

ASTR 101 - Fall 2014
Big Dipper Observing Assignment
Due Monday October 6th

The goal of this assignment is to get you out of the classroom and looking up at the sky. Let's "do some astronomy."

Make a video that shows the following:

1. Everyone in your group saying their first name and a "hello" to the camera.
2. Clearly demonstrate that you are all outside, at night. Show what time it is, by flashing a watch or cell phone clock at the camera.

Now, prove that you are actually finding and observing the Big Dipper.

3. Show members of your group looking up, and flash a compass at the camera (a cell phone app is fine) that shows the general direction in which they are looking.
4. Show a blank piece of paper (maybe on a clipboard) being handed to one of the observers. Show them tracing star-by-star, exactly what they see of the Big Dipper. Be sure to preserve the exact orientation of it, as you see it in the sky.
5. Show the observer finding Polaris (the North Star) from the Big Dipper. Draw Polaris on the piece of paper too.
6. Verify with the compass that the North Star "is in the right direction." Demonstrate this verification to the camera somehow.
7. Show an observer finding the angular size of the Big Dipper using their hand and arm fully extended as discussed in class. Annotate your star-by-star sketch of the Big Dipper with these angular sizes. Two or three different angular sizes will be fine. [This diagram](#) may help.
8. Find the angular distance to the North Star from the Big Dipper.
9. Next, find and draw Cassiopeia. (the "W"). It's on the "other side" of Polaris, relative to the big dipper. Be sure to carefully draw it in its proper orientation.
10. Hold up your final drawing to the camera so we can clearly see your work in the video. Again, the drawing should show the "dots" you identified as the Big Dipper, the North Star, and angular sizes you found.
11. Can you demonstrate to the camera somehow that you can "arc to Arcturus" as discussed in class. What color does Arcturus seem to be. If you found Arcturus, remember that you found a star much much bigger than our Sun, as seen here: [CLICK](#).

That's it and congratulations! You are becoming a "better camper" already.

Upload your video to Youtube. Give all members in your group the Youtube link so they can submit it via the question that will be posted at Quizable.org. Have fun!