



## Solar #3

<b>Books</b>	<i>A Million Suns</i>	<i>Black Hole Sun</i>
	<i>Every Soul a Star</i>	<i>Sun and Moon, Ice and Snow</i>
	<i>Sunshine</i>	<i>The Age of Miracles</i>
	<i>The Battle of the Sun</i>	
<b>Solar Kits</b>	Greenex DIY Amazing Solar Eco-House	Thames & Kosmos Solar Mechanics
	Solar Deluxe Educational Kit	Snap Circuits Green/Alternative Energy Kit
<b>Greenex DIY Amazing Solar Eco-House</b>	4 Walls (orange) & 1 Beam	6 Windows (clear)
	1 Door (green)	5 Fence pieces & 1 Ladder piece (green)
	1 Windmill (green) & Base (green & white wires)	1 Floor (white)
	1 Roof with Solar cell (green)	4 Springs
	1 Sidewalk Sticker	4 Decorations (clear)
	2 Chimney pieces (red)	1 Horn with cone (yellow & blue wires)
	1 Battery case (green)	1 Door switch blue & white wires)
	Main switch (black & red wires)	Lamp base (red & black wires)
<b>Solar Deluxe Educational Kit</b>	Solar Cell with Stand	Musical unit with wire
	Plastic Lamp with wire	Fan unit
	Small DC Motor with wire	Paper airplane & bird models
	Jumper & Connecting wires	Plastic screw driver, screws, & nuts
	Instructions	
<b>Thames &amp; Kosmos Solar Mechanics</b>	Rectangle & Square frames	2 (11 hole) rods & 2 (5 hold) rods
	2 (11 hole) flat rods & 1 (7 hole) flat rods	4 Dual hole rods
	4 Curved Elbow rods	1 (3 hole) rod
	2 (90 degree) L converters	2 (90 degree) R converters
	2 Axel locks (black)	2 Shaft pins (red)
	2 Joint pins (red)	1 Part separator (yellow)
	3 Small gear wheels (red)	2 Medium gear wheels (blue)
	1 Large gear wheel (yellow)	2 Long axles (black)
	1 Medium axle (black)	2 Short axle (black)
	1 Motor axle (beige)	16 Anchor pins (red)
	4 Wheels	1 (1.5 volt) Solar Motor unit
<b>SNAP Circuits Green/Alternative Energy Kit</b>	Board	Instructions
	2 One snap wires	1 Rechargeable Battery
	3 Two snap wires	1 Solar Cell
	3 Three snap wires	Battery Eliminator for FM Radio
	1 Four snap wire	470uF Capacitor
	1 Five snap wires	Red LED
	2 Jumper wires (1 black, 1 red)	Yellow LED



	3 Copper Electrodes	Motor
	1 Copper Electrode with Snap	Wind Fan
	3 Zinc Electrodes	Water Wheel
	1 Zinc Electrode with Snap	Meter
	Hand Crank	Pivot Stand Base
	Liquid Holder	Pivot Post
	Pivot Top	FM Radio
	Press Switch	Slide Switch
	Clock	Horn
	3 Screws 8-32 Phillips	3 Nuts 8-32
	Phillips head screwdriver	Think Green Manual
<b>Solar Oven</b>	Small box	Aluminum Foil
	Mylar	Tape
	Ruler	
<b>Other Supplies</b>	Exacto Knife	Small crosshead screwdriver
<b>Documents</b>	Check-out & Return Procedures	Inventory List
	Program Activities & Ideas	40 Developmental Assets for Teens



## Maker Kit Check-Out & Return Procedures

- An Inventory List is included. Check before and after use.
- If kit is incomplete, please e-mail or call Melendra Sanders at [msanders@nckls.org](mailto:msanders@nckls.org) or 1-800-432-2796 ext. 143.
- Loan period: **1 month**
- Kits will be sent, and can be returned, via courier.
- For those libraries not on courier, transportation can be arranged through the rotating book van. However, since the check-out period is for 1 month, either pick-up or return will be the responsibility of the library.
- Partial kits will not be checked out. Even if you are only utilizing a portion of the kit, the kit will remain as a unit.
- If you have created an activity that goes with the theme, please include a description (and photograph if possible) when sending back the kit. In this way, ideas are shared and everyone benefits. Ideas and activities can be added directly to the folder.
- All copying of activity sheets is the responsibility of the library.
- Copies can be made of all program materials to fill patron requests.
- If you have suggestions on how to improve this service, please share your thoughts with NCKLS.
- Excessive damage to the kit will be the responsibility of the library.
- **Please fill out the evaluation form before sending back.**
- Return all items to the original boxes before packing materials.
- Secure lid to bin using the plastic ties included in folder.
- Do not add packing material to the bins.
- If you have suggestions on how to improve this service, please share your thoughts with NCKLS.
- If you have any questions or concerns, e-mail or call Melendra at [msanders@nckls.org](mailto:msanders@nckls.org) or 1-800-432-2796 ext. 143.



## Solar #3

### Program Activities & Ideas

#### Activities on the Computer:

KidWind Quick Lesson Solar: <http://learn.kidwind.org/sites/default/files/solar2.pdf>

KidWind Solar Car Assembly: <http://vimeo.com/39439494>

KidWind Solar Boat: <http://vimeo.com/37754050>

Climate Kids Solar Ovens: <http://climatekids.nasa.gov/smares/>

Other types of solar ovens from [http://solarcooking.wikia.com/wiki/Category:Solar cooker designs:](http://solarcooking.wikia.com/wiki/Category:Solar_cooker_designs)

<http://solarcooking.wikia.com/wiki/Fun-Panel>

<http://solarcooking.wikia.com/wiki/CooKit>

[http://solarcooking.wikia.com/wiki/Heaven%27s Flame](http://solarcooking.wikia.com/wiki/Heaven%27s_Flame)

[http://solarcooking.wikia.com/wiki/Double-Angled-Twelve-Sided cooker](http://solarcooking.wikia.com/wiki/Double-Angled-Twelve-Sided_cooker)

#### Videos:

Simple explanatory videos: <https://www.youtube.com/watch?v=7OAcv7k8Qc0>

<https://www.youtube.com/watch?v=rtpxYgfmXhQ>

<https://www.youtube.com/watch?v=dngqYjHfr98> (plays twice on video)

More scientific explanatory video: <https://www.youtube.com/watch?v=Y0InAuhAre4>

#### Other Ideas:

[How Does Energy Affect Wildlife? Comparison of different energy sources](#)

[Build different types of solar ovens](#)

[Compare cooking temperatures of different solar ovens](#)

Cook S'mores in Solar Ovens

Have a discussion about habitable planets in relation to other stars in space



## Book Trailers

*A Million Suns* by Beth Revis

<https://www.schooltube.com/video/1002a932949947129966/A%20Million%20Suns>

*Every Soul a Star* by Wendy Mass

[https://www.youtube.com/watch?v=C9tI\\_BwwtaE](https://www.youtube.com/watch?v=C9tI_BwwtaE)

<https://www.youtube.com/watch?v=dzWcinFo2jc>

<https://www.youtube.com/watch?v=ngylcTpK2S4>

<https://www.youtube.com/watch?v=EFLKd1fqZUw>

<https://www.youtube.com/watch?v=hUWiidLI69U>

*Sunshine* by Robin McKinley

<https://www.youtube.com/watch?v=UJpUD9335ZY>

*Black Hole Sun* by David Macinnis Gill

<https://www.youtube.com/watch?v=5rORPwmr3pU>

[https://www.youtube.com/watch?v=Klu298\\_SsoM](https://www.youtube.com/watch?v=Klu298_SsoM)

<https://www.youtube.com/watch?v=Kupnx4lBxLA>

[https://www.youtube.com/watch?v=irJe\\_opbVno](https://www.youtube.com/watch?v=irJe_opbVno)

*Sun and Moon, Ice and Snow* by Jessica Day George

<https://www.youtube.com/watch?v=UMraY4nwbZA>

*The Age of Miracles* by Karen Thompson Walker

<https://www.youtube.com/watch?v=9JDnSiVFc0U>

[https://www.youtube.com/watch?v=lq4M4\\_f3y5o](https://www.youtube.com/watch?v=lq4M4_f3y5o)

<https://www.youtube.com/watch?v=mPC8H-IPhDI>



## Maker Kit Evaluation Solar #3

1. Please place an X in the column next to any piece of the kit that you used:

	X		X
<b>Books</b>	<i>A Million Suns</i>		<i>Black Hole Sun</i>
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	<i>The Battle of the Sun</i>		
<b>Solar Kits</b>	Greenex DIY Amazing Solar Eco-House		
	Thames & Kosmos Solar Mechanics		
	Super Deluxe Solar Educational Kit		
	Snap Circuits Green - Alternative Energy Kit		
<b>Other Items</b>	Solar Oven		
<b>Documentation</b>	Check-out & Return Procedures		
	Program Activities & Ideas		
	Inventory List		
	40 Developmental Assets for Teens		

2. How many programs did you conduct with the kit and how many total people attended?

# of programs: \_\_\_\_\_ # of attendees: \_\_\_\_\_

3. Please rate the kit on a scale of 1-5 (1=poor, 5 =excellent):

1      2      3      4      5

4. Any comments about the kit or suggestions for improvement?