

Looking at Thinking

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March 2005

THIS IS NOT A DEFINITIVE FINAL REPORT

FORMATIVE evaluation studies like this one often:

- **are conducted quickly**, which may mean
 - small sample sizes
 - expedited analyses
 - brief reports

- **look at an earlier version** of the exhibit/program, which may mean
 - a focus on problems and solutions, rather than successes
 - a change in form or title of the final exhibit/program

Mind Looking at Thinking

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BACKGROUND

'Looking at Thinking' is the first in a series of events that the Mind team put together to primarily help inform and inspire exhibit development. This event invited 3 experts who represent 3 very different ways of looking at thinking:

- Dacher Keltner in the field of social psychology
- Ken Farber in the area of meditation and health
- Chuck Workman on the subject of filmmaking, looking and emotions

Each expert gave a presentation as part of a 3.5 hour long workshop with intermissions between the presentations. The team encouraged each expert to include an experiential component, or audience activities, into their talks.

This workshop also provided the team an opportunity to get some initial feedback from visitors about some of the mind topics these experts touched on as well as the audience activities that each presenter tried.

PURPOSE

To collect initial feedback on the 3 different topics and ways these experts look at thinking. More specifically,

- How interesting did they find the overall workshop and the individual presentations. What was interesting?
- How confusing was the overall workshop and the presentations. What was confusing?
- Did the workshop help people look at thinking? If so, did they find that they looked at thinking in a new way?

METHOD

- We placed a survey form on every chair in the McBean theatre.
- We informed the audience at the beginning of the program that we were interested in getting their feedback and then reminded them at each intermission and at the end of the program to fill out the survey. Although the workshop was designed as a whole, some audience members attended only parts of the workshop.

DATA COLLECTED

- N= 47¹
- Demographics

Gender	Count
male	12
female	32
<i>total respondents</i>	<i>44</i>

Age Group	Count
18 to 25	13
26 to 35	6
36 to 45	8
46 to 55	9
56 to 65	6
66+	5
<i>total respondents</i>	<i>47</i>

- Prior Background in Field

Prior Background	Count (out of 37 respondents)
Studied/ works in psychology	20
Works in social services	4
Studied/ works in health education	2
Artist	2
Works in teaching/learning	1
Has mental illness in family	1
Practice meditation	1
In therapy	1

- Did they come specifically to attend this workshop?
 - 41/47 (87%) came for the express purpose of attending this workshop.
 - The others were drop-ins who learned about the workshop during their visit to the Exploratorium or friends. One came knowing about the workshop but was not fully committed to attending beforehand.

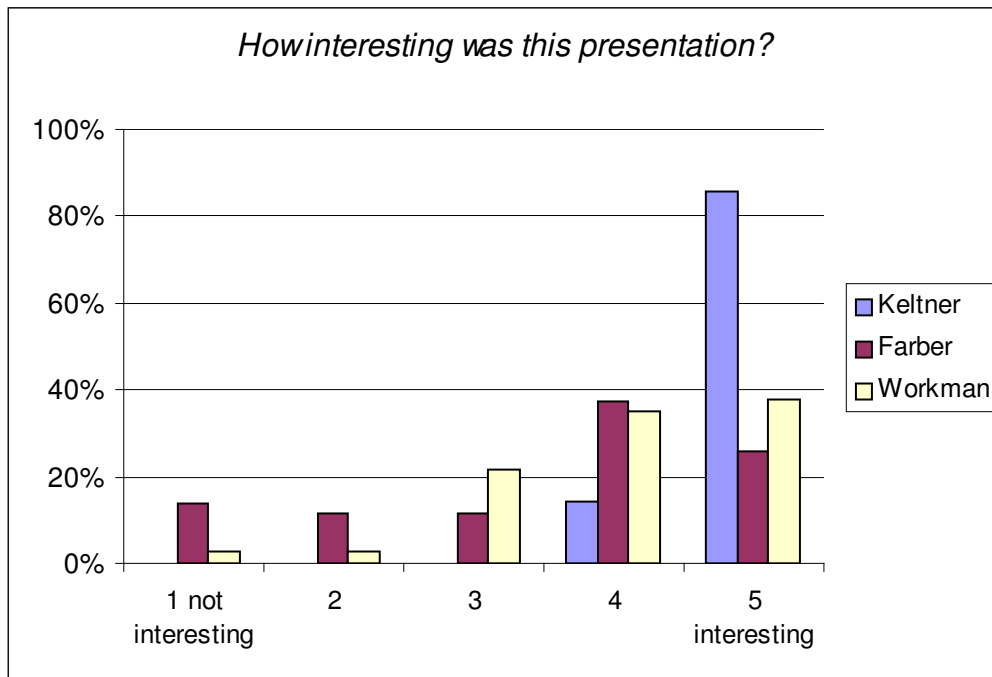
¹ We also received 4 completed surveys from staff members, which we did not include in this report.

- How did attendees find out about the workshop?

	Count (out of 47 respondents)
Word of Mouth	11
Outreach letter (through your school)	10
Member's calendar	8
Member's eNews	8
Online event calendar	7
Posters inside the Exploratorium	5
SF Chronicle	2

RESULTS

How interesting were the presentations?

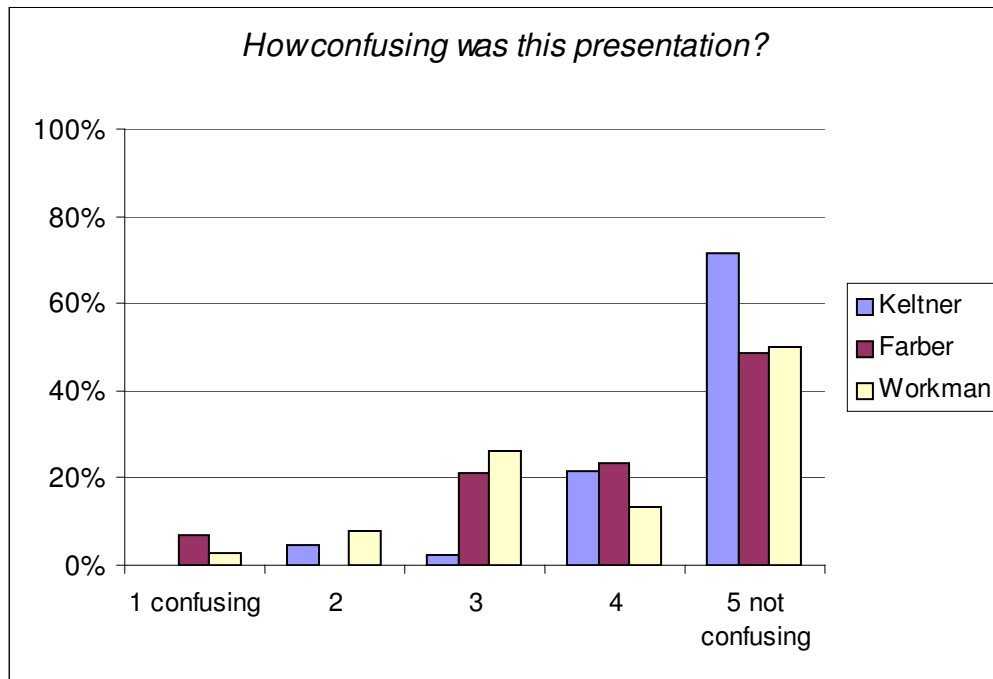


Presentation	Median (on a 1 – 5 scale)	Respondents
Keltner	5	42
Farber	4	43
Workman	4	37

- Wilcoxon's signed-rank tests indicate people found Keltner's presentation more interesting than Workman's and more interesting than Farber's; $z = 3.474$ ($N=34$), $p = 0.00$ and $z=4.778$ ($N=40$), $p = 0.00$, respectively. Respondents also found Workman's presentation more interesting than Farber's; $z=1.91$ ($N=36$), $p=0.005$.
- We also found that workshop attendees thought the lecture portion of Keltner's presentation was more interesting than the audience activities. Wilcoxon test, $z = 2.652$ ($N=41$), $p = 0.008$.
- Alternatively, people found the audience activities more interesting than the lecture in Farber's session. Wilcoxon test, $z=2.434$ ($N=30$), $p = 0.015$.
- There was no detectable preference for lecture or activity in the Workman talk.
- Visitors also commented on what they thought was the best part of the workshop. Many of their comments identified one particular session, while a few respondents described characteristics of the overall workshop. These are listed in the following:

Best Part of the Workshop	Count (out of 32 respondents)
<i>Keltner's Session</i>	20
Content	13
Presenter	11
Personal interest in material	2
Relationship between emotions and thinking	2
Application of the material	1
Familiarity of material	1
Learning new information	1
<i>Farber's Session</i>	2
Meditation	2
<i>Workman's Session</i>	8
Presenter	3
Seeing film clips	2
Personal interest in subject	2
Relationship between emotions and thinking	2
Application of material	1
Familiarity of material	1
Content	1
<i>Workshop – Overall</i>	9
Variety of perspectives	3
Looking at thinking	2
Audience activities	1
Connections between thought and emotions	1
Importance of interactions (?)	1
Learning new information	1

How confusing were the presentations?



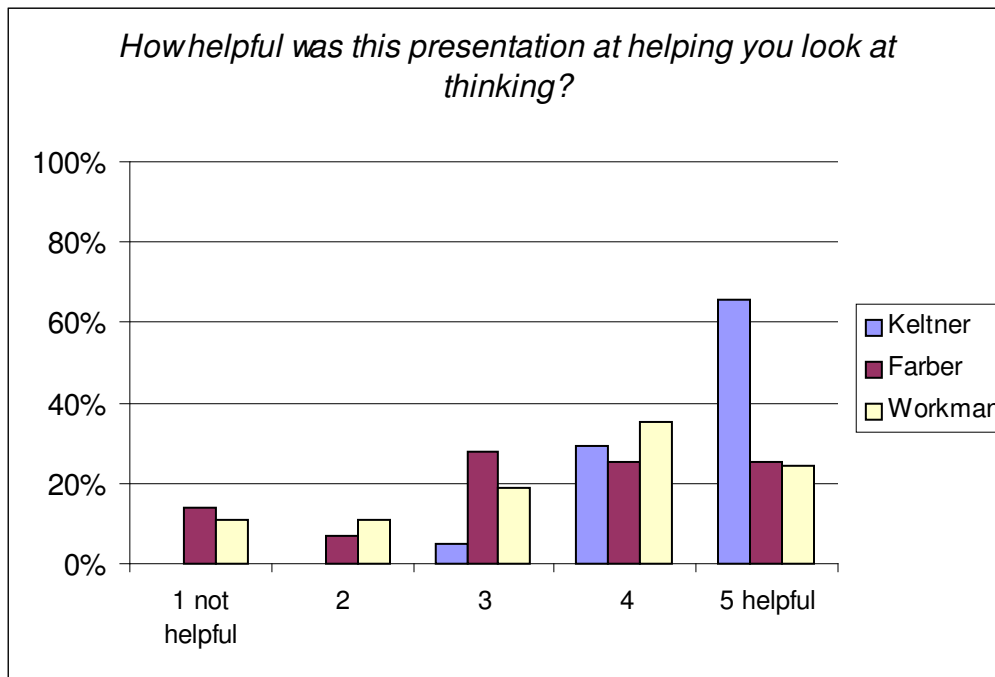
Presentation	Median (on a 1 – 5 scale)	Respondents
Keltner	5	42
Farber	4	43
Workman	4.5	38

- People thought Workman's presentation was more confusing than Keltner's; Wilcoxon $z=2.937$ ($N=35$), $p=0.003$. They also found Farber's more confusing than Keltner's; Wilcoxon $z= 2.884$ ($N=40$) , $p = 0.004$. There was no significant difference between ratings for Farber and Workman's sessions.
- The respondents did not find the audience activities more or less confusing than the lecture portions for any of the 3 sessions.
- We asked the audience to describe what was the most confusing aspect of the workshop. These are their responses.²

² Note that some visitors took this opportunity to also talk about parts of the workshop they did not like. These comments are also included here in parentheses.

Most Confusing Part of the Workshop	Count (out of 29 respondents)
<i>Keltner's Session</i>	2
Statistics table	1
The vocabulary	1
<i>Farber's Session</i>	2
The meditation concepts	3
Had difficulty meditating	2
Unclear about the point of the session	2
(Disliked the session)	1
<i>Workman's Session</i>	9
Unclear about the point of the session	8
Lacked coherence	1
<i>Workshop – Overall</i>	3
Nothing confusing	10
Connection between thinking and emotions	1
(Poor environment of the theatre)	1
(Too long)	1

How helpful were the presentation at helping to look at thinking?



Presentation	Median (on a 1 – 5 scale)	Respondents
Keltner	5	41
Farber	4	43
Workman	4	37

- People thought Keltner’s presentation was more helpful than Farber’s (Wilcoxon $z=4.197$ (N=39), $p=0.000$) and more helpful than Workman’s (Wilcoxon $z=3.945$ (N=34), $p=0.000$) . There was no significant difference between ratings for Farber and Workman’s sessions.
- The respondents did not find the audience activities more or less helpful than the lecture portions for any of the 3 presentations.
- As part of the written questionnaire, we asked the audience if they found themselves looking at thinking in a new way, in a way they haven’t before. Although we wrote the question to allow for comments on their experience as well as remarks about new content, we found that most people who responded wrote about *what* they learned as opposed to *how* they learned.

New way of looking at thinking	Count (out of 24 respondents)
<i>Keltner's Session</i>	<i>8</i>
Biological basis of emotions	3
The connection between emotion and thought	1
Our intuitive reactions	1
New ideas for research	1
Relationship between touch and emotions	2
<i>Farber's Session</i>	<i>6</i>
How to meditation	3
Meditation can be therapy	1
Meditation can help us understand our bodies	1
The metacognition of meditation	1
<i>Workman's Session</i>	<i>12</i>
Taking a detailed view of films	9
Film can be art	1
Filmmaker's thoughts	1
<i>Workshop – Overall</i>	<i>4</i>
connection between emotion and thought	1
cultural differences (???)	1
sources of emotions	1
bodily effects of emotions	1

- 8/32 (25%) of the respondents did not feel that they learned or experienced anything new.

SUMMARY

- The workshop targeted and attracted a select crowd; all the respondents were adults and a majority indicated that they had some prior experience, either within their schooling or within their vocational and advocational experiences, with the subjects discussed in the workshop.
- A large majority (87%) of the respondents came to the Exploratorium to attend this workshop. Only five visitors were 'drop-ins', who had found out about the program during their visit and attended a part of Looking at Thinking.
- In general, the workshop was well received, and respondents rated all three sessions positively in terms of how interesting, how clear, and how helpful each was at helping them look at thinking.
- Compared to each other, the audience ranked Keltner's presentation higher than Farber and Workman's along the dimensions of interest, clarity and helpfulness.
- Different types of experiential audience activities were tried for each of the presentations and were integrated into the talks differently. Therefore, it was not surprising that we could not find a preference for activities over lecture across the three sessions. On the contrary, we found that visitors found the lecture, or information delivery, portion of Keltner's session more interesting than his activities. Alternatively, the audience rated Farber's meditation activity more interesting than his lecture. With Workman's session, where it was difficult to clearly separate the activity from the lecture, we found no preference for one over the other.
- A majority of the respondents claimed that they learned or discovered something new about the way they think.
- Respondents tended to comment more about individual sessions. There were few remarks about the connections between the sessions and the overall message of the workshop. This, however, may be due to the structure of the questionnaire, which asked visitors to focus on individual presentations initially. It may also be due to the length of the workshop and the diversity of the presentations. One person felt that s/he lost the overarching message of the workshop. And, 8 individuals were confused by how the last presentation by Workman fit into the larger theme of the workshop. That is; the connection between what he said and the examples he gave did not seem to have a strong tie in with looking at thinking. These remarks point to a need on the part of the audience for more coherence and better tie in with the 'point' of the workshop.

ACKNOWLEDGEMENTS

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APPENDIX A: Feedback Form

Looking at Thinking
 A Workshop Exploring Thought and Emotion
 - FEEDBACK FORM -

Please drop your completed form in the feedback boxes outside the theatre.

Thank you for your help!

Please tell us about yourself

1. I am (*check one*): Male Female
2. Age (*check one*): 8-12 18-25 36-45 56-65
 13-17 26-35 46-55 66+
3. Do you have any special interest or background that might have helped you understand or enjoy this workshop? (For example, do you work in the mental health field? Did you study psychology in school?) Please describe briefly.
4. How did you find out about this workshop? (*check all that apply*)
- Posters inside the Exploratorium
 - Member's eNews
 - Member's calendar
 - Outreach letter (through your school)
 - Online event calendar
 - Word of Mouth
 - Other _____
5. How strongly do you agree with this statement?
- I came to the Exploratorium in order to expressly attend this workshop (*check one*):
- Agree Somewhat Agree Neutral Somewhat Disagree Disagree

Tell us what you thought about *Looking at Thinking*

Presentation #1: Dacher Keltner, Social Psychologist

- ◆ Please rate how interesting this presentation was. (Check one box in each row.)

	Not Interesting				Interesting	Did not attend
Overall presentation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
audience activity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
lecture/discussion	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>

- ◆ Please rate how confusing this presentation was. (Check one box in each row.)

	Confusing				Not Confusing	Did not attend
Overall presentation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
audience activity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
lecture/discussion	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>

- ◆ Did this presentation help you look at thinking? Please rate how helpful it was. (Check one box in each row.)

	Not helpful				Helpful	Did not attend
Overall presentation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
audience activity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
lecture/discussion	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>

Presentation #2: Ken Farber, Behavioral Health Coordinator

- ◆ Please rate how interesting this presentation was. (Check one box in each row.)

	Not Interesting				Interesting	Did not attend
Overall presentation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
audience activity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
lecture/discussion	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>

◆

- ◆ Please rate how confusing this presentation was. (Check one box in each row.)

	Confusing				Not Confusing	Did not attend
Overall presentation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
audience activity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
lecture/discussion	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>

Presentation #2: Ken Farber, Behavioral Health Coordinator

- ◆ Did this presentation help you look at thinking? Please rate how helpful it was. (Check one box in each row.)

	Not helpful				Helpful	Did not attend
Overall presentation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
audience activity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
lecture/discussion	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>

Presentation #3: Chuck Workman, Filmmaker

- ◆ Please rate how interesting this presentation was. (Check one box in each row.)

	Not Interesting				Interesting	Did not attend
Overall presentation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
audience activity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
lecture/discussion	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>

- ◆ Please rate how confusing this presentation was. (Check one box in each row.)

	Confusing				Not Confusing	Did not attend
Overall presentation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
audience activity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
lecture/discussion	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>

- ◆ Did this presentation help you look at thinking? Please rate how helpful it was. (Check one box in each row.)

	Not helpful				Helpful	Did not attend
Overall presentation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>
audience activity	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/>

The Workshop - Overall

– Please rate how interesting the workshop was. (Check one box.)	Not Interesting 1	2	3	4	Interesting 5
– Please rate how confusing the workshop was. (Check one box.)	Confusing 1	2	3	4	Not Confusing 5
◆ Did the workshop help you look at thinking? Please rate how helpful it was. (Check one box.)	Not Helpful 1	2	3	4	Helpful 5

- ◆ What was the best part of this workshop?
 - ◆ What made it the best part?

- ◆ Was there anything that was particularly confusing? If so, what?

- ◆ Did any part of the workshop help you look at thinking in a way you haven't before?
 - ◆ If so, which part of the workshop?

 - ◆ If so, what was new about it?

 - ◆ If not, where have you encountered these experiences before?

- ◆ We would like to make some exhibits based on today's workshop. If you could choose 1 or 2 ideas or activities from this workshop to make into an exhibit, what would they be?

- ◆ Why would you choose these?

- ◆ Do you have any additional feedback on the workshop?

Thank you for your feedback!

Please drop your completed form in the feedback boxes outside the theatre.