

Seeing the World Differently

FACILITATOR GUIDE

Facilitator: _____

Workshop: Professional learning for the Kingsport City Schools, PreK-3.

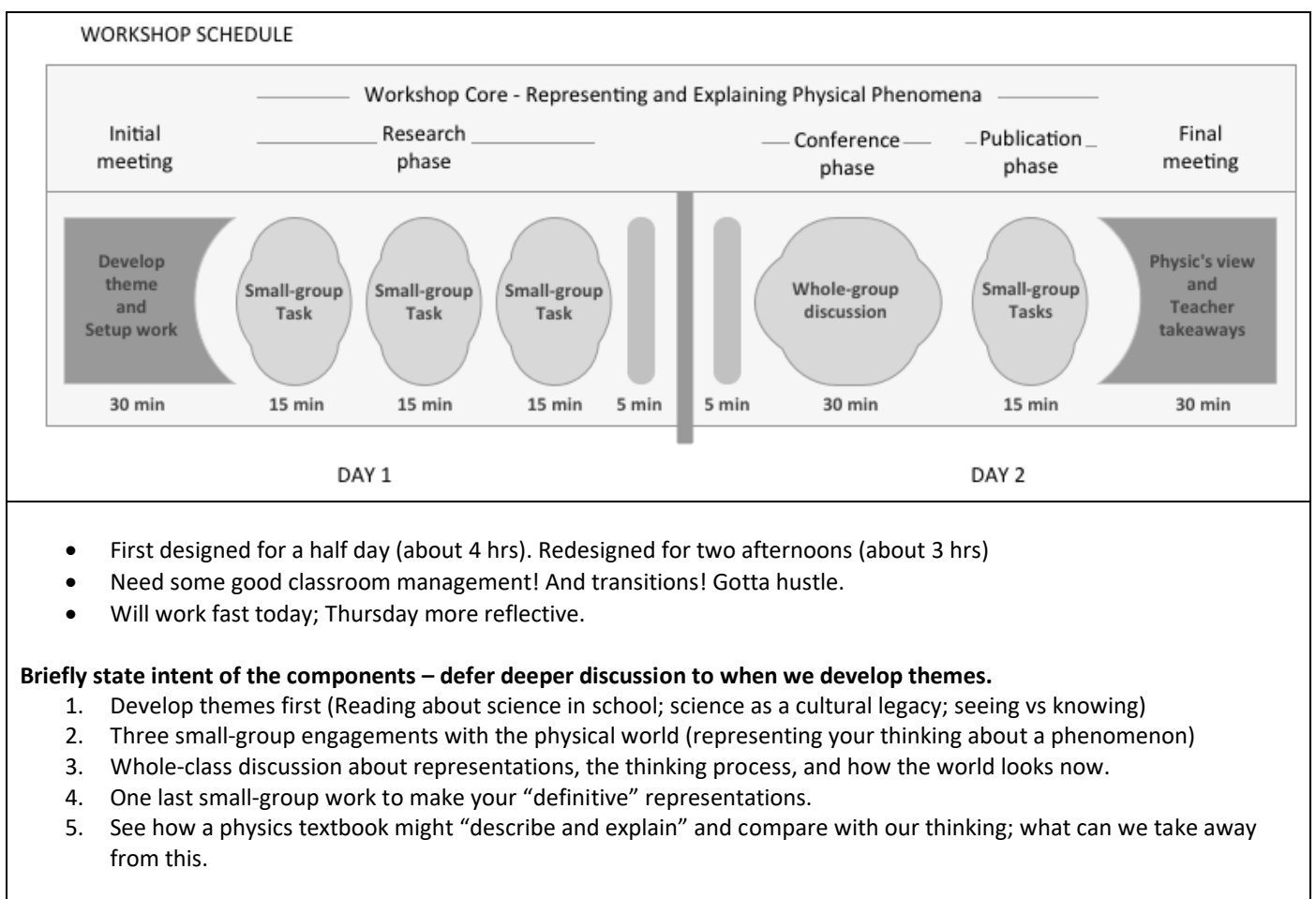
Purpose: Bring science thinking into the classroom while working toward ELA and Math standards.

Location: Thomas Jefferson Elementary School

Date: 16-Aug-2016

<p>Purpose: Begin to help elementary school teachers to bring science thinking into the classroom while working toward • Next Generation Science standards • ELA standards • Math standards</p> <p>Focus: on what is sometimes called “Scientific Modeling” and core concepts behind “Physics”</p> <p>Main directive: Describe and Explain simple, everyday physical phenomena.</p> <p>THINKING – Not “Sciencey Answers” or fancy terms</p> <p>Making thinking visible – Simple representations of what you think</p> <p>Build Sciencey ways of looking at the world – Using conversations about representations</p>	<ul style="list-style-type: none"> • Ask teachers to think about standards while going through the intro. • Tell teachers there are some key words I’ll use. Circle “thinking”, “Representations” “Conversations” • Emphasize that conversations are about Representations of Thinking
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STRUCTURE OF THE WORKSHOP



FACILITATOR NOTES:

ROSTER AT START OF WORKSHOP

ID	Name	HAS ICD	Survey comp	ICD comp	Grade / School	Notes
14736	Casey McKnight	x	x			
15341	Holly Griffin	x	x			
14968	Mary Hatzikazakis	x	x			
14734	Patsy Stout	x	x			Did demog survey twice. Second time finished other part as well
14976	Vickie Meade	x	x			
14591	Pam Whitlock	x	x			
12025	Virgini Marshall	x	-			Did demog. Not stebi
15869	Renee Polson	x			George Wash Elementary	Joined day of workshop.
12601						
13213						
17334						
16352						
19884						
17745						
15332						
17504						
15245						
17976						
14657						
11622						
11734						
11435						
13311						
Not confirmed registration						
	Vickie Meade					
13550	Taylor Jessee	x	x	withdrew		
	Sierra Nelson					

Seeing the World Differently	Facilitator Guide		GREET AND CATCHUP
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PROTOCOL FOR ARRIVAL OF PARTICIPANTS	✓	NOTES
Greet each teacher and check them against the roster.		
Update the roster with correct name, email, school, grade.		
Make sure they have and know their study ID		
Hand out name tag – First name only!		
Manage Informed Consent Documents		
Give them a copy of the informed consent document		
Ask if they've seen it and whether they have questions		
Ask them to read it over carefully. Answer questions		
If they agree, ask them to sign and initial each page. Collect the signed version		
Manage the pre-study survey. Check against roster whether they have finished both parts (demog and STEBI).		
If not: Hand them paper copy of survey		
Ask them to take a minute to fill it out		
Be sure they put their study ID on the form, not their name.		
Collect survey		
Hand out Participant journals. Ask them to label with ID		

PROTOCOL FOR TRANSITION TO INITIAL MEETING	✓	NOTES
AT 3:25, Announce "We're going to start in a minute. We will be working in small groups. Think about what who you can work well with."		
AT 3:30. Announce "OK, find a seat so you can see the projector. We're starting."		

Check your facilitation against protocols above. Initial ____

Seeing the World Differently	Facilitator Guide		INITIAL MEETING
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DEVELOP THEMES

Use the powerpoint presentation

SETUP FOR WORK

- Participant journals

Your thoughts on <i>Component title</i>	
CVM1	<p>How <u>enjoyable</u> was this part of the workshop?</p> <p>-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5</p>
CVM2	<p>How <u>interesting</u> was this part of the workshop?</p> <p>-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5</p> <p>Answer on a scale of -5 to 5, where -5 means you found it very uninteresting and +5 means you found it very interesting. A score of 0 indicates you didn't feel strongly either way.</p> <p>Did you find parts of this work fun or interesting?</p> <p>_____</p> <p>_____</p>
CVM5	<p>_____</p> <p>_____</p> <p>_____</p>
CVM3	<p>How useful do you think this part of the workshop was for helping you understand the way science works?</p> <p>0 +1 +2 +3 +4 +5</p>
CVM4	<p>How useful do you think this part of the workshop was for helping you understand <u>how to teach science</u>?</p> <p>0 +1 +2 +3 +4 +5</p> <p>Answer on a scale of 0 to 5, where 0 means you think it is not useful at all and 5 means you think it very useful.</p> <p>Do you think parts of this work could be usefull in helping you understand science yourself or helping you teach science?</p> <p>_____</p> <p>_____</p>
CVM6	<p>_____</p> <p>_____</p> <p>_____</p>
CVM7	<p>Anything else you'd like to get down about this work? Write on the back if you need to.</p> <p>_____</p> <p>_____</p>

- Introduce Flipbooks
- Ask teachers to form their groups and choose a name.
- Handout group page. Ask teachers to put name on it and the ID Roster

TRANSITION INTO RESEARCH PHASE – SMALL GROUP TASKS

- Remind them we need to be brisk and transition well!
- Pick a station and go. Look at the provocation and the materials.

Seeing the World Differently	Facilitator Guide		Small-Group Research Phase R1 / R2 / R3
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General protocols to follow	Check	How easy was this? How successful?
Constrain work to epistemological tasks (how do you know that happened; what does this mean? Can you see it again?)		
Constrain work to ontological clarifications (did you see that; why do you think this exists? Where did you see that? what do you call that? Can you name/label the important parts?)		
Create an atmosphere of approval of individual thinking;		
Do not show dedication to any particular outcome		
Do not second or endorse use of technical terms. Ask for clarifications: how did you see that; what did you see; press to use nontechnical terms or to define technical terms in text of flipbook.		

Specific protocols during visits to groups									
		1	2	3	4		protocol	notes	
Initial visit	T0					0	1. Within first three minutes, visit each group. 2. Instruct groups to inspect provocation statement and materials. 3. Allow groups to explore these as they wish, without intervention, for first three minutes.		
Middle visit	T1					2	4. intervene with general question ("So what have you found? Can you describe it and explain it?") 5. Listen attentively. Answer direct questions without telling or attributing. 6. Ask to see representations (Flipbooks). Make general affirmations ("Interesting. I see.") 7. Interrogate representations. Ask specific questions about function and meaning of symbols. 8. Make statements about your own understanding of their thinking ("I don't know what you mean here. This part does make sense, this part doesn't. Why do you have two arrows, etc.") 9. Press for clarity and direct linkage to observable phenomenon in thinking of participants. 10. Clarify roles of members of group. ("So, who's doing the drawing? Who is working the materials") 11. Leave again to own devices; 12. Intervene to redirect within to epistemological and ontological imperatives.		
Final visit	T2					12	13. At 12 minutes, announce "it's about time to wrap up this task and move to another." 14. Announce "Make sure there is a cover page for this center" 15. Announce "Take a minute to fill out the journal for this component" 16. Answer last minute questions quickly and redirect to finishing up.		
	Tf	14					17. Announce "Time to transition to next center"		

Check your facilitation against general protocols above. Initial ____

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Specific protocols during visits to groups									
		1	2	3	4		protocol	notes	
Initial visit	T0					0	18. Within first three minutes, visit each group. 19. Instruct groups to inspect provocation statement and materials. 20. Allow groups to explore these as they wish, without intervention, for first three minutes.		
Middle visit	T1					2	21. intervene with general question ("So what have you found? Can you describe it and explain it?") 22. Listen attentively. Answer direct questions without telling or attributing. 23. Ask to see representations (Flipbooks). Make general affirmations ("Interesting. I see.") 24. Interrogate representations. Ask specific questions about function and meaning of symbols. 25. Make statements about your own understanding of their thinking ("I don't know what you mean here. This part does make sense, this part doesn't. Why do you have two arrows, etc.") 26. Press for clarity and direct linkage to observable phenomenon in thinking of participants. 27. Clarify roles of members of group. ("So, who's doing the drawing? Who is working the materials") 28. Leave again to own devices; 29. Intervene to redirect within to epistemological and ontological imperatives.		
Final visit	T2					12	30. At 12 minutes, announce “it’s about time to wrap up this task and move to another.” 31. Announce “Make sure there is a cover page for this center” 32. Announce “Take a minute to fill out the journal for this component” 33. Answer last minute questions quickly and redirect to finishing up.		
	Tf					14	34. Announce “Time to transition to next center”		

Check your facilitation against general protocols above. Initial ____

Seeing the World Differently	Facilitator Guide		Small-Group Research Phase R1 / R2 / R3
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Specific protocols during visits to groups										
		1	2	3	4		protocol	notes		
Initial visit	T0					0	35. Within first three minutes, visit each group. 36. Instruct groups to inspect provocation statement and materials. 37. Allow groups to explore these as they wish, without intervention, for first three minutes.			
Middle visit	T1					2	38. intervene with general question ("So what have you found? Can you describe it and explain it?") 39. Listen attentively. Answer direct questions without telling or attributing. 40. Ask to see representations (Flipbooks). Make general affirmations ("Interesting. I see.") 41. Interrogate representations. Ask specific questions about function and meaning of symbols. 42. Make statements about your own understanding of their thinking ("I don't know what you mean here. This part does make sense, this part doesn't. Why do you have two arrows, etc.") 43. Press for clarity and direct linkage to observable phenomenon in thinking of participants. 44. Clarify roles of members of group. ("So, who's doing the drawing? Who is working the materials") 45. Leave again to own devices; 46. Intervene to redirect within to epistemological and ontological imperatives.			
Final visit	T2					12	47. At 12 minutes, announce “it’s about time to wrap up this task and move to another.” 48. Announce “Make sure there is a cover page for this center” 49. Announce “Take a minute to fill out the journal for this component” 50. Answer last minute questions quickly and redirect to finishing up.			
Tf						14	51. Announce “Time to transition to next center”			

Check your facilitation against general protocols above. Initial ____

Seeing the World Differently	Facilitator Guide		INITIAL MEETING
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TRANSITION TO END OF DAY 1

- Call time on finishing representations.
- Ask participants to take a last look at their journals and make any additions they want
- Ask participants to assemble their flipbooks in good order (group/cover/work/cove/work)
- Collect flipbooks and journals
- Remind everyone that when we meet on next day (same place/time) we will move into a whole-group discussion of the Representations and Thinking captured in the books
 - People will talk about their thinking about the phenomenon
 - What worked well
 - What was trouble
- Ask for questions.
- Thank everyone.

Seeing the World Differently	Facilitator Guide		BEGIN DAY TWO
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Seeing the World Differently	Facilitator Guide		WHOLE-GROUP DISCUSSION
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Seeing the World Differently	Facilitator Guide		Small-Group Publish Phase
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General protocols to follow	Check	How easy was this? How successful?
Constrain work to epistemological tasks (how do you know that happened; what does this mean? Can you see it again?)		
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Do not second or endorse use of technical terms. Ask for clarifications: how did you see that; what did you see; press to use nontechnical terms or to define technical terms in text of flipbook.		

Specific protocols during visits to groups									
		1	2	3	4		protocol	notes	
Initial visit	T0					0	52. Within first three minutes, visit each group. 53. Instruct groups to inspect provocation statement and materials. 54. Allow groups to explore these as they wish, without intervention, for first three minutes.		
Middle visit	T1					2	55. intervene with general question ("So what have you found? Can you describe it and explain it?") 56. Listen attentively. Answer direct questions without telling or attributing. 57. Ask to see representations (Flipbooks). Make general affirmations ("Interesting. I see.") 58. Interrogate representations. Ask specific questions about function and meaning of symbols. 59. Make statements about your own understanding of their thinking ("I don't know what you mean here. This part does make sense, this part doesn't. Why do you have two arrows, etc.") 60. Press for clarity and direct linkage to observable phenomenon in thinking of participants. 61. Clarify roles of members of group. ("So, who's doing the drawing? Who is working the materials") 62. Leave again to own devices; 63. Intervene to redirect within to epistemological and ontological imperatives.		
Final visit	T2					12	64. At 12 minutes, announce “it’s about time to wrap up this task and move to another.” 65. Announce “Make sure there is a cover page for this center” 66. Announce “Take a minute to fill out the journal for this component” 67. Answer last minute questions quickly and redirect to finishing up.		
	Tf					14	68. Announce “Time to transition to next center”		

Check your facilitation against general protocols above. Initial ____

CANONICAL DESCRIPTIONS AND EXPLANATIONS

BEAR

Diss Water

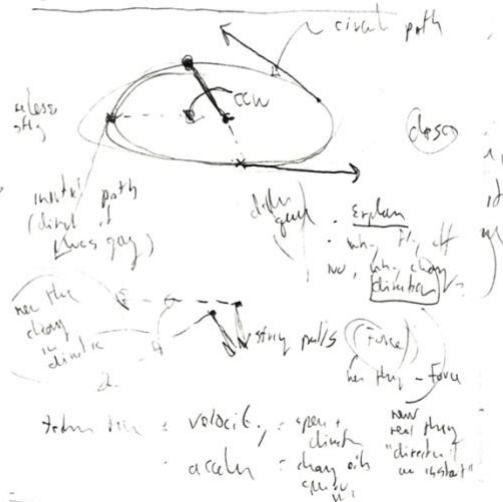
map

A	B	C
✓	✓	
✓		✓
	✓	✓

(A) Please First -
 the discuss
 need to
 discuss on
 "del
 situation"

241 yellow
less color from

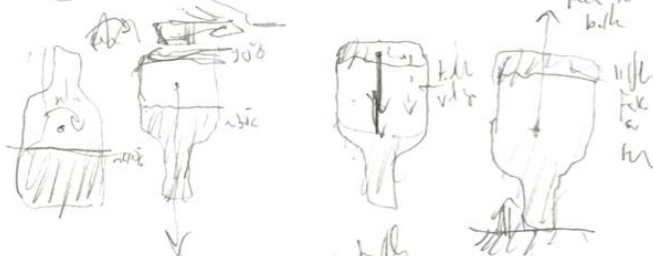
8/18 DISS workshop
commoned supervisor
 (1) Prov (col)



KETCHUP

1255 - Cannonball 1255

② Ketchup - "volting if" "loose" h/p



- All fur bottle
- archaic bottle (hang. video)

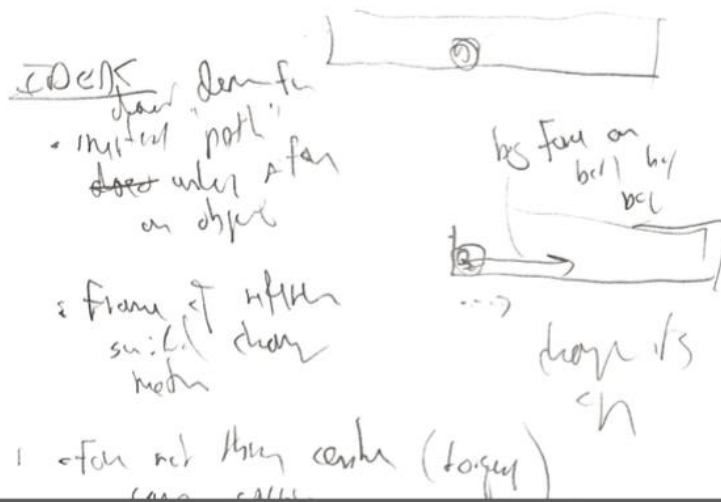
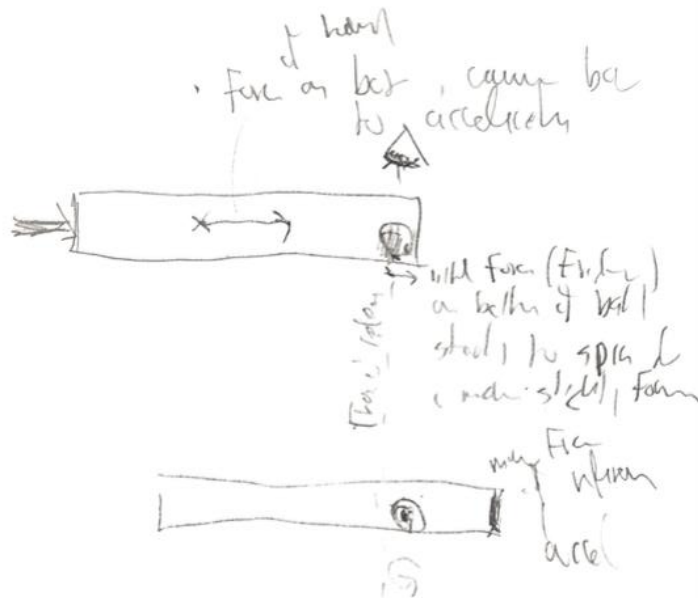
- bottle supplies fur
- archaic bottle
- archaic bottle



Key idea: need Fura &
"argue with"
winter & ketchup

- bottle supplies fur
- no sew fur - key. more

BALL



REPRESENTATIONS REVISITED – PRETENDING AS A SCIENCE PRACTICE

(2nd) Visit Bear Simplification
(Pretends)
Focus

Bear



Boy

not easy to repeat

knowing -

what did you see
pretend was it them.