

Tools Of The Trade II training			
Tasks		Who/when	✓
PowerPoint			
Number of participants? Number of PPT CDs?			
NOTE: The number of items should be based on the number of people attending.			
General supplies			
• Chart paper	100 pages		
• Name tags to be used each day			
• Markers (big & small), colored pencils	5 of each size/table		
• Masking tape	10 rolls		
• Sticky notes 3" x 3" or 3" x 5"	3 pads/table		
• pens/pencils	Enough for people who don't bring any		
• Push pins, T-pins or tape to hang posters			
• Blank 8 ½" x 11" paper	3 to 4 sheets per person		
• Colored pencils	8 to 10 per table		

Day One - 4 hours			
#1. Inspiring Young Minds...the scientist in all of us – supplies & handouts – TOT II		90 minutes	
Handouts:			
• Find someone who...	1:9		
• Afterschool SET ready for life checklist	1:11-1:12 Back-to-Back		
Posters:			
• SET ready for life checklist	2 x 3 laminate (2)		
• Why SET in afterschool settings	2 x 3 laminate (2)		
Supplies:			
• Beach balls with questions	10		
Curriculum Overview		15 minutes	
Break		15 minutes	
#2. Explore It! Design It! Use It! – supplies & handouts		2 hours	
Handouts:	none		
Supplies:			
• Vegetable oil	Small bottle – 8 oz.		
• Plastic or paper cups	20 – 6 to 8 oz.		
• Water	2 quarts +/-		
• Foods that don't contain oil (slices of apples, oranges, potatoes or squash)	2 apple or orange 2 potato or squash		
• Foods that contain oil (nuts, chips or soybeans)	2 small bag nuts 2 small bag chips		
• Brown paper grocery bag – cut into 3" x 3" squares	2 to 3 bags		
• Spoons (plastic are okay)	10 to 15		
• newspaper	Stack of 15 to 20 inches		
• construction paper	30 sheets		
• craft sticks	40		
• yarn or string	20 yards cut in to 1 yard pieces		
• scissors	10 pairs		
• plastic cups	40 - 6 to 8 oz.		
Posters:			

• Science, Engineering and Technology model	2:15 - 2 x 3 (2)		
• Process of science inquiry	2: 17 – 2 x 3 (2)		
• Engineering process	2:19 – 2 x 3 (2)		
• Technology processes	2:22 – 2 x 3 (2)		

Day Two	8 hours		
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breakfast			
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#3. SET Abilities for the 21st Century– supplies & handouts – TOT II	90 minutes		
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Handouts:			
• SET abilities	3:8-3:9 Back-to-Back		
• Changing emphasis	3:17-3:18 Back-to-Back		
Supplies:			
• 1 bag of a variety of objects (at least 20) per table, such as paper cup, pencil, plastic flower, paper clip, bottle cap, rock, ribbon, wrapper, marble, rubber band, soap bar, scissors, leaf, etc.	10 bags		
• Trays or plates of objects (rocks, shells or leaves) – 1 per table group	10 plates		
• Blank and lined index cards	1 each per person		
• Hand lenses – 1 per table group	10		
• Ruler – 1 per table group	10		
• Graph paper	1 per person +/-		
• Supplies for SET abilities activities on pages 3:10 to 3:15			
➤ SET Ability Activity 1 – straws, tape paper clips	3:10		
➤ SET Ability Activity 2 – pens/pencils, paper, graph paper	3:11		
➤ SET Ability Activity 3 – two items to compare, paper, pens	3:12		
➤ SET Ability Activity 4 – ruler, string, pair of dice, paper, pens, items to measure	3:13		
➤ SET Ability Activity 5 – plastic shopping bags, string/yarn, tape, paper cups, marbles, coins or rocks	3:14		
➤ SET Ability Activity 6 – dowel or PVC 12”-18”, tape, yarn, wire coat hanger, large craft sticks	3:15		

Break			
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#4. Hands on! Minds On!...Inquiry & Experiential Learning – supplies & handouts – TOT I	75 minutes		
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Handouts:			
• Swamp slug boat directions – A and B	4:11 - 5 of A – single sided 4:12-4:13 - 5 of B – BTB		
Supplies:			
• 8 oz. cups, clear	20		
• Mt. Dew	2 liters		
• Foam trays or paper plates	50		
• Drinking straws, non-flex are best	50		
• Raisins	3 boxes		
• Large plastic tub (2’ x 4’ x 8”deep) to test boats - 2” of water	2		
Posters:			
• Experiential learning model	2 x 3		
• Science inquiry	2 x 3		

Lunch	1 hour		
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#5. How kids learn science and what it means to afterschool – supplies & handouts – TOT I 90 minutes			
Handouts:			
• Blank map of US	5:16		
• SET Activity bags and sample sheet	5:18-5:19 Back-to-Back		
Supplies:			
• Chart paper, markers, pens/pencils, sticky notes			
• Index cards	1 per person		
• <i>Fish is fish</i> book by Leo Lionni	10		
Posters:			
• Concept map poster	2 on chart paper		
• Wonder wall poster	2 on chart paper		
• Science, engineering and technology word wall poster	2 on chart paper		
Break 15 minutes			
#7. Creating science-rich environments		90 minutes	
Handouts:			
• Strands of informal science learning	7:11 – 1 per person		
• Brainstorming activity sheets	7:5-7:10 – 2 per table Back-to-Back		
• Strand table top activities	7:12, 7:18-7:22 – 2 sets per table, Back-to-Back		
Supplies:			
• Science games and puzzles – 1 per table	10		
• Chart paper, markers,			
• Jeopardy game board	2		
• Wonder Wall	1 on chart paper		
• several non-fiction books on topic on Wonder Wall	6		
• biographies and/or literature showing children involved in science	6		
• 4-H Youth Experiences in Science – Bubbles or other theme-based five day curriculum			
• 4-H Youth Experiences in Science Backpack or other science backpack			
• Measuring tools and items for measuring tools kit	1 kit		
Q & A...Teaching Techniques 45 minutes			
Day Three 4 hours			
#9. SET Everyday...Using centers in afterschool		90 minutes	
Handouts:			
• SET center discovery sheet	9:19 – 2 per table		
• Facilitating and managing cards	9:20-9:21, 4 sets of cards		
Supplies:			
• Logic games and tokens	10 games		
• Chart paper, markers, tape			
• Enlarged puzzle pieces	9:8 & 9:9-12		
• SET Centers & supplies – 1 per table	9:13-9:18		
• Index cards	1 per person		
Planning 1 hour 45 minutes			

