

# Lunar Program Observing List

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## Lunar Observing Program Coordinator:

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## The List

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The 100 features to be observed for the Lunar Program are listed below. At the top of each section is a space to list the instruments used in the program. After that are five columns: CHK, Object, Feature, Date and Time. The "CHK" column should be used to check off the feature as you observe it. The "Object" column lists the features in Naked Eye, Binocular, and Telescopic order, and tells you what you are observing and when the best time is to observe it. The "Feature" column lists the 100 features to be observed. Finally, the "Date" and "Time" columns allow you to log when you observed the objects. In the last section, we have listed the 10 optional activities, and broken them down as to naked eye, binocular, and telescopic. Also on page 4, we have included four illustrations to help with observing four of the naked eye features.

We certainly hope that you find the Lunar Program useful in helping you become more familiar with earth's nearest neighbor. If after completing this program you would like to do more work in this area, you may contact [The Association of Lunar and Planetary Observers](#).

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Until then, good luck, clear skies, and good observing.

# Lunar Program Checklist

## Naked Eye Objects

Instruments Used \_\_\_\_\_

	OBJECT	FEATURE	DATE
[ ]	(Within 72 Hrs of new)	Old Moon in New Moon's Arms	_____
[ ]	(Within 72 Hrs of new)	New Moon in Old Moon's Arms	_____
[ ]	(Within 40 Hrs of new)	Crescent Moon, Waxing	_____
[ ]	(Within 48 Hrs of New)	Crescent Moon, Waning	_____
[ ]		Man in the Moon	_____
[ ]		Woman in the Moon	_____
[ ]		Rabbit in the Moon	_____
[ ]		Cow Jumping Over the Moon	_____
	<b>Maria</b>		
[ ]		Crisium	_____
[ ]		Fecunditatis	_____
[ ]		Serenitatis	_____
[ ]		Tranquillitatis	_____
[ ]		Nectaris	_____
[ ]		Imbrium	_____
[ ]		Frigoris	_____
[ ]		Nubium	_____
[ ]		Humorum	_____
[ ]		Oceanus Procellarum	_____

Binocular Objects

Instruments Used \_\_\_\_\_

	OBJECT	FEATURE	DATE
<input type="checkbox"/>		Lunar Rays	_____
<input type="checkbox"/>		Sinus Iridum	_____
<input type="checkbox"/>		Sinus Medii	_____
<input type="checkbox"/>		Sinus Roris	_____
<input type="checkbox"/>		Palus Somnii	_____
<input type="checkbox"/>		Palus Epidemiarum	_____
<input type="checkbox"/>		Mare Vaporum	_____
	Craters		
<input type="checkbox"/>	~4 Days old	Langrenus	_____
<input type="checkbox"/>		Vendelinus	_____
<input type="checkbox"/>		Petavius	_____
<input type="checkbox"/>		Cleomedes	_____
<input type="checkbox"/>		Atlas	_____
<input type="checkbox"/>		Hercules	_____
<input type="checkbox"/>		Endymion	_____
<input type="checkbox"/>		Macrobius	_____
<input type="checkbox"/>	~7 Days old	Piccolomini	_____
<input type="checkbox"/>		Theophilus	_____
<input type="checkbox"/>		Cyrillus	_____
<input type="checkbox"/>		Catharina	_____
<input type="checkbox"/>		Posidonius	_____
<input type="checkbox"/>		Fracastorius	_____
<input type="checkbox"/>		Aristoteles	_____
<input type="checkbox"/>		Eudoxus	_____
<input type="checkbox"/>		Cassini	_____

<input type="checkbox"/>		Hipparchus	_____
<input type="checkbox"/>		Albategnius	_____
<input type="checkbox"/>		Aristillus	_____
<input type="checkbox"/>		Autolycus	_____
<input type="checkbox"/>		Maurolycus	_____
<input type="checkbox"/>	~10 Days old	Plato	_____
<input type="checkbox"/>		Archimedes	_____
<input type="checkbox"/>		Ptolemaeus	_____
<input type="checkbox"/>		Alphonsus	_____
<input type="checkbox"/>		Arzachel	_____
<input type="checkbox"/>		Walter	_____
<input type="checkbox"/>		Maginus	_____
<input type="checkbox"/>		Tycho	_____
<input type="checkbox"/>		Clavius	_____
<input type="checkbox"/>		Eratosthenes	_____
<input type="checkbox"/>		Longomontanus	_____
<input type="checkbox"/>		Copernicus	_____
<input type="checkbox"/>		Bullialdus	_____
<input type="checkbox"/>		Aristarchus	_____
<input type="checkbox"/>		Gassendi	_____
<input type="checkbox"/>	~14 Days old	Kepler	_____
<input type="checkbox"/>		Grimaldi	_____

Telescopic Objects

Instruments Used \_\_\_\_\_

	OBJECT	FEATURE	DATE
[ ]		Sinus Aestuum	_____
[ ]		Lacus Mortis	_____
[ ]		Palus Putredinis	_____
[ ]		Promontorium Laplace	_____
[ ]		Promontorium Heraclides	_____
[ ]		Promontorium Agarum	_____
[ ]		Montes Alpes	_____
[ ]		Montes Apenninus	_____
[ ]		Mons Hadley	_____
[ ]		Mons Piton	_____
[ ]		Mons Pico	_____
[ ]		Rupes Altai	_____
[ ]		Rima Hyginus	_____
[ ]		Vallis Schroteri	_____
[ ]		Vallis Alpes	_____
[ ]		Rupes Recta (straight wall)	_____
	<b>Craters</b>		
[ ]	~4 Days old	Picard	_____
[ ]		Furnerius	_____
[ ]		Petavius Wall	_____
[ ]		Messier/Messier A	_____
[ ]		Proclus	_____
[ ]		Fabricius	_____
[ ]	~7 Days old	Plinius	_____
[ ]		Mitchell	_____

[ ]		Cassini A	_____
[ ]		Manilius	_____
[ ]		Gemma Frisius	_____
[ ]	~10 Days old	Davy	_____
[ ]		Pitatus	_____
[ ]		Billy	_____
[ ]		Fra Mauro	_____
[ ]		Clavius craterlets	_____
[ ]		Hippalus	_____
[ ]		Herschel, J.	_____
[ ]	~14 Days old	Schickard	_____
[ ]		Reiner Gamma	_____

## Optional Activities:

### Naked Eye:

1. Estimate first quarter phase within eight hours.
2. Estimate third quarter phase within eight hours.
3. Estimate full moon within thirty-six hours.
4. Plot moon's position against the stars for three consecutive days.
5. Compare the size of the full moon on the horizon with the full moon on the meridian using a dime held at arm's length.
6. Find the thinnest phase by which you can read newsprint.

### Binocular:

1. Sketch libration - use Mare Crisium or Grimaldi for examples.
2. Sketch a lunar map - use any scale for binoculars only.

### Telescopic:

1. Plot the moon's hourly motion against the stars for two hours or more.
2. Measure the height of a lunar mountain - need to calculate the sun's elevation at the mountain and estimate the shadow length - try Mt. Piton.