SOLAR SYSTEM OBSERVING PROGRAM CHECKLIST

PROJECTS	TASKS	✓
SUN: Sunset OR Sunrise Azimuth	1. Record azimuth once a week for 4 weeks in spring or fall	
	2. Record azimuth once a week for 6-8 weeks in summer or winter	
	3. Observation data (see footnote)	
	4. Question: In which season is the azimuth change most noticeable?	
SUN: Solar Eclipse (partial or total)	1. Observation data	
	2. Eclipse phase times (start of partial and total, end of total and partial)	
	3. Sketch at maximum eclipse, note time	
SUN: Sunspots	1. Observation data	
	2. Sketch (full disk) showing at least one sunspot	
MOON: Maria	1. Observation data	
	2. Question: What evidence do you see that maria are not water?	
MOON: Highlands	1. Observation data	
	2. Question: Which appears to be older, the maria or the highlands? Why?	
MOON: Crater Ages	1. Observation data	
	2. Question: Which crater appears older, Theophilus or Cyrillus? Why?	
MOON: Scarps	1. Observation data	
	2. Estimate the length of the Straight Wall (Rupes Recta)	
MOON: Occultations	1. Observation data	
	2. Identity of star or planet occulted	
	3. Times (UT) of disappearance AND reappearance	
MOON: Lunar Eclipse (penumbral, partial, or total)	1. Observation data	
	2. Time of start and end of each phase (penumbral, umbral, total)	
	3. If a total eclipse, give the Danjon Scale estimate at mid-eclipse (L1-L4)	
MERCURY: Location	1. Observation data	
	2. Altitude and azimuth	

VENUS: Low Power Crescent	1. Observation data (must be a binocular observation)	
VENUS: Daytime Observation	1. Observation data (must be a daytime observation)	
VENUS: Phases	1. Observation data	
	2. Sketches (8) showing weekly phase changes over a 2-month period	
MARS: Albedo Features	1. Observation data	
	2. Sketch	
MARS: Retrograde Motion	1. Observation data (naked-eye acceptable)	
	2. Plot Mars on a chart (minimum weekly from 1 month before to 1 month after opposition	
CERES: Locating	1. Observation data	
	2. Sketch starfield showing Ceres	
ASTEROIDS: Course Plotting	1. Identity of asteroid	
	2. Observation data (3 to 5 observations)	
	3. Plot asteroid positions on a star chart	
ASTEROIDS: Measuring movement	1. Using your plot (see above), estimate average hourly movement of asteroid	
COMET: Observing	1. Observation data	
	2. Sketch (If comet is star-like, provide 2 sketches on different nights)	
JUPITER: Great Red Spot (GRS)	1. Observation data	
	2. Three timings (leading edge, middle, trailing edge of GRS on meridian)	
JUPITER: Galilean Satellites	1. Observation data	
	2. Sketches (6) on different nights (successive, if possible) identifying moons	
JUPITER: Satellite Discovery	1. Observation Data (must be a binocular observation)	
	2. Describe view of satellites (sketch optional)	
JUPITER: Cloud Belts	1. Observation data	
	2. Sketch (mark celestial north, and east or west)	
JUPITER: Satellite Shadow Transits	1. Observation data	
	2. Identity of satellite casting the shadow	
JUPITER: Satellite Transits	1. Observation data	
	2. Identity of satellite	
	3. Times of transit start AND transit end	

JUPITER: Satellite Eclipses	1. Observation data	
	2. Identity of the satellite	
	3. Time of disappearance OR reappearance	
JUPITER: Satellite Occultations	1. Observation data	
	2. Identity of the satellite	
	3. Time of disappearance OR reappearance	
SATURN: Rings	1. Observation data	
	2. Sketch	
SATURN: Cassini Division	1. Observation data	
	2. Describe view of Cassini Division	
SATURN: Disk Markings	1. Observation data	
	2. Question: Which hemisphere is darker: north or south? (sketch optional)	
SATURN: Satellites	1. Observation data	
	2. Identity of the satellites observed (sketch optional)	
URANUS: Locating	1. Observation data	
	2. Describe view of Uranus (sketch optional)	
NEPTUNE: Locating	1. Observation data	
	2. Describe view of Neptune (sketch optional)	
PLUTO: Locating	1. Observation data	
	2. Describe view of Pluto (sketch optional)	

OBSERVATION DATA:

1. Date and Time
2. Transparency
3. Seeing
4. Instrument used, if any
5. Magnification
6. Observer Location (longitude and latitude are required)