

HOUSTON MUSEUM OF NATURAL SCIENCE

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Astronomy Merit Badge Prerequisites Worksheet

Scout's Name: _____ Unit: _____

The following requirements must be completed prior to the Astronomy Merit Badge class. Bring all paperwork with you on the day of the class.

The Houston Astrological society list the stars that are visible at night. Go to <https://www.astronomyhouston.org/interests>

Requirement 4a: Identify in the sky at least 10 constellations, at least four of which are in the zodiac. See attachment at the back of the workbook.

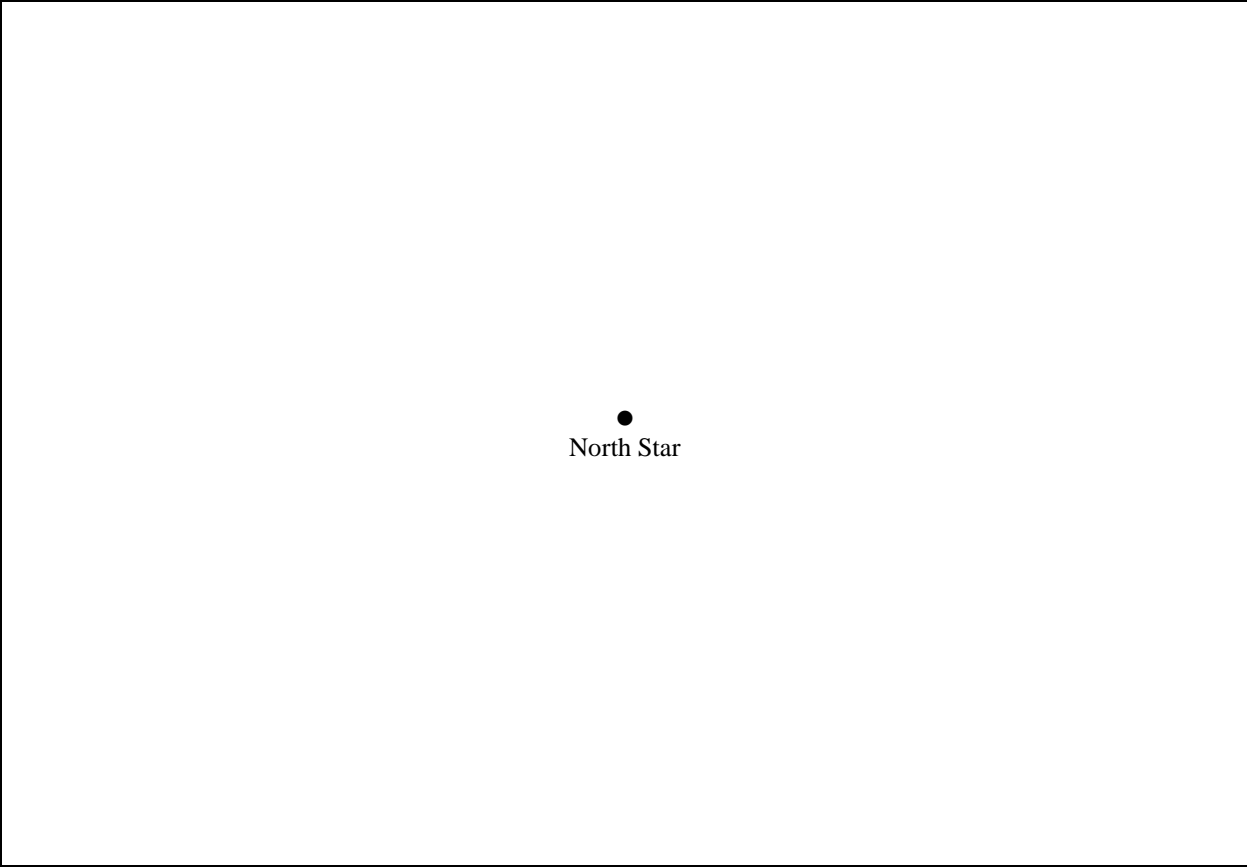
Zodiac	Non-Zodiac
1.	1.
2.	2.
3.	3.
4.	4.
	5.
	6.

Requirement 4b: Identify in the sky at least eight conspicuous stars, five of which are of magnitude 1 or brighter.

Name of Star	
1.	5.
2.	6.
3.	7.
4.	8.

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Requirement 4(c): Make two sketches of the Big Dipper. In one sketch, show the Big Dipper's orientation in the early evening sky. In another sketch, show its position several hours later. In both sketches, show the North Star and the horizon. Record the date and time each sketch was made.

Observation 1: Date: ___/___/___ Time: _____		Observation 2: Date: ___/___/___ Time: _____	
			
West	North	East	
<p>Suggested Procedure: Choose a clear night when you will have time and the ability to make observations some hours apart. Looking north, draw the position of the Big Dipper with relation to the North Star. Note the time next to it. Several hours later (six hours are best but at least four hours and preferably more than five hours) draw the position of the Big Dipper with relation of the North Star and note the time next to it. (Be sure to clearly identify which diagram represents which observation.)</p>			

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REQUIREMENT 6(b): Sketch the phase and the daily position of the Moon at the same hour and place, for four nights within a one week period. Include landmarks on the horizon such as trees and buildings.

Date: ___/___/___	Time: _____	Date: ___/___/___	Time: _____
Date: ___/___/___	Time: _____	Date: ___/___/___	Time: _____
<div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> East South West </div> <p>Suggested Procedure: First check to see whether it is a morning or evening moon and chose a time to view the moon. Avoid an observation period when there will be a new moon. Choose a time and place you are going to be able to observe the moon each day. On the first day, sketch the relative position of the moon across the southern horizon noting its height and shape (phase). Draw some landmarks on the sketch as points of reference. On the same drawing, repeat this at the same time each day for the next three days, showing the height and shape of the moon for each observation. Note the date and time of your observation next to each sketch of the moon. If the sky is overcast and the moon is not visible, either extend the observations until you can make four of them, and/or using the other observations, estimate where the moon would have been and what shape it would have been on the overcast day(s) and indicate that what is an estimate due to overcast sky.</p>			

<p>Explain the changes you observed:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
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