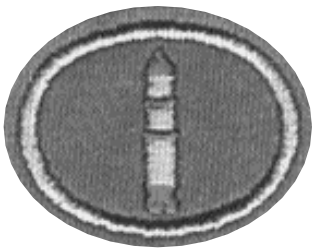

_____
Pathfinder's Name

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:
The steps in the flight of a model rocket

A cut-a-way view of a model rocket engine, labeling each part

A schematic plan for a simple launch system using proper electrical symbols

❑ **4.** Define the following:

Wadding _____

_____

Boost gliders _____

_____

Stall _____

_____

Payload _____

_____

Apogee _____

_____

Center of gravity _____

_____

Center of pressure _____

_____

Impulse _____

_____

Velocity _____

_____

Ejection _____

_____

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

	Name	Description
1.	_____	_____
		_____
		_____
2.	_____	_____
		_____
		_____
3.	_____	_____
		_____
		_____
4.	_____	_____
		_____
		_____

❑ **6.** From a kit, build, finish, and paint a single-stage rocket that has a mini mum 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.
Launch date: _____

Date completed _____ Instructor's Signature _____

_____

Pathfinder's Name

Model Rocketry, Advanced

(Instructor Required)

❑ **1.** Have the Model Rocketry Honor.

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

Launch date: _____

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

Launch date: _____

❑ **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.

Launch date: _____

❑ **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.

Launch date: **1.** _____

2. _____

3. _____

4. _____

5. _____

❑ **6.** Describe and demonstrate single station altitude tracking.

_____

_____

_____

Date demonstrated: _____

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.

	Engine Size	Altitude
1.	_____	_____
2.	_____	_____
3.	_____	_____

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

	Rocket Weight	Velocity	Altitude
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

Date completed _____ Instructor's Signature _____