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## **Unit 01 – Welcome and Orientation to Maine’s Magnificent Night Skies**

**Goal:** To transform the night sky from a "blur of lights" into a navigable map using both ancient star-hopping and the SkySafari app.

**I. Introduction (5 Minutes)**

- Your Instructor, Russ

**II. Course Materials (10 Minutes)**

- SkySafari 8 Basic
- Astronomy: A Self-Teaching Guide, 8<sup>th</sup> Edition, Dinah L. Moché
- SkyMaps.com
- Planisphere
- Binoculars (optional)

**III. The Planisphere (10 Minutes)**

**IV. SkySafari 8 Basic (15 Minutes)**

- Location
- Time
- Compass Mode
- Constellations

**V. Constellations and Star You Should Get to Know (20 Minutes)**

- By Season
  - By Month
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## Miscellaneous Information

- **The Big Dipper (Ursa Major):** Using the "Pointer Stars" (Dubhe and Merak) to find Polaris.
- **The North Star (Polaris):** Debunking the myth that it's the brightest star. Its true value is its "stillness."
- **Orion (The Winter Anchor):** Identifying the Belt and how it points to Sirius (the Dog Star).

## Digital Astronomy: SkySafari 8

- **Compass Mode:** How the app uses your phone's gyroscope to "see" through the Earth.
  - **The "Tonight" Feature:** Finding what planets are visible *right now* from Maine.
  - **Night Vision Mode:** Why the screen turns red and how it saves your "rod" cells (low-light receptors).
  - **Searching:** A quick drill on finding a specific object (e.g., "Find Mars").
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## Atmosphere & Observing

- **Transparency vs. Seeing:** Why a "clear" night might still be "blurry" for a telescope.
  - **Averted Vision:** The trick of looking "next to" an object to see it more clearly.
  - **The "20-Minute Rule":** Discussion on how long it takes for human eyes to fully adapt to the dark.
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- **The Pine Tree State's Dark Gift:** Why Maine is the best place in the Eastern US for stargazing.
  - **The Bortle Scale:** Explaining why "dark" in Portland is different from "dark" in Rangeley.
  - **Safety & Comfort:** Dressing for the "Maine drop" in temperature.
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## Fast Facts Handout: Navigating the Pine Tree State

<b>Feature</b>	<b>Comment</b>
<b>Maine’s Darkest Spot</b>	Katahdin Woods & Waters (International Dark Sky Sanctuary)
<b>The "Pointer Stars"</b>	Dubhe and Merak (The edge of the Big Dipper's bowl)
<b>Polaris Elevation</b>	~44° (Always equal to your latitude)
<b>Human Eye Dark-Adaptation</b>	20 to 30 minutes (Reset instantly by white light)
<b>SkySafari "Night Mode"</b>	Turns the screen <b>Red</b> to preserve night vision

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