Phys 102 Astronomy Name Key

ATLAS CHARTS

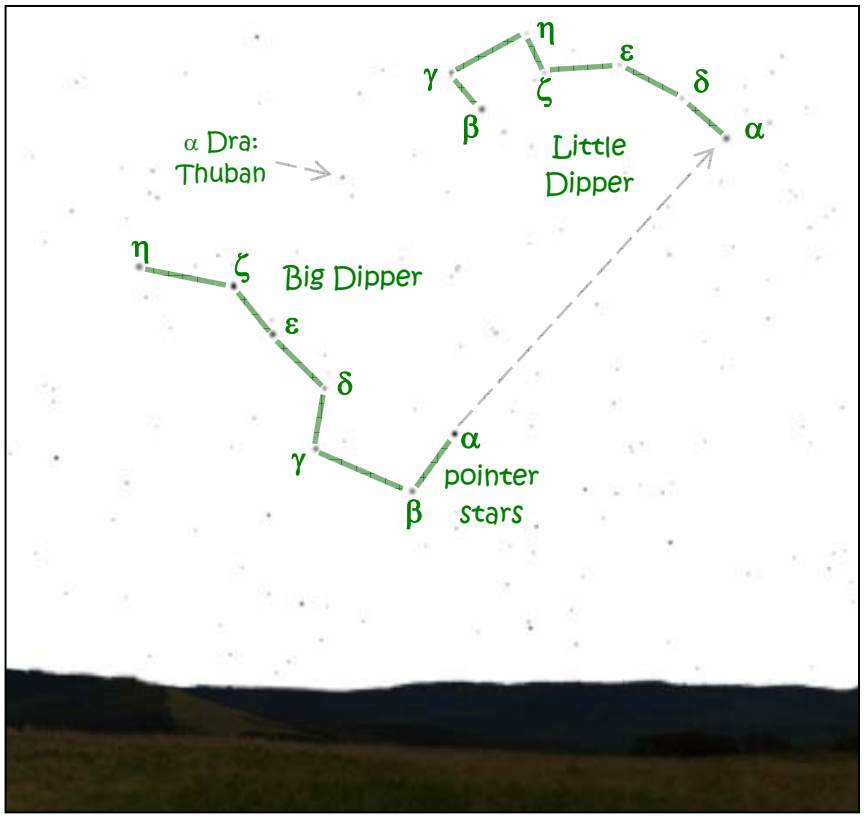
Find the atlas charts (two) for the Big & Little Dippers in the field guide and **read the descriptions** to complete the following:

1. The diagram shows the Dippers at 10 pm tonight over Canton. Label it with

a) Greek letters of the Bayer designations of the stars in the Dippers

b) Complete Bayer designation of Thuban (α Dra)

c) List the apparent magnitudes of the stars in each dipper (read the texts of the atlas charts!)



Star	Name	Mag.
α UMi	Dubhe	1.8
β UMi	Merak	2.4
γ UMi	Phecda	2.4
δ UMi	Megrez	3.3
ε UMi	Alioth	1.8
ζ UMi	Mizar / Alcor	2.1/4.0
η UMi	Alkaid	1.9

Star	Name	Magnitude
α UMi	Polaris	2.0
β UMi	Kochab	2.1
γ UMi	Pherkad	3.1
δ UMi	Delta	4.4
ε UMi	Epsilon	4.2
ζ UMi	Zeta	4.3
η UMi	Eta	5.0

2. List the proper names and magnitudes of the stars in the Big Dipper in order from brightest to dimmest

	Brightest →							*Dimmest*
Name	Dubhe	Alioth	Alkaid	Mizar	Merak	Phecda	Megrez	Alcor
Magnitude	1.8	1.8	1.9	2.1	2.4	2.4	3.3	4.0

3. What's special about the stars Mizar and Alcor?

Mizar & Alcor are a double star in the handle separated by 18°, 1/3 the moon's diameter. Mizar is also a double star and each of its stars are, in turn double stars.

4. What stars provide a good test of the sky and your eyes' sensitivity and how?

The stars in the bowl and handle of the Little Dipper decrease in brightness from Kochab at 2.1 to Eta at 5.0. Noting which stars are visible on a given night gives a measure of the brightness of the sky or, if others can see all the stars, the sensitivity of your eyes.

5. What are the Owl Nebula and M101?

The Owl Nebula is one of the largest planetary nebulae and is close to β. M101 is 'an exceptionally beautiful galaxy" and one of the brightest galaxies in the sky. It's near Alkaid at the end of the Big Dipper'