2008 Ali‘i Workshop Evaluation

The following results will be used to improve the 2008 ALI‘I program. The variety of lectures, as the strength of this program, will continue to be the backbone of this professional development program. Activities will be re-evaluated and more options will be offered. We hope this will assist you in deciding whether ALI‘I suits you needs.

Some do not add close to 100% due to no response to that question by a few.
SA - strongly agree, A - agree, U - unsure, D - disagree, SD - strongly disagree

1. I understand the integrative nature of astrobiology. 75%  25%  0  0  0
2. I learned more than I expected to in this course. 92%  8%  0  0  0
3. Astrobiology can be integrated into all science courses. 83%  17%  0  0  0
4. I would like to learn about the other VTT modules. 17%  50%  0  17%  17%
5. I will integrate astrobiology into a course next year. 57%  25%  8%  0  0
6. My students will enjoy learning about astrobiology. 67%  17%  17%  0  0
7. I feel inspired to learn more astrobiology. 92%  9%  0  0  0
8. I learned about the nature and process of science research. 67%  17%  0  0  8%
9. I would recommend this course to my colleagues. 92%  8%  0  0  0

<table>
<thead>
<tr>
<th>Lectures/Discussions</th>
<th>Excellent</th>
<th>Very Good</th>
<th>Good</th>
<th>Ave</th>
<th>Fair</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Intro to Astrobiology – Eric Gaidos</td>
<td></td>
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<tr>
<td>11. Role of Gravity – Mike Nassir</td>
<td>68%</td>
<td>23%</td>
<td>8%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12. Small Solar System Bodies – Nuno Peixinho</td>
<td>100%</td>
<td>0</td>
<td>0</td>
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<tr>
<td>13. Different Types of Telescopes – C. Garland</td>
<td>50%</td>
<td>50%</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>14. Chemistry of Carbon – Ed Ginoza</td>
<td>62%</td>
<td>38%</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>15. Astrochemistry – Ralf Kaiser</td>
<td>77%</td>
<td>23%</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>16. Density and Pressure – Ginoza/Nassir</td>
<td>46%</td>
<td>31%</td>
<td>15%</td>
<td>0</td>
<td>8%</td>
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<tr>
<td>17. Evolution of Stars – M. Nassir</td>
<td>85%</td>
<td>15%</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>18. Stardust Mission – Gary Huss</td>
<td>92%</td>
<td>8%</td>
<td>0</td>
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<tr>
<td>19. Unique Chemistry of Water – Ed Ginoza</td>
<td>31%</td>
<td>31%</td>
<td>23%</td>
<td>0</td>
<td>15%</td>
</tr>
<tr>
<td>20. Ice on Mars and in Space – Schorghofer/Keane</td>
<td>77%</td>
<td>8%</td>
<td>15%</td>
<td>0</td>
<td>0</td>
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<tr>
<td>21. Meteorites – Lysa Chizmadia</td>
<td>100%</td>
<td>0</td>
<td>0</td>
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<tr>
<td>22. Origin of Oceans – Mike Mottl</td>
<td>92%</td>
<td>8%</td>
<td>0</td>
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<tr>
<td>23. Origin &amp; Evolution of Life on Earth – Dave Karl…</td>
<td>85%</td>
<td>15%</td>
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Lectures #11, 13, 14, 16, and 19 were given to bridge the research lectures with important physics and chemistry concepts necessary to understand the research. We also wanted to provide background for those who may need it and for the others give you ideas about ways to approach these topics. Your reactions and comments will be valued. Were they useful? Did they help to clarify research ideas?

In general, yes

Yes, very useful as they preceded lectures, learned another way to teach orbitals for chemistry.
All aspects of this workshop were excellent.
Yes, the background information allowed for a better understanding of the research presentations.
Nice review, but chemistry was not clear.
Yes, it helped to review information and to move on to new insights
Helpful, but with a weak chemistry background, I needed another hour on periodic table rows and columns.
Some were exceptional and critical. They deepened my understanding and provided glimpses of how I could bring this to my students.
Yes, lectures were on basic concepts and were related to astronomy by astronomers.
Background in physics and chemistry is essential.
Yes, good review/introduction, reminder of connections.
Yes, they were useful, even if laden with chemistry. For non-chemistry teacher it was hard to follow.

Activities 28 – 34: We tried to expose you to variety of activities that may be used in classroom. The range of backgrounds and courses taught required flexibility in time allotted and choices. Comments on these activities are appreciated.

Spectroscopy activity was good, but many teachers lack equipment (spectrum tubes and power supply). It would be nice to see how more of the activities could be done in class, maybe by putting participants in student mode.
Few will be useful to me due to classroom limitations, need to do more non-computer demonstrations. All will be helpful.
Activities were very helpful for (1) ideas to use in the classroom, (2) nice change of pace from absorbing new technical information.
VTT certainly has its strengths, but I would rather not rush the speakers to do it. The speakers were the jewels of this workshop.
Good demonstrations, I'll use the VTT unit.
Activities useful, but time consuming, so need to be few, covering sufficient detail. (community college)
Only parts of the activities will be useful.

35. What was most useful part of this workshop?
Updated information and research projects of scientists -
Lectures from expert scientists -
Variety of great speakers – informative and quite interactive
Research lectures were really neat, great to be able to bring exciting ideas to classroom.
The dedication these researchers have showed in the quality of their educational outreach. Actual scientists explaining their work, how exciting it was to hear about them.
Speakers bringing current research to teachers.
New knowledge
The cutting edge information and the networking with other teachers.
Wow. How do I narrow it down? Evolution of solar system, composition of stars, Earth, Moon, & other planets, timeline since Big Bang
Interdisciplinary aspect of all the sciences into astrobiology.
Adding student time gave us flexibility to remain a little longer with the scientists.
Talks by scientists
Wow, nearly all lectures were fabulous.

36. What would you leave out of this workshop, given the time constraints?
Reduce VTT computer time, have different teams investigate different activities and share with class.
Water chemistry
Concept maps – 3
Computer activities are fun, but easy enough to do on own.
Nothing – 3
VTT activities - 3

37. Is there anything specifically that will change in your classroom THIS YEAR as a result of this workshop?
Emphasis on microbes more, redo “timeline” on the wall as activity
Integrate more sciences
Use lots of materials and implement some of Mike Nassir’s antics.
Relate concepts to other topics. Hopefully, have an astronomy course elective, include term on astrobiology.
Include spectrographically relevant materials.
Increase planetology and astrobiology in class. I also want to develop a class in history of life.
Add timeline from Big Bang, go more into the elements and their weights (gravity).
Update what I do, EM spectrum, spectrum tubes, more with search for life, ices, periodic table.
Use VTT to start year with 8th grade Earth Science,
Introducing Astro 281, Astrobiology course at Hawaii Community College
Introduction to elements from Eric Gaidos, Ralf Kaiser, Gary Huss, Lyssa Chizmadia, Mike Mottl
Update my gravity and solar system presentations

Suggestions and Other Ideas –
This is a great course for professional development. I can't believe there are no PD credits for this high powered very professional 40 hour workshop.
I would like to hear more about everything, but also global warming.
Consider an on-going cumulative concept map (magnetic and flexible)
Really appreciate all the free stuff!!! Teachers are poor.
We thank you for your participation and hope you had a great time!

Modifications for 2008 AL'I'I