

# *the Houston Museum of natural science*

## **Astronomy Merit Badge Prerequisite Workbook**

Scout's Name: \_\_\_\_\_ Unit: \_\_\_\_\_

### **REQUIREMENT 4**

#### **PREREQUISITE/HOMEWORK**

- a. 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.

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

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

**PREREQUISITE/HOMEWORK**

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.

Date: ___/___/___	Time: _____	Date: ___/___/___	Time: _____
<p>● North Star</p>			
West	North	East	
<p><b>Suggested Procedure:</b> 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>			

d. Explain what we see when we look at the Milky Way.




## REQUIREMENT 6

**b. PREREQUISITE:** Sketch the phase and the daily position of the Moon at the same hour and place, for four days in a row. Include landmarks on the horizon such as hills, trees, and buildings.

Date: ___/___/___    Time: _____		
East	South	West

Date: ___/___/___    Time: _____		
East	South	West

Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_\_\_

East South West

Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_\_\_

East South West

Explain the changes you observe.

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