

## ATLAS CHARTS

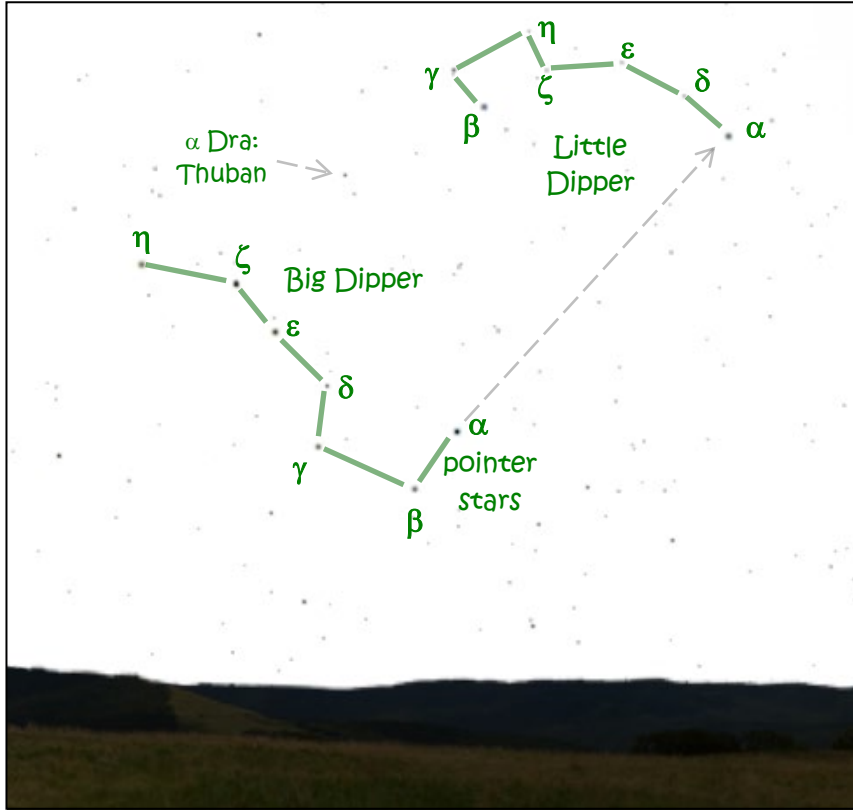
Find the atlas charts (two) for the Big & Little Dippers in the field guide and **read the texts describing the field** to complete the following:

1)<sup>30</sup> The diagram shows the Dippers at 10 pm tonight over Canton. Label it with

*Superscript gives number of points.*

a)<sup>15</sup> **Greek letters** of the Bayer designations of the stars in the Dippers

b)<sup>15</sup> **List the apparent magnitudes** of the stars in each dipper (**READ THE TEXTS of the atlas charts!**)



Star	Name	Mag.
α UMa	Dubhe	1.8
β UMa	Merak	2.4
γ UMa	Phecda	2.4
δ UMa	Megrez	3.3
ε UMa	Alioth	1.8
ζ UMa	Mizar	2.2
80 UMa	Alcor	3.9
η UMa	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

	<i>Brightest</i> <span style="color: red;">→</span> <i>Dimmest</i>							
Name	Dubhe	Alioth	Alkaid	Mizar	Merak	Phecda	Megrez	Alcor
Magnitude	1.8	1.8	1.9	2.1	2.4	2.4	3.3	3.9
	<i>Same!</i>				<i>Same!</i>			

3)<sup>4</sup> What's special about the stars Mizar and Alcor? (**READ both Atlas Chart TEXTS**)

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.

*Write enough to be worth the points.*

4)<sup>4</sup> What stars provide a good test of the sky and your eyes' sensitivity and how? (**READ the TEXTS**)

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)<sup>4</sup> What are the Owl Nebula and M101? (**READ the TEXTS**)

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'