U.S. GLOBE Student Research Symposium (SRS)
Project Review Form

Project: A Short Study of Contrails Over the Sonoran Desert

Review from Dr. Alison Post, University of Colorado Boulder

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Dr. Alison Post

Alison is the Program Manager and a Research Scientist at Earth Lab (located at the University of Colorado Boulder). She is an ecologist who studies how grasslands respond to climate change using field studies and digital photography from the PhenoCam Network. Her current project focuses on understanding what causes year-to-year differences in when grassland plants turn green in the spring or brown in the fall.

In her free time, Alison likes to hike, bake, play the flute/piccolo, and swing dance.

Research Question

- Objectives are clear and focused and answerable

I really liked that this question arose from something that you observed in your own environment.... because that's how science works! I might suggest making your question a little more specific, because then it's easier to answer. For example, you were interested in how humidity affects contrails, so you might ask "How does humidity influence the number of visible contrails in Phoenix, AZ?"

Research Methods

- **GLOBE protocols or data are used**
- Defines what is being observed or measured
- Well-designed research plan

I liked the pictures of contrails and clouds that you included- it's always great to have visual evidence. I know your time was limited, but if you do this project again, you might want to look for contrails at a similar time every day and for a standard amount of time (for example, look at the sky from 3-3:30 pm every day for a week). Then, you could relate the number of contrails you see to the current humidity, which you could get from the weather forecast or measure on your own. Having clear methods helps you parse out whether what you see is due to what you think (humidity) or some other unknown variable (for example, time of day that most planes fly, direction of the sky you look at, length of time looking at the sky, etc.).

Results

- Shows or summarizes observations through text, graphics, mathematics, statistics, stories and/or illustrations
- Interpretations are supported by data

Again, awesome pictures! Looks like you did have some sunny days and some cloudy days. Did the weather influence the number of contrails you saw each day? It would be neat to include a table or chart showing the number of contrails you saw each day to go along with the pictures.

Discussion/Conclusion

- Puts findings in context
- Described future plans or research possibilities
- Includes acknowledgement of scientific literature, data and/or local knowledge

I like your ideas for future studies when you have more time. I'll be curious to see what you find! Great explanation of how contrails are created- you clearly understand what you are studying and why it might be impacted by humidity.

Presentation

- Logical organization, visualizations are clear
- Demonstrates understanding of project science and local relevance to community

Good job clearly explaining your project, and the powerpoint was nicely organized! I liked that this study was on a topic that was relevant to your local community.

Specific areas in which the project excelled (select all that apply)

- [ ] Use, Analysis or Visualization of GLOBE Protocols/Data
- [x] Community Impact
- [ ] Research Process
- [ ] 21st Century Skills
- [x] Community Knowledge (stories, values, language, history)

Further comments or questions

Great job! I really enjoyed hearing about your project - I can't wait to see what you find if you continue this project next year!