

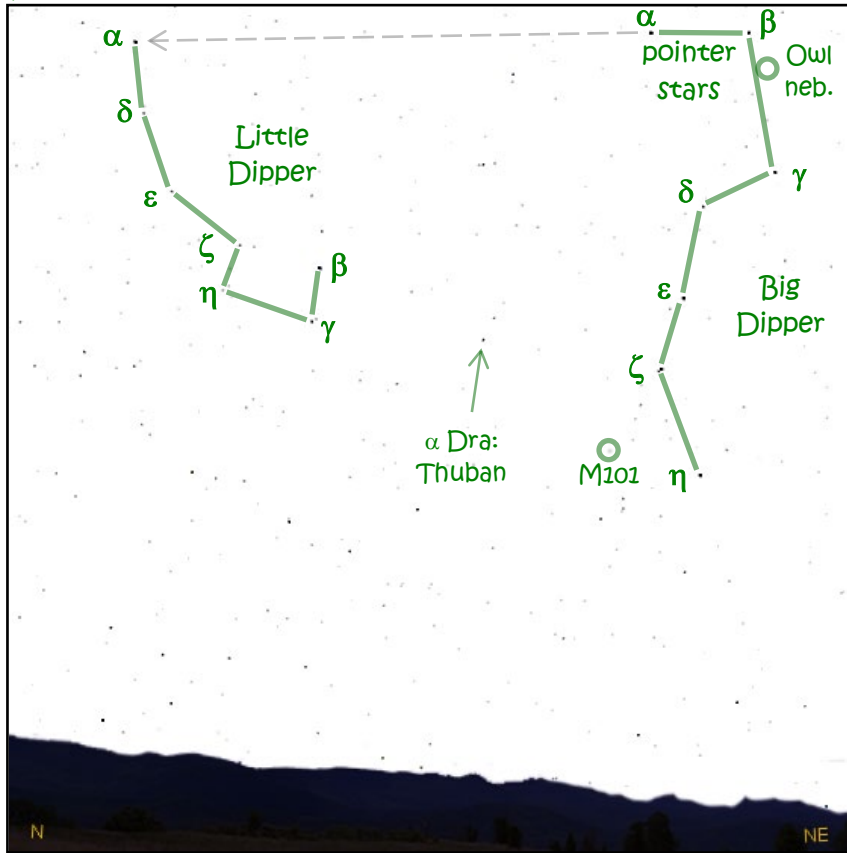
ATLAS CHARTS

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



- 1)³⁰ The diagram shows the Dippers at 10 pm tonight over Canton. Label it with
 a)¹⁵ **Greek letters** of the Bayer designations of the stars in the Dippers
 b)¹⁵ **List the apparent magnitudes** of the stars in each dipper (**READ THE TEXTS of the atlas charts!**)

Superscript gives number of points.



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)¹⁶ List the "other" names and magnitudes of the stars in the Big Dipper in order from brightest to dimmest

	<i>Brightest</i> → <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

Same!

Same!

Write enough to be worth the points.

3)⁴ 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.

4)⁴ 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)⁴ 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'