BOY SCOUT NOVA AWARD WORKBOOK

Cub Scout	**Nova Award**	Award	Brief Description															
						1 (choose a, b or c)			**2**	**3 (chose A or B)**		**4 (chose a or b)**		**5 (choose a, b or c)**			6	
						a	**b**	**c**		**a**	**b**	**a**	**b**	**a**	**b**	**c**		
	Shoot!	Patch +pin	How science affects your daily life	counselor		3 hour TV show, create five questions, discuss with counselor	Read 3 hours, five que2 questions from each article, discuss with counselor	total of 3 hours reading or watching TV, five questions, discuss with counselor	Complete a merit badge from a list	Find and use a simulation Applet and complete activities. Answer questions with counselor	Answer for the counselor two of three questions specified in book.	Visit an observatory or flight related museum. Speak with someone from there. Discuss visit with your counselor	After find the latitude and longitude of your location, plot an anticipate satellite flyover. Observe the flyover and report specifics to counselor	Design a catapault to shoot marshmallows. Observe and report findings to counselor	design a pitching machine to lob a softball. Observe and report finds to counselor	design a marble track to specification, observe and report findings to counselor	Discuss with counselor how science affects your everyday life	
						1 (choose a, b or c)			**2**	3			**4 Build a working vehicle (not from kit)**				**5**	
						a	**b**	**c**		**a**	**b**	**c**	**a**	**b**	**c**	**d**		
	Start Your Engine	Patch +pin	This module is designed to help you explore how technology affects you r life each day.	counselor		3 hour TV show, create five questions, discuss with counselor	Read 3 hours, two questions from each article, discuss with counselor	total of 3 hours reading or watching TV, two questions from each article or show, discuss with counselor	Complete a merit badge from a list	using earned merit badge discuss 1) energy source 2) pros and cons of energy sources	Make a list of possible energy sources for transportation	With counselor discuss alternative energy sources and their pros and cons	make drawings and specs before building	use an alternative fuel for vehicle	Test your model and report	discuss the project with your counselor	Discuss with counselor how technology affects your everyday life	
						1 (choose a, b or c)			2	3			4 (a or b)		5		6	
						a	**b**	**c**		a	b	c	a	b	a	b		
	Whoosh	Patch +pin	Engineering and simple machines (levers) affect daily life	counselor		3 hour TV show, create five questions, discuss with counselor	Read 3 hours, two questions from each article, discuss with counselor	total of 3 hours reading or watching TV, two questions from each article or show, discuss with counselor	Complete a merit badge from a list	make a list or draw of six simple machines	Tell counselor the name of each machine and how it works	Discuss with counselor: 1) the type of machine involved with the motion of merit badge, 2) the energy source of the motion 3) what you learned about motion	visit an amusement park and discuss 1) simple machines in two rides 2) forces involved in two rides	visit a park and discuss 1) simple machines in the playground equipment 2) forces involved in the playground equipment	By yourself, design (with drawing, sketch of model) one of the following: an amusement park ride, playground fixture , method of transportation	Discuss with counselor the simple machines and the energy sources	Discuss with counselor how engineering affects your everyday life	
						1 (choose a, b, c or d)				2	3 (choose 2)					**4**			5
						a	**b**	**c**	d		a	b	c	d	e	a	b	
	Designed to Crunch	Patch +pin	Explore how math affects your daily life	counselor		3 hour TV show, create five questions, discuss with counselor	Research 3 hours on website re: cryptography, list the URL's, discuss with counselor	Read 3 hours, two questions from each article, discuss with counselor	total of 3 hours reading or watching TV, two questions from each article or show, discuss with counselor	Complete a merit badge from a list	Calculate YOUR horsepower answer questions	Attend 2 track meets, 2 swim meets or 2 cross country meets. Answer questions	Statistics for Soccer, Baseball and Basketball	Keep specific stats for football game	Perform star count and additional related activities.	investigate your calculator and explore the functions.	with counselor discuss functions, abilities and limitations of your calculator	Discuss with counselor how math affects your everyday life
	Supernova Awards																	
					1	2	3	4	5	6 (a or b)		7	8			9		
										a	b		a	b	c			
		Medal	Dr. Bernard Harris Award	mentor	complete any three nova awards	Earn Scholarship MB	Earn 4 Supernova MB	Complete 2 Supernova activity topics*	Participate in a STEM event approved by counselor	shadow a scientist or engineer and report	discuss STEM careers	present a Nova program to a Cub Scout den or pack	choose a modern science subject with two competing ideas and learn as much as possible about both ideas	analyze the theories decide the one you agree with and make argument to mentor	complete presentation to mentor	Submit an application		
					1	2	3	4	5	6	7	8						
		Medal	Thomas Edison Award	mentor	earn Dr. Bernard Harris award	Complete additional Nova award	Earn 4 additional Supernova MB	Complete 2 additional Supernova activity* topics in areas not completed in Harris Award	Participate in a STEM event approved by counselor	present a Nova program to a Cub Scout den or pack	Research a STEM breakthrough or invention from the last 100 years. Create 30 minute oral report with specific information	complete an application						
								*Activities and directions located in the Guidebook. Two parts include an activity and an analysis of the results										