

Space Exploration Merit Badge Schedule– Saturday, March 23, 2024, 10 am to 3 pm

| | | | | | |
|---------------------------------|---|---|---------------------|--|---|
| One Group of 20 scouts | <p>*Class 1. <u>Space Exploration History and Careers</u></p> <p>Set up: Computer, Projector & Screen</p> <p style="text-align: center;">Classroom 412</p> | <p>**Class 2. <u>Design an Inhabited Base.</u></p> <p>Need: graph paper pencils Pencil sharpeners</p> <p style="text-align: center;">Classroom 412</p> | <p><u>Lunch</u></p> | <p>***Class 3. <u>GLM Early History of Rocket Manufacturing</u></p> <p style="text-align: center;"><u>MD Astronauts</u></p> <p style="text-align: center;"><u>Space Pioneers</u></p> <p style="text-align: center;">Gallery</p> | <p>****Class 4. <u>Rocket ID & Launch</u></p> <p>Need:</p> <ul style="list-style-type: none"> • paper rocket parts • supplies • Launcher <p style="text-align: center;">Gallery</p> |
| Group Escort | 10:00-10:50am | 11:00-11:50am | 12:00-12:40pm | 12:45-1:40pm | 1:45–2:45pm |
| | | | All scouts | | |
| (10 minute gap between classes) | 50 min. | 50 min. | 40 min. | 30 min. | 60 Min. |
| | Speaker TBD | | 443-717-2613 | | |
| Requirements | 1,4.c.d.,6 | 7 | | 2. Bring collector's Card | 3; 4.a.b. |

REQUIREMENTS BEFORE SPACE EXPLORATION DAY: 2, 5, 8

***Class 1. (requirement 1)** Tell the purpose of space exploration and the reasons – a. Historical; b. Immediate goals in terms of specific knowledge; c. Benefits related to Earth resources, technology and new products; d. International relations and cooperation. **(requirement 4.c.)** How satellites stay in orbit; **(requirement 4.d.)** How satellite pictures of Earth and other planets are made and transmitted. **(requirement 6)** Describe the purpose, operation, and components of either: a. Space shuttle or any other crewed orbital vehicle, etc. or b. International Space Station

****Class 2. (requirement 7)** Design an inhabited base within our solar system, such as Titan, asteroids, or other locations that humans might want to explore in person. Make drawings or a model of your base. In your design, consider and plan for the following:

- a. Source of energy; b. How it will be constructed; c. Life-support system; d. Purpose and function.

*****Class 3. (requirement 2; Bring Collector's card)** Discuss favorite space pioneer; discuss four space pioneers; MD Astronauts; Space Pioneers; The Glenn L. Martin Company history of rocket manufacturing.

******Class 4. (requirement 3)** Build & launch paper rocket. Identify and explain the following rocket parts: Body tube, Engine mount; Fins, Igniter, Launch lug, nose cone, payload, recovery system, Rocket engine.