

## Virtual Moon Journal Part I

As we prepare to “virtually” follow the Moon through its cycle of phases, we must first become familiar with the software program *Starry Night*. In part I, we will explore how to open the software and what types of things you can view and explore with it. Though it may be confusing at first, we’ll discover how to use it together!

### *Starry Night Introductions and Tutorials*

1. Open either the Firefox or Safari web browser. (Chrome was having difficulty working with *Starry Night* the last Mr. Bryant checked.)
2. Navigate to [www.mrbryant.net](http://www.mrbryant.net)
3. Navigate to our Astronomy class page and find the link: [Starry Night Logon Screen](#). Click that and once you’re able to enter the Login Code, enter **DCLZuQ1**
4. Click the **Launch App** button under *Starry Night High School*.
5. It may take a few moments for the application to load in your browser. If it takes more than a couple of minutes, let your teacher know.



We will be going through the Tutorial as we learn about the function of *Starry Night*. You’ll see a button for it on the upper left part of your window under the word SKYGUIDE. (If you ever get frustrated, you can always click the icon shaped like a house—the home button—to take you back to the basic first view.)

Go ahead and click on the Tutorial button.

Then click on the Introduction tab. →



As you go through the tutorial, read the directions and try the actions suggested so that you become familiar with the software. At the bottom of each section there will be a blue highlighted phrase that will take you to the next part. Some sections have short questions at the end that are repeated on the back of this page and you should try and answer.

Ask for help when you need it and have fun!

Starry Night Introductions and Tutorials (cont.)**Tutorial**

**Introduction**—Read and continue to part 1.

**1. The Sky Chart and Toolbar**—read about and notice the various controls, perform the actions relating to changing your view.

**2. Object Info**—read and perform actions. Answer Question 1.

Q1. Select the star Antares and press the Info button in the Status Bar. How far away from you (the observer) is Antares?

- A. 2 light years
- B. 550 light years
- C. 200 light years
- D. 302 light years

**3. Measurement Tool**—read about and figure out how to use the Measurement Tool. Answer Questions 2 and 3.

Q2. What is the approximate angular separation between the star Antares and the Moon?

- A. 15 degrees
- B. 98 degrees
- C. 30 degrees
- D. 36 degrees

Q3. What is the distance between Antares and Sabik?

- A. 100.0 light years
- B. 186.3 light years
- C. 469 light years
- D. 20.5 light years

**4. Time Flow**—read try out the various time controls on Starry Night. Then answer Question 4.

Q4. Change the date to July 8, 2014. What was the approximate angular separation between the star Antares and the Moon on this date?

- A. 3 degrees
- B. 11 degrees
- C. 32 degrees
- D. 8 degrees

**5. Elevation Control**—read and practice zooming while in orbit around Jupiter

**6. Gaze**—read and practice changing your gazing direction. Fill in the blanks:

**Altitude**—measures the \_\_\_\_\_ the \_\_\_\_\_.

**Azimuth**—indicates the \_\_\_\_\_ you are \_\_\_\_\_ with respect to \_\_\_\_\_.

Azimuth angle increases to the \_\_\_\_\_, through \_\_\_\_\_, and on to the \_\_\_\_\_.

Q5. The compass direction points (N, NW, W, SW, S, SE, E, NE) are marked along the horizon in Starry Night. Change the direction you are facing until the gaze display shows an azimuth (Az) of 315 degrees. Toward what compass direction are you facing?

- A. S
- B. SE
- C. N
- D. NW

7. **Zoom Controls**—read and try zooming. Notice the FOV (Field of View) at the bottom left of the screen. Select and center the Moon on the Sky Chart. (Once you select the Moon, click the bull's-eye button on the bottom right.) Answer Question 6.

Q6. Using the zoom controls to magnify the Moon until it fills the entire Sky Chart top to bottom. Read the field of view (FOV) display on the bottom left corner of the Status Bar. Roughly, what is the angular diameter of the Moon?

- A. About 0.40 degrees
- B. About 0.50 degrees
- C. About 0.60 degrees
- D. About 0.80 degrees

8. **Finding Objects**—read and practice using the search function (magnifying glass icon). Search for a few astronomical objects that interest you, then answer Question 7.

Q7. Using the search function, find the star Alkaid. What is the distance in light years (ly) to Alkaid?

- A. 12 ly
- B. 104 ly
- C. 55 ly
- D. 4 ly

9. **Navigating SkyGuide**—read about navigation and then click on [Student Exercises](#) to go back to the beginning. If you have extra time, try exploring some other exercises in Unit A: Earth, Moon, and Sun such as A1: Day and Night Cycle, A2: The Year and Seasons, or A3: The Moon.

