



## ASTRONOMY MERIT BADGE AT TURNER FARM PARK

### Important general Merit Badge information for parents:

- Be sure that you are familiar with the requirements for the merit badge your scout has selected. Some badges may take considerable time and planning to complete and may not be appropriate for younger scouts. Blue cards must be signed by your Troop Leader prior to attending the merit badge class. Park staff will not sign off on any blue cards missing this signature.
- Most merit badges are not designed to be completed in a single session with an instructor, so it is not always possible to walk away with a completed and signed blue card at the end of a program. Every badge requires some independent work by your scout.
- FCPA-Riverbend Park will provide staff, meeting BSA Youth Protection guidelines for male and female scouts, and supervision ratios. Parent/guardian **MUST** sign-in, and sign-out each participant(s) from the class. If you provided your own transportation, you may sign-in and sign-out yourself from the class. There is no fee if adults wish to stay during the class.

### Below is the recommended pre-work to be completed before the program:

Please record the responses to these questions in your merit badge workbook or on a separate piece of paper **AND BRING THIS PREWORK TO CLASS**. Please attach photo evidence or any supplementary data sheets if the question requires you to provide this information. Merit badge worksheets may be downloaded from [Astronomy Merit Badge \(usscouts.org\)](http://usscouts.org) and brought to class. These worksheets help scouts organize their homework and classwork.

#### 1. Do the following:

- a. Explain to your counselor the most likely hazards you may encounter while participating in astronomy activities, and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.
- b. Explain first aid for injuries or illnesses such as heat and cold reactions, dehydration, bites and stings, and damage to your eyes that could occur during observation.
- c. Describe the proper clothing and other precautions for safely making observations at night and in cold weather.
- d. Explain how to safely observe the Sun, objects near the Sun and solar eclipses.

4c. Make two sketches of one of the following: Big Dipper, Cassiopeia, Orion. In one sketch show either the Big Dipper or Cassiopeia's orientation in the early evening sky. In another sketch, show their position several hours later. In both sketches, show the North Star and the horizon. Record the date and time each sketch was made.

5. Do the following:

a. List the names of the five most visible planets. Explain which ones can appear in phases similar to lunar phases and which ones cannot and explain why.

b. Using the Internet (with your parent's permission) and other resources, find out when each of the five most visible planets that you identified in requirement 5a will be observable in the evening sky during the next 12 months, then compile this information in the form of a chart or table.

6b. 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. Explain the changes you observe.

9. Find out about three career opportunities in astronomy. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you.

### **What to bring to the program:**

- Your completed homework. It is OK if you cannot complete the homework before class. You can email completed homework at a later date for sign-off.
- Come prepared to discuss and present your homework. As we move from one topic to the next during class, scouts will be asked to present homework elements completed. It will be more important to prove that you have understood a requirement orally rather than just presenting written information.
- Your blue card signed off by your Troop Leader
- Wear weather appropriate clothing/outerwear. We will not go outdoors in heavy rain or thunderstorms but many of our badges include some outdoor element.
- You may wear your scout uniform but it is NOT required.
- Pencil, pen, or some sort of writing utensil.
- Download the merit badge worksheets from [meritbadge.com](http://meritbadge.com) and bring these worksheets to class with your prework written in them. We usually will not require the scouts to fill out every part of this workbook during the merit badge but they can use it to take notes while listening to the lecture.
- Flashlight, if the program is held after dusk.
- Bring a water and snack and a lunch if you think you may need it as many of these sessions are very long and run past normal lunch hours.

## **WHAT NOT TO BRING:**

Merit badges are a place for learning and require the same attention and respect as would be expected in a school setting. In order for your scout to be successful and stay on task, the following items should stay at home or in backpacks and will not be permitted during the program:

- Weapons of any kind are strictly prohibited and will be confiscated and may or may not be returned. Depending on the type of weapon, further disciplinary or legal action may be pursued. Exceptions include camping or fishing tools/knives as long as they stay concealed and are used appropriately.
- Vapes, E-cigarettes, & other nicotine products are illegal for anyone under 21 years of age to possess. They are strictly prohibited and will be confiscated and not returned.
- Handheld gaming systems such as a DS or a Switch are not permitted and will be confiscated and given back at the close of the program.
- Cell phones ARE PERMITTED for emergency use and/or contacting parents & guardians but if they become a distraction they may be confiscated.
- Toys, books, games, or anything deemed a distraction during the program will be confiscated and returned at the end. Exceptions include quiet and inconspicuous fidget toys. If your scout has accommodations that would require them to use fidget toys to focus please let us know before the program.
- Headphones/Air pods are not allowed but we understand that these devices can be helpful for some people with sensory processing disorders. Again, if your scout has accommodations that would require them to use headphones please let us know before the program.

## **Work completed after the program:**

During the program, the merit badge counselor will do a demonstration or explain the process for completing the final merit badge requirements. Your scout must provide evidence of completion in order to obtain blue card sign-off. Digital photographs of your scout doing the element and a picture of the completed requirement will be sufficient evidence, unless otherwise stated.

If your scout needs blue card sign-off after the class date, your merit badge counselor will let you know how to contact them with remaining requirements. Please call the park at 703-759-9018 to arrange a time to meet with a merit badge counselor or email your counselor directly.

Thank you and we look forward to working with your Scout!

## **Casey Tinius**

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