

The Great Observatories in Space
 An Introduction to Astronomy through Satellite based Astrophotography

Week 1		Assignments		Time (hrs)	Rubric Value	Comment
Outcome	The participants will distinguish between the goals of each of the Great Observatories in Space		Standard 4 - Science Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.		5	Exceeds assignment responsibilities. Adds new information to the program. Builds links and content. Provides other teachers with interesting additional ideas
Objective	The participants will compare and contrast the 3 space telescopes The participants will learn about multiwavelength observations The participants will explore new websites on the topic	Motivation View: http://hubblesite.org/gallery/movie_theater/revelations/revelations_640x480_mov <u>View and read:</u> http://www.spacetoday.org/DeepSpace/Telescopes/GreatObservatories/GreatObservatories.html Answer: What are the 3 Great Observatories? How do they differ? Why are these observatories in Space?			4	Meets assignment responsibilities. Completes all work and necessary updates
				0.25		
				0.50	3	Assignment on time but incomplete in some areas. Improved to acceptable after updated
				0.75	2	Assignment late (up to one week)but would otherwise have gotten a 4
					1	Assignment late (up to two week)but would otherwise have gotten a 3 or 4
					0	Assignment not submitted or more than two weeks late
Essential Question	Can Astronomy be exciting?					
		Add a site to the library		0.25		
Week2		Assignment	Standard 2 - Information Systems Students will access, generate, process, and transfer information using appropriate technologies			
Outcome	Participants shall create a review plan that can be used by students to aid in the discovery process of the "hubblesite" web site	<u>View and review:</u> http://hubblesite.org/			1.00	
Objective	Participants will learn about the many objects that have been viewed by Hubble. Participants will explore the Hubble image gallery and movie theater Participants will distinguish between solar system objects and deep space objects	<u>Where to go and what to see:</u> Create a review plan that can be used by students to aid in the discovery process of this very complex site			1.00	
Essential Question	Can Astronomy be exciting?	<u>Get connected:</u> Find the Space Science Education Resource Directory – Pick up some freebies for you or your class. http://teachspacescience.org/cgi-bin/ssrtop.plex			0.25	
Week 3		Assignment	Standard 6 - Interconnectedness: Common Themes			
Outcome	The participants will determine the suns position on the HR diagram. Participants will formulate a thesis to generalize about the lives of stars	<u>View:</u> In Hubble theater and view two brief videos "A Stars Life" and "Planetary Nebula"	Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning. Standard 1 - Analysis, Inquiry, and Design		0.50	
Objective	Participants will learn about Main Sequence Stars Participants will determine the earth's position on the HR diagram	<u>Find:</u> Information about the HR diagram :	Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.		0.50	

		Connect: See if you can find additional examples of these in the gallery. Find at least one example of each and explain why they may have been done in this fashion.
Week 6		Can Astronomy be exciting?
Outcome	Participants will identify object in the night sky using their naked eye or binoculars.	View: observe the monthly sky update video. http://hubblesite.org/explore_astronomy/tonights_sky/january/2008/play
Objective	Participants will explore the night sky and identify several of the month's key features. Participants will keep a log of the images observed and their location and time	Explore the night sky and find some of the many objects that they have become familiar with during the course.
Essential Question	Can Astronomy be exciting?	
		Answer: Are the closest stars the brightest stars? Explain your answer.
		Log: Keep a log of your observation with time and location
		Total Time
	Course Evaluation	

0.50

Standard 6 - Interconnectedness: Common Themes

Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas

0.50

1.00

0.50

0.50

14.50