

Cluster 1: Energy and Eating Evaluation Revision Findings 4/3/02

Method

- Conducted 20 interviews which included 40 visitors. Interviews were conducted on Thursday, 3/28, Friday, 3/29 and Saturday, 3/30. Female (N=12) and Male (N=8). Adults (N=15), Teens (N=3), Kids (Ages 10 to 12) (N=2).
- Visitors were all cued and recruited randomly. Total time with visitors (recruiting, looking at cluster, interview) took an average of 15 to 25 minutes. All visitors were given a small gift at the end of the interview.
- Most cued visitors look at all of the six exhibits.
- Cluster 1 included Energy form Death with media element, Oxygenator, Termitarium, Termite Gut, Hot Pile, Bacteriapolis, introductory label, three pithy statements, and section title. (Digital images of cluster available)

Findings

Did visitors notice title, introductory label, and pithy statements?

Title

- 14 of 20 saw and read the title, "Life Uses Energy" in one of the two places it was hanging
- 9 of the 14 saw and read the title just on the introductory graphic.
- 3 of the 14 saw and read both the title on the introductory graphic and the hanging section title.
- 2 of the 14 saw and read just the hanging section title

Introductory Text

- 8 of 20 saw and read some if not all of the introductory text
- 4 of 20 noticed it but didn't read it.
- 8 of 20 did not notice or read the introductory text

Pithy Statements

- 9 of 20 saw and read one or more of the pithy statements
 - 5 of 20 saw and read all 3 of the pithy statements
 - 3 of 20 saw and read 2 of the pithy statements
 - 1 of 20 saw and read 1 of the pithy statements
- 11 of 20 visitors did not see or read any of the pithy statements
- There was an even distribution between which pithy statements visitors noticed and read; they did not notice to read one statement more than any of the other three.

Things to consider

- Cued visitors did not notice the hanging section title, passersby the area were informally observed reading or looking at the hanging section title from a

distance. While in the section, it may have been awkward and unnatural for visitors to look immediately above their heads at something while the introductory graphic was in their range of vision as they moved from one exhibit to the next.

- Visitors noticed the title more often than they did in the previous baseline study. They most frequently noticed the title above the introductory text but also noticed it in the exhibit graphics and hanging section title graphic.
- The pithy statements were positioned directly above the exhibits, which may potentially have led visitors to think that the statements were in direct reference to the exhibits below them.

Pithy Statements: what did visitors think they were communicating?

Note: Multiple answers were taken into consideration, therefore total N is greater than 20.

- 14 of 20 thought the statements were about energy
- 6 of 20 visitors thought the statements were about interdependence of living things or the cycle of life
- 2 of 20 could not say what it was about, saying that it said exactly what was written down or that it was common knowledge written down.
- 1 of 20 visitors said that the statements were about living (Note: This visitor was about 11 years old.)
- 3 of 20 were confused by the poetic pithy statement.

Things to consider

- When visitors said energy they were referring to:
 - Living things needing energy to survive
 - The sun and air creating energy for different things to survive
 - The process of living things getting energy
 - Different kinds of energy
- 3 visitors responded to the statement, "Life is woven from air by light" by saying that they didn't understand it, that it didn't make sense, or that it took some work to understand what the statement meant. It has a very different style than the other two statements, which may have made it more confusing than if all three statements were more poetic than pragmatic in style. Let's discuss this.
- Please see data sheet for visitor responses

Did visitors think that the title accurately reflected the group of exhibits?

Note: The title still read "Life Uses Energy" on the graphics, but the proposed title offered to the visitors was "Life Needs Energy". As a result, visitors sometimes commented on the difference between life 'needing' energy versus 'using' energy.

- 15 of the 20 visitors thought that the title accurately described the theme of the exhibits.
- 4 of the 20 visitors thought that the title accurately described the theme but said that the title was missing something still to accurately depict the group of exhibits.
- 1 of the 20 visitors thought that the title did not accurately describe the group of exhibits in the section.

Things to Consider

Visitor Title Suggestions:

- Life and Energy Go Hand in Hand
- Life Needs Energy to Survive
- Something to denote the circular process of energy transferal
- Degradation of Things
- Life Uses and Needs Energy but It Also Produces It

Some General Conclusions and Impressions

- More visitors are seeing the title now that it is above the introductory text and repeated throughout the area.
- More visitors are noticing the introductory text now that it is standing out from the wall.

Next Steps to be determined at the meeting on Wednesday, April 3, 2002.

Date	#	Gender	Age	Group Size	Group	ESL	Time In	Time Out	What are the statements about?	Title accurate?	Termite Gut	Bacteriapolis
3/28/02	1	F	30s	1	A	N	1:20	1:30	That living things need energy to survive and they're interdependent on each other. The circle of life - the death of one organism provides life for another.	It accurately depicts it but it needs a catchier title. It sounds a little bland and it doesn't make you remember it. (K: suggestions?) Something like life and energy go hand in hand. That makes me think that they go together and are interchangeable. Life and energy overlap and life is energy. Life needs energy to survive. Maybe say something about survival as well if it is going to be Life Needs Energy. Say, "Life Needs Energy to Survive." That would be better.		
3/28/02	2	F	60s+	3	A+K (2A60s+, 1M-12)	N	1:35	1:52	They're talking about things need energy to survive and there are different kinds of energy. Light energy, life is made up of air and light.	yes. I think it is better than 'uses'. (K: Why?) Because life using energy doesn't mean that life needs energy. I think that's two different messages. It's like the difference between using a coat and needing a coat.		
3/28/02	3	M	30s	5+	A+K	N	1:55	2:10	I don't know if they're trying to make a point as much as to tell you how the process works. I guess from a standpoint of simple organisms to people. It's kind of the same process I'd guess. The process of how organisms get energy is the same for simple organisms as for people or more complex organisms.	yes. It makes sense. When you go through and read exhibits they say why life needs energy.		
3/28/02	4	M	18-20s	2	A	N	2:00	2:22	They're about everything that life needs to survive. It's the cycle of life pretty much.	yes. It shows all the different phases where energy is coming from. It shows the transfer of energy.		
3/28/02	5	F	13-17	2	A+T	N	2:25	2:35	It educated me. I don't know that much about the way of life. How much we need different things in our world. That energy is very important. Air is the most important thing there is and all of these things (exhibits) show that.	I think that's good but you should add something about oxygen in there. Put something about oxygen in the title.		

Date	#	Gender	Age	Group Size	Group	ESL	Time In	Time Out	What are the statements about?	Title accurate?	Termite Gut	Bacteriapolis
3/28/02	6	F	13-17	2	A+T	N	2:38	2:50	That everything needs energy. Different things make it possible for things to feed everything else. The circle of life. And that nothing goes to waste.	yeah. That just seems like what it's about. You can sort of categorize the exhibits by that one thing - life needs energy.		
3/28/02	7	F	30s	3	A+K (2K -10, 11)	N	12:35	1:00	[reads out loud] "Life is woven from air by light." I don't get that one at all. And the first one (living things depend...) speaks to the statement you just read. The other one (light energy 2) seems like more of a broad statement than something specific to this point. I do think that having a small short statement is better for kids than a big long one, though. They'd be more likely to read it.	Yeah, it does. The point is how different things get energy and how they feed, but I don't see anything in this exhibit comparative to people. You should include something that brings it closer to home so it is not so bizarre and alien to humans. Everything in here is really unusual but it doesn't connect to humans that much. Energy from death is more about how nature takes care of itself than how things eat and get energy. I found myself talking about death and life cycles with the kids I'm with more than how these bugs are getting energy from dead carcasses. The termites address the food issue better and talking about light and photosynthesis in the plant and bacteria ones address the energy issue more than the others. The little boy I was with's father died this last year and so I was wondering at RC if we should go into these death issues here but he didn't go there with the exhibit at all.		
3/28/02	8	M	30s	3	A+K (1AF 30s, 1KM-10, 1AM-30s)	N	1:00	1:21	It's all a statement about a natural energy instead of created energy. Life and light ... this is a lot of stuff that we take for granted. We need to wake up to these things. The light and the ozone layer. We need to do what we can to be educated and these natural energies can help us on the planet.	It's good with the exhibits. The plants giving oxygen, with the soil, the termites - they all show the different habitats of the energy that different things need. It's a pretty good title.		
3/28/02	9	F	40s	3	A+T (2AF 40s and 60s+, 1 Teen Female)	N	1:42	1:54	Just the flow of life - How energy is transformed and used.	Life uses energy is better than Life Needs Energy. What you are showing is how it utilizes energy, not how it needs it.		
3/29/02	10	F	30s	2	A	Y	3:20	3:33	The first one (on left) says that all of life has energy. We get energy from plants. Life depends on energy to live.	I didn't think these exhibits had to do with energy, instead I think they have to do with degradation of things. Degradation is separate from energy. (Do you see energy in any of those exhibits?) No, not really maybe the oxygen one.		
3/29/02	11	F	30s	3	A+K	N	3:36	3:55	All life forms depend on the sun to get energy.	Yeah, because the termites energy is stored in dead things. so yeah that works (AE?) No.		

Date	#	Gender	Age	Group Size	Group	ESL	Time In	Time Out	What are the statements about?	Title accurate?	Termite Gut	Bacteriapolis
3/30/02	12	F	8 to 12	3	A+K (1AF30s, 2K ~11. 8)	N	11:35	11:58	I thought they were about living. (More?) I liked that one (points to HP). That it was warm and everything.	I think it's good because I saw some living things. (K: Living things a good title?) yeah, I guess it would be fine.		
3/30/02	13	M	40s	2	A+K	N	12:00	12:17	The general point of it all is that this whole process is a circle that feeds back in on itself. It might be helpful to have some sort of diagram instead of just text.	I think it's a good title. The best thing would be something to show the circular process. The termites, for example, show that you've got energy in the wood and the termites are using the energy and then excreted what they don't use and it helps to make something else. You need something to denote the circular process. I can't think of something that is 5 words or less right now but something to denote the circular as part of these exhibits.		
3/30/02	14	M	13-17	1	T	N	12:28	12:35	I don't really know. Different things give other things what they need.	yes. All the stuff here shows what or how animals get other stuff that they need for living and stuff.		
3/30/02	15	M	50s	5+	A+K (3A, 3K)	N	1:00	1:20	It almost sounds trite but it is life. Do you want more? (K: yes) I'm seeing living, life, energy. I guess it's important to develop the statements and so forth but I don't pay attention to them as much as to the exhibits themselves.	Yes. I like that. I think it's important and I guess it's obvious. My mom died because she couldn't eat. There is nothing more primordial basic to being alive than that we need energy to be alive.		
3/30/02	16	M	10 to 12	2	A+K (AF 30s, AMK-11)	N	1:22	1:40	That is what it is trying to say. What it says is what it is trying to say. It's straightforward.	Yeah. Because it displays that. The termites eat wood for energy, these bugs eat the dying animal for energy, this plant needs light to live.		
3/30/02	17	F	50s	5+	A+K	N	1:55	2:10	That life needs energy and energy eventually derives from the sun. The woven from air by light is kind of meaningless to me. It doesn't mean a lot to me.	Yeah. It needs it and it also talks about how it (life) uses it (energy). You're showing a lot of things getting energy and how they get it in different ways. This is about how the different forms of life get energy. More than use of energy is how they're getting it from different sources.	it doesn't tell enough about what you're doing and what to look for. Tell the person to adjust the focus and what they should be looking for. There should be a big clear sign on the table sayign to move the focus slowly and you will see the moving bacteria.	it needs description about what you're looking for. I don't know what to make of it. Why is it different colors at the different places? It needs more explanation.

Date	#	Gender	Age	Group Size	Group	ESL	Time In	Time Out	What are the statements about?	Title accurate?	Termite Gut	Bacteriapolis
3/30/02	18	F	50s	3	A	N	2:18	2:45	The first one (on left) it's nice and obvious, you've got to have energy to survive. 2nd one (middle) most people know this, it's intuitive, the role of the sun. 3rd (poetic one) that's not obvious, you are talking about photosynthesis right? (yes) It's poetic. (What do you think about that?) It's nice to have it, but it takes a bit of work to get it.	Yeah, absolutely. You've illustrated the statements in several different ways. It's true both ways I guess (either uses energy or needs energy) but "needs energy" is more truthful. If you wanted to be more forceful about it go with "needs energy." You could add the thermal vents bacteria.		
3/30/02	19	M	20s	3	A	N	2:46	3:00	It's all stuff I learned in school, common knowledge, except for the last one (poetic) it doesn't make sense to me. The other two you learn about in school. (AE?) No.	That sounds right. (why?) It just does. (AE?) No, I'm on break from school.		
3/30/02	20	F	20s	2	A	N	3:20	3:40	All three say that energy is needed to survive; sunlight and air to survive or live and grow. I think that people take certain things for granted, it's good to remind us that we need the sun, energy to live.	I like it but I think there's something missing from it. (like what?) Something like "we use it and need it but we also produce it."		