

Driftway Observatory



“Double, double, toil and trouble”

- *William Shakespeare*



Hey, this night's all about double stars – no trouble at all - MacBeth should have had it so good!

It's a big night! You should learn:

- Two new constellations – Cassiopeia, and Andromeda.
- Why, when, and how to change telescope eyepieces.
- To observe carefully six double stars and a bonus surprise, paying special attention to star colors.
- How to draw a double-star for your observing report.

The constellations are easy. Just study the chart on the back of this sheet and pay attention when I point them out with the green laser.

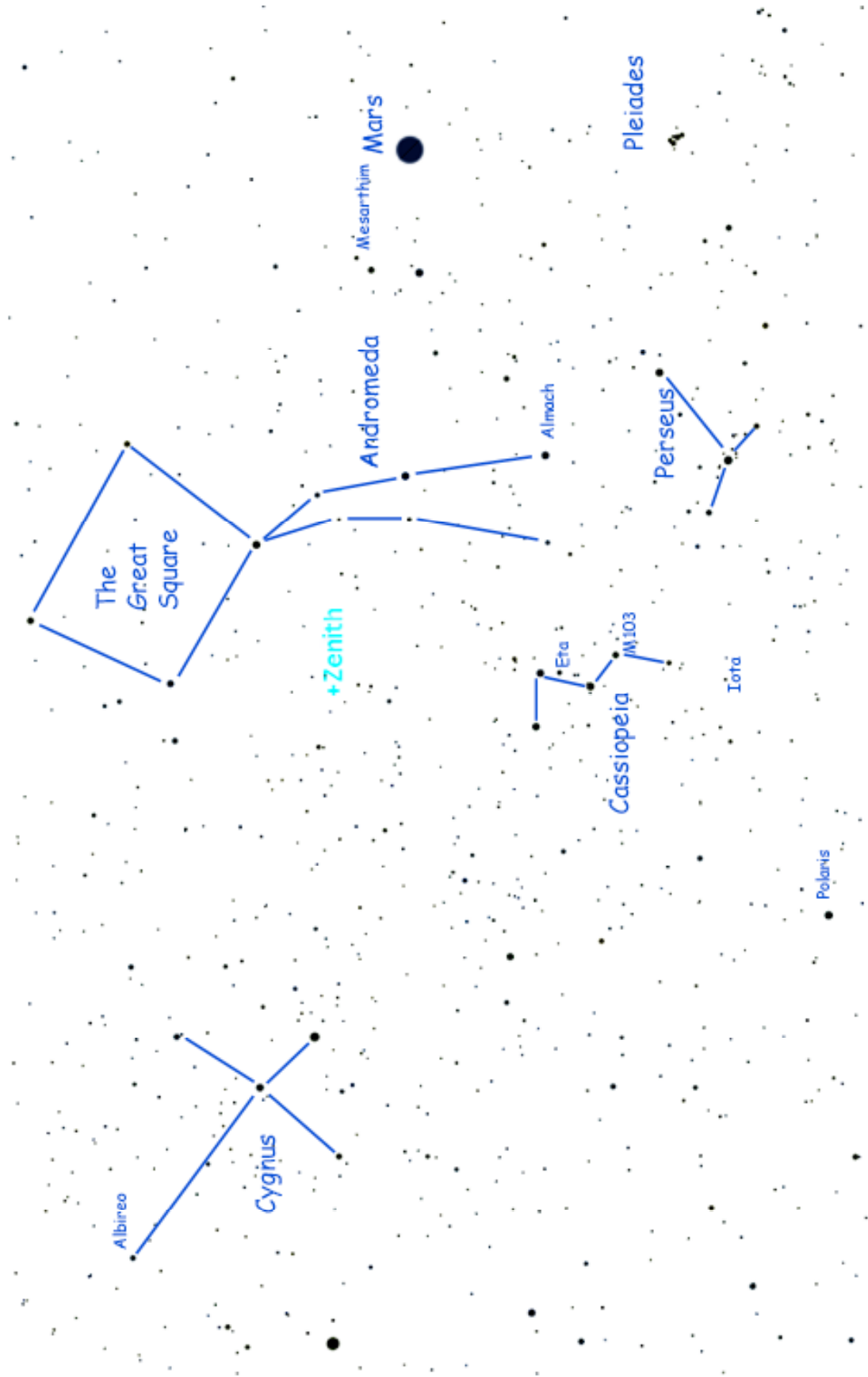
Eyepieces give telescopes their magnification. Remember these four things:

1. Never touch the glass of an eyepiece.
2. Each eyepiece gives a different amount of magnification depending on which telescope it is used in, but . . .
3. The **lower** the number on an eyepiece, the **higher** the power.
4. The **higher** the power, the **smaller** your field of view.

True double stars are stars that are held together by gravity just as the Earth is held in its orbit around the sun by gravity. Our Sun is a single star. Most stars, however, are double stars. Some belong to big star families that have four or more members.

Double stars are fun to study for themselves – **but we are looking at them tonight because we want to see star color** and this is easier to see when there are two stars of different color that are close together. However, some of the double stars we will see tonight are both white, so **don't assume they all have color!**

Scientists study the color of a star because it tells them **important things about a star's temperature, age, size and the stuff of which it is made. Knowing the color can even give you and I some hints about these stars.**



Some fall constellations and double stars. View horizontally. North is at the top, east to your right.