

ATLAS CHARTS

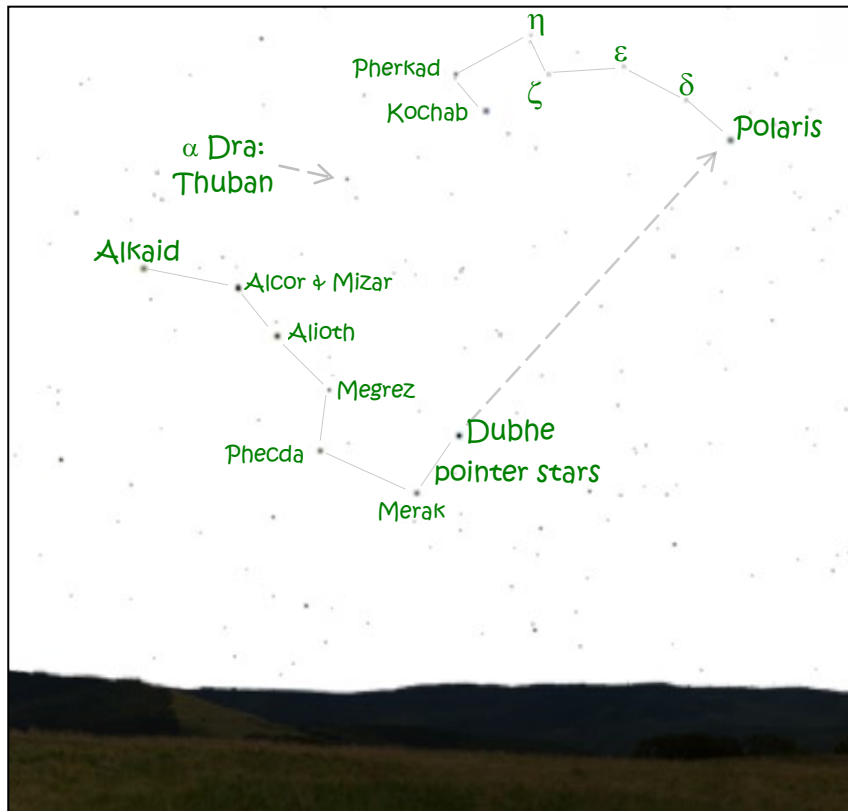
Find the atlas charts (two) for the Big & Little Dippers in the field guide and **read the texts ... all the paragraphs describing each field** to complete the following:

1)³⁰ The diagram shows the Dippers at 10 pm tonight over Canton.

Superscript
gives number
of points.

a)¹⁵ List the **apparent magnitudes** of the stars in each dipper (**READ THE TEXTS**)

b)¹⁵ Label diagram with names (or Gk. Letters if no name) of the stars listed in the tables. Example labels and Thuban are shown.

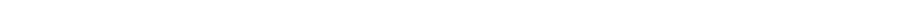


Star	Name	Mag.
α UMa	Dubhe	1.8
β UMa	Merak	2.4
γ UMa	Phecda	2.4
δ UMa	Megrez	3.3
ε UMa	Alioth	1.8
ζ UMa	Mizar	2.2
80 UMa	Alcor	3.9
η UMa	Alkaid	1.9

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

Boxes that are filled in are starting points that should help you fill in the rest of the tables from the texts.

2)⁸ 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!

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'

Write
enough
to be
worth
the
points.