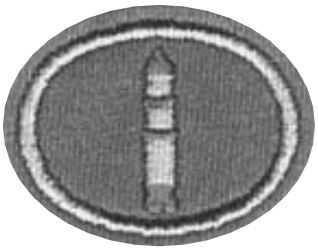

Model Rocketry

(Instructor Required)

1. Know and explain the Model Rocketry Safety Code.

2. Know and explain the importance of the basic model rocket components.

3. Draw the following:
- **a.** The steps in the flight of a model rocket
- **b.** A cut-a-way view of a model rocket engine, labeling each part
- **c.** A schematic plan for a simple launch system using proper electrical symbols

4. Define the following:
- **a.** Wadding
- **b.** Boost gliders
- **c.** Stall
- **d.** Payload
- **e.** Apogee
- **f.** Center of gravity
- **g.** Center of pressure
- **h.** Impulse
- **i.** Velocity
- **j.** Ejection

5. Name and describe at least four different recovery systems.

6. From a kit, build, finish, and paint a single-stage rocket that has a minimum length of six inches with a recovery system, such as a parachute or streamer. Successfully launch and recover the rocket with the recovery system deploying properly.

Skill Level 1

Original Honor 1970

Model Rocketry, Advanced

(Instructor Required)

1. Have the Model Rocketry Honor.

2. From a kit, build, successfully launch, and recover a boost glider.

3. Design, build (not from a kit), finish, and paint a single-stage rocket. Check for stability, and successfully launch and recover this rocket.

4. Do one of the following:
- **a.** From a kit build, finish, and paint a two-stage rocket. Successfully launch and recover this rocket.
- **b.** From a kit, build, finish, and paint a three-engine clustered single-stage rocket. Successfully launch and recover this rocket.

5. Design an electrical launch system. When this has been approved by your instructor, build this system and use it to launch rockets at least five times.

6. Describe and demonstrate single station altitude tracking. With the aid of a helper, track the same rocket three times using three different sizes of engines and compare altitudes with an altitude finder.

7. Compare the velocity and altitude of two different weights of rockets using the same size engine.

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Skill Level 2

Original Honor 1970