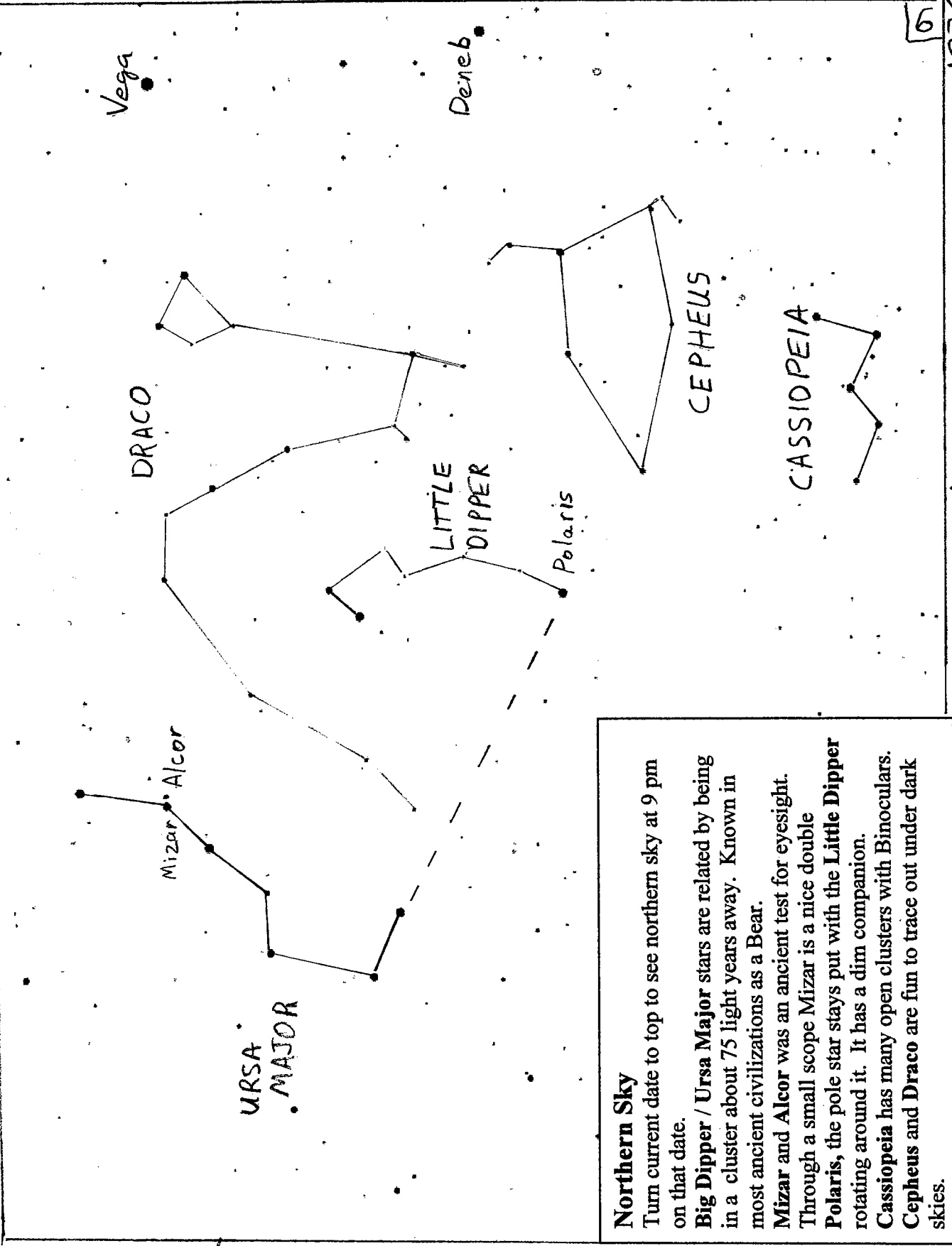
Oct 1

Nov 1

Dec 1

Jan 1

Feb 1



Northern Sky

Turn current date to top to see northern sky at 9 pm on that date.

Big Dipper / Ursa Major stars are related by being in a cluster about 75 light years away. Known in most ancient civilizations as a Bear.

Mizar and Alcor was an ancient test for eyesight. Through a small scope Mizar is a nice double

Polaris, the pole star stays put with the **Little Dipper** rotating around it. It has a dim companion.

Cassiopeia has many open clusters with Binoculars. **Cepheus** and **Draco** are fun to trace out under dark skies.

May 1

Apr 1

Mar 1

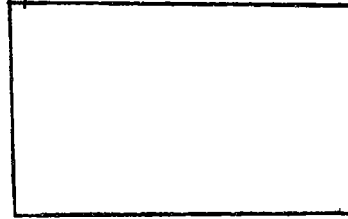
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WINTER CONSTELLATION QUIZ

1. Find the Winter Hexagon. Use Orion's Belt to find Sirius and Aldebaran.

2. What color is Aldebaran. _____

3.* Sketch the Pleiades



4.* Find M42 in Orion. What does it look like? _____

5. What color is Capella? _____

6.* View the Hyades - a cluster similar to the Pleiades only closer!

7.* Find M41 in Canis Major. How is it different from M42? _____

8. Find B Tauri and γ Auriga. Why is this star unusual? _____

9.* Find M35 in Gemini. Compare it to M41. _____

10. What colors are Betelgeuse _____ in _____ (Constellation)
 Rigel _____ in _____
 Castor _____ in _____
 Pollux _____ in _____
 Procyon _____ in _____
 Sirius _____ in _____

Notes on Observing:

Your eyes will take several minutes to adapt to the dark. You will be able to see much more 10-20 minutes after starting to observe. Use a flashlight with red cellophane to look at the charts. This won't cause you to lose your night vision.

* Use Binoculars. Brace yourself so you can study the Messier (M35, M41, M42, M46) Objects. The longer you look the more you will see. Be sure to record your observations.