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Supplemental Materials for Evaluation to Improve a High School Summer Science Outreach Program

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Appendix 1. SFP Scholar End-of-Summer Survey

1. What gender are you?

2. Please rank on a scale of 1 to 5, where 1=”not very helpful” and 5=”very helpful”, how beneficial you feel the Young Scientist Program was to [the requested aspect of the program]:

1. **YSP helped my understanding of scientific research.**
2. **YSP helped the development of knowledge about the area being studied.**
3. **YSP helped me appreciate the benefits of a scientific research career.**
4. **YSP helped me understand the difficulties of entering a scientific research career.**

3. Based on your experience this year, would you encourage your friends or colleagues to participate in this program?

4. What one factor was most influential in your decision to apply to the Young Scientist Program? How did you find out about this summer program?

5. How many hours each week did you spend working in the lab?

6. Do you plan on entering any science fairs or other competitions using the work you completed this summer?

7. Will you be included as an author on a Publication? On an abstract for a scientific meeting

8. Were you included in a significant number of laboratory social functions?

9. On a scale of 1 to 5, where 1 is "not likely" and 5 is "very likely", how likely are you to attend college? Where will you apply?

10. Please rank, in order of preference, the three college majors you are most likely to pursue. Place a "1" next to the most likely, a "2" next to your second choice, and a "3" next to your third choice.

11. If you listed "other" [in answering the previous question], please specify here.

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12. Please indicate whether your participation in this summer research program influenced your thinking about the type of college major in which you are interested?

13. Do you plan to obtain a graduate or advanced degree?

14. Please rank on a scale of 1 to 5, where 1 is "strongly disagree" and 5 is "strongly agree", whether you agree or disagree with the following statements:

14A. "I spent a lot of time discussing my career plans or goals with my mentor.

14B. I was able to make significant contributions to the project

14C. I have a good understanding of how the work I did relates to the overall work of the laboratory.

14D. The work I did in the laboratory was exciting and challenging.

14E. I spent a significant amount of time discussing my project and the work of the laboratory with my mentor.

14F. I have a good understanding of the experimental procedures I used in my experiments.

14G. When given scientific articles to read, I was able to understand them.

14H. I am comfortable explaining my lab results to others.

15. Please indicate who provided most of your day-to-day instruction in the lab.

16. How useful were the spring tutoring sessions? Please rank on a scale of 1 to 5, where 1="not useful" and 5="very useful".

17. Did you continue to meet with your tutor during the summer?

18. How useful was the Research Boot Camp? Please rank on a scale of 1 to 5, where 1="not useful" and 5="very useful". Comment.

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19. Overall, how useful were the lunch seminars? Please rank on a scale of 1 to 5, where 1=”not useful” and 5=”very useful”. Comment.

20. On a scale of 1 to 5, where 1 is "poor" and 5 is "excellent", please rate each seminar speaker.

21. Using the list above, please comment on any seminars you thought were particularly useful or interesting and/or any seminars you thought were not useful or interesting.

22. How useful was the Genome Sequencing Center Tour? Please rank on a scale of 1 to 5, where 1=”not useful” and 5=”very useful”. Comment.

23. How useful was the Career Panel? Please rank on a scale of 1 to 5, where 1=”not useful” and 5=”very useful”. Comment.

24. How useful was the Journal Club? Please rank on a scale of 1 to 5, where 1=”not useful” and 5=”very useful”. Comment. What was your favorite topic?

25. What other hot topics in science would you like to see included in this discussion?

26. How useful was the Writing Course? Please rank on a scale of 1 to 5, where 1=”not useful” and 5=”very useful”. Comment.

27. Overall, did you enjoy your lab experience? Please rank on a scale of 1 to 5, where 1=”not useful” and 5=”very useful”. Comment.

28. Give an example of how science or your lab project relates to everyday life.

29A. What was your favorite part of the program?

29B. What was your least favorite part of the program?

30 Do you have any additional comments, suggestions or observations about the SF program that might be helpful to us?

Appendix 2: Post-Research Boot Camp Assessment.

1. Over the course of the Research Boot Camp did you feel comfortable asking questions of your fellow interns? Asking questions of the instructors?
2. Do you now know the names of all of your fellow interns?
3. Could you teach someone else how to pipet liquids? Would you use a P20, a P200, or a P1000 to pipet:
    a. 498 µL
    b. 50 µL
    c. 150 µL
    d. 5.5 µL
4. Can you explain what an antibiotic is and how it is used during bacterial transformation?
5. How would explain what sterile technique is?
6. Did you do the homework problems? Did you read the lab manual?
7. Did you refrain from asking any questions that you had during Bootcamp? If so, why?
8. Was the Research Bootcamp too long, too short, or just the right length?
9. Having just completed the Research Bootcamp, do you feel that this experience was helpful to you? How was/wasn't it useful?