

Fearful Symmetry



Cub Scout Nova Award Workbook

This workbook can help you but you still need to read the Cub Scout Nova Awards Guidebook.

This Workbook can help you organize your thoughts as you prepare to meet with your counselor.

You still must satisfy your counselor that you can demonstrate each skill and have learned the information.

You should use the work space provided for each requirement to keep track of which requirements have been completed, and to make notes for discussing the item with your counselor, not for providing full and complete answers.

If a requirement says that you must take an action using words such as "discuss", "show",

"tell", "explain", "demonstrate", "identify", etc, that is what you must do.

Counselors may not require the use of this or any similar workbooks.

No one may add or subtract from the official requirements found in the Cub Scout Nova Awards Guidebook (Pub. 34032 – SKU 614935).

The requirements were issued in 2018 • This workbook was updated in May 2018.

Scout's Name:				Unit:					
Counselor's Na	ame: _			Counselor's Phone No.:					
				http://www.MeritBadge.Org estions about this workbook to: Workbooks@USScouts.Org ements for the Nova Award to: Program.Content@Scouting.Org Program.Content@Scouting.Org Output Description:					
	Sena	comments or suggestion	ons for changes to the requirem						
		This module is de	esigned to help you explo	re how symmetry affects	your life each day.				
I. Choose A	or B or	C and complete ALI	L the requirements.						
☐ A. W	/atch a	ın episode or episode	es (about one hour total) of a	show that involves symmetry,	mirrors, or artistic patterns				
	Wh	at was watched?	Date	Start Time	Duration				
T	hen do	the following:	<u> </u>						
		•	questions or ideas from what	you watched.					
	1.			•					
	2.								
	۷.								

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Fearful Sym	metry		Scout's Name:						
		cuss two of the ques	stions or ideas with your couns	selor.					
	1.								
	2.								
□в	Read (a	hout one hour total	about anything that involve:	s symmetry, mirrors, or artistic	natterns				
□ 5.		hat was read?	Date	Start Time	Duration				
		100							
		the following:							
		ke a list of at least t	wo questions or ideas from v	vhat you read.					
	1.								
	0								
	2.								
	2. Dis	cuss two of the que	estions or ideas with your cou	unselor.					
	1.	<u> </u>	<u> </u>						

Fearful Symr	metry	Scout's Name:						
	2.							
□ C	Do a c	ombination of reading and wa	tching (about one hour to	tal) about about anything th	at involves symmetry,			
		s, or artistic patterns.	Dete	Otant Times	Dunation			
	vvn	at was watched or read?	Date	Start Time	Duration I			
	Thon	lo the following:						
		ake a list of at least two quest	tions or ideas from what yo	ou read and watched.				
	1.							
	2.							
	2. Di	scuss two of the questions or	ideas with your counselor	r.				
	1.							
	2.							

Fearful Symmetry						Scout's Name:								
2.				dventure from the following lissly earned.)	st or	complete	option A or	B. (If you cho	ose a	ın adventur	re, choose	one you		
		•		If Cub Scouts	<u>B</u>	ear Cub	Scouts .		Web	elos Scouts	<u> </u>			
			П	Air of the Wolf	Ī	Foren	sics			Art Explosio	on .			
			\Box	Code of the Wolf	Ī	_ │ Marble	e Madness		$\overline{\Box}$	Build It				
			\Box	Motor Away	_	<u> </u>			$\overline{\Box}$	Maestro!				
		□ 0	ption <i>F</i>	A: Complete all of the following	ing:				_					
] a.	Explain the difference betwee herbaceous periwinkle.	etween the symmetry of the flower of a geranium and the symmetry of the flower of									
] b.	Explain the difference in leaf arrangement (the pattern of where leaves appear on the stem) between a maple tree and a sweetgum tree.										
	c. Find another pair of plants that you can distinguish based on some difference in sOption B: Complete both of the following.										nmetry.			
] a.	Using toothpicks and colored structure of olivine,.	d ma	rsh mallo	ws, or other	appropriate ı	mater	als, make a	a model of	the crystal		
] b.	Using toothpicks and colored structure of halite.	d ma	rsh mallo	ws, or other	appropriate ı	mater	als, make a	a model of	the crystal		
] c.	Use your models to guess w	vhich	of the two	o minerals is	harder						
		Discus	s with	your counselor what kind of	scier	ice, techn	ology, engin	eering, and r	math v	was used ir	the adver	nture.		
	3.	Choos	e TWC	O options from A or B or C or	D or	E and co	mplete ALL	the requirem	ents f	or the optio	ns you cho	oose		
		A. M	ake a	paper lantern.										
		1.	Fold	d a large piece of paper in qua	arter	s lengthw	ise.							
		2.	Cut	decorative or symbolic shape	es in	to the two	folded edge	s.						
		3.	Unf	old, tape the two edges of the	e pap	er togeth	er, and smoo	oth into a cyli	inder.	Hang by a	string			
		B. Le	earn al	bout the kolam artwork of sou	utherr	n India		•			-			
		1.	patt	ok at some pictures of kolams. tern? If you turn it a little, do y ture?				•				•		
		2	l le <i>c</i>	e sand chalk dust flour or so	nma (other met	arial to make	a kolam of v	vour o	wn				

Fearful Symmetry Scout's Name:								
		C.	Lea	rn about the litema wall decorations from Lesotho and South Africa.				
_ [1.	Look at some pictures of litema. What does one basic tile look like? In how many ways can you see that tile arranged (turned a different direction, flipped backward, etc)				
			2.	Use clay. paper, or some other material to make a litema of your own.				
		D.	Lea	ırn about the design of Navajo rugs.				
_ [1.	Look at some pictures of Navajo rugs. Find as many similarities as possible within each rug. Is there a repeated pattern? Is there a mirror image? How many?				
			2.	Using different colors of paper, or other materials, make your own Navajo-like rug.				
		E.	Lea	ırn about Seminole or Miccosukee patchwork designs.				
			1.	Look at some pictures of Seminole or Miccosukee patchwork. Find as many similarities as possible within each piece. What does a basic block of each pattern look like? How many different basic blocks are used in the design?				
			2.	Using different colors of paper, or other materials, make your own Seminole-like patchwork.				
	4. Visit a place where symmetry is important (such as an art exhibit, building site, or printer) or visit with a power works with symmetry (such as an artist, interior designer, or landscape architect).							
		Disc	cuss	with your counselor the symmetry or ideas of balance involved				
	5.	Disc	cuss	with your counselor how symmetry impacts your everyday life.				

The Tyger
By William Blake
Tyger Tyger, burning bright,
In the forests of the night;
What immortal hand or eye,
Could frame thy fearful symmetry?

When working on Nova and Supernova awards, Scouts and Scouters should be aware of some vital information in the current edition of the *Guide to Advancement* (BSA publication 33088).Important excerpts from that publication can be downloaded from http://usscouts.org/advance/docs/GTA-Excerpts-nova.pdf.

You can download a complete copy of the Guide to Advancement .from http://www.scouting.org/filestore/pdf/33088.pdf.