Activities × Objectives Matrix

Category	Activity	understand size and scale of universe	familiar with main characters of universe	understand analyzing light is only way to study universe	describe key difference between characters BASED on evidence	understanding of reflecting telescope	meaning and use of exposure time	understanding of light	formulate Qs and find evidence	meaning and use of filters	understand how digital image is produced	understand how digital image is processed	value organizing own observing work	importance of and need to improve personal oral and written	gain confidence in giving oral presentations	create powerpoint presentations	address science (and other) Qs from audience	ask meaningful and clear questions	lead group discussion	work as a team	provide feedback to each other	receive feedback and use it	teach others
		Science Content Objectives									**Computer/Technology Objectives**			**Positive Youth Development Objectives**									
Hands-On Activities	Astronomy in the Marketplace		✗																				
	Youth Generate Rules																			✗			
	Modeling the Universe Activity	✗	✗						✗										✗	✗			
	Cosmic Cast of Characters	✗	✗	✗													✗			✗			✗
	From Starlight to Image					✗	✗		✗		✗												
	Cosmic Survey	✗	✗						✗											✗			
	Modeling the Earth-Moon System	✗	✗						✗											✗			
	Moon Phases Activity								✗														✗
	Toilet Paper Solar System	✗	✗	✗					✗											✗			
	Group Portrait of the Solar System: Taking Images		✗				✗	✗	✗		✗												
	Group Portrait of the Solar System: Making Sense of Images	✗	✗	✗					✗										✗				
	Telescopes and Light					✗	✗	✗	✗	✗	✗								✗				
	Tour of the Universe	✗	✗	✗			✗													✗			
	A Journey through the Universe: Presentation					✗			✗														
	Group Portrait of the Universe: Taking Images		✗					✗															
	Group Portrait of the Universe: Making Sense of Images	✗	✗						✗										✗				
	Light, Color and Astronomy					✗	✗												✗				
	Filters Puzzler					✗	✗		✗		✗												
	Introduction to Models	✗	✗			✗	✗						✗	✗	✗	✗	✗	✗	✗				
Computer Activities	MicroObservatory Guest Portal					✗		✗															
	Introduction to MicroObservatory						✗	✗	✗		✗		✗										
	Image Processing and Contrast										✗	✗	✗										
	Images as Data										✗	✗											
	Investigation of Jupiter and Its Moons: Taking Images		✗				✗	✗	✗		✗												
	Investigation of Jupiter and Its Moons: Making a Movie/Making Sense of Images	✗	✗	✗			✗		✗		✗	✗	✗										
	Advanced Image Processing					✗			✗	✗	✗	✗	✗										
	Group Portrait of the Universe in Color: Taking Images		✗			✗			✗	✗													
	Creating Color Images					✗			✗		✗	✗	✗										
Observing Activities	**Observing Project #1**	✗	✗			✗			✗				✗		✗	✗	✗	✗	✗			✗	✗
	Did You Notice?								✗														
	Observation or Inference?								✗														
	Sharing & Publishing													✗									
	Observing Project #2	✗	✗			✗			✗				✗		✗		✗		✗		✗	✗	✗
	Introduction & Planning								✗								✗		✗				
	What does your data mean?								✗								✗		✗				
	Giving Feedback																		✗			✗	✗
	Observing Project #3	✗	✗			✗			✗				✗		✗	✗	✗	✗			✗	✗	✗