OBJECTIVE 6
Topic Area: Education

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AS PER PROPOSAL: *Integrate education across all aspects of the CSCAP with focus on place-based education and outreach programs.*

SYNOPSIS: Our hypothesis is those place-based educational opportunities that incorporate inquiry and interactive (constructivist) learning strategies are effective for increasing student understanding and performance in traditional academic subjects (e.g., STEM) as well as fostering awareness of environmental issues.

RQ 1. Will the target audience of 9-12 high school students increase their content knowledge and understanding using the Grade Band 9-12 Educational "Climate Discovery" Modules developed by the project?

Hypothesis 1a: We hypothesis that students will increase their content knowledge and environmental awareness by using the Grade Band 9-12 Educational "Climate Discovery" Modules developed by the project.

Hypothesis 1b: Students' knowledge and awareness development of environmental issues surrounding sustainable agriculture including phenology, food production, watershed ecology, water footprints, and career awareness will be evaluated using pre and post testing and surveys.

RQ 2. Will teachers increase their content knowledge and awareness of environmental issues by participating in teacher training/classes developed by the project and/or using the Grade Band 9-12 Educational "Climate Discovery" Modules developed by the project?

Hypothesis 2a: We hypothesize that teachers will increase their content knowledge and awareness and will include environmental topics to a greater extent because of their participation in the teacher training/classes developed by the project and/or using the Grade Band 9-12 Educational "Climate Discovery" Modules developed by the project.

Hypothesis 2b: The quality and usefulness of teacher training and curriculum resources of teachers will be evaluated through evaluation forms, observations, and surveys or retrospective pre/posttests.

RQ 3. Will undergraduates/graduate students increase their content knowledge and awareness of environmental issues by participating in short courses developed by the project?

Hypothesis 3a: We hypothesize that undergraduates/graduate students will increase their content knowledge and awareness of environmental issues by participating in short courses developed by the project.

Hypothesis 3b: The quality and usefulness of the short courses will be evaluated through evaluation forms and surveys or retrospective pre/posttests.

RQ 4. Will undergraduates participating in research internships increase their content knowledge and awareness of environmental issues and awareness of careers in the field?

Hypothesis 4a: We hypothesize that undergraduates participating in research internships will increase their content knowledge and awareness of environmental issues and awareness of careers in the field.

Hypothesis 4b: The quality and usefulness of undergraduate research internships will be evaluated through evaluation forms, observations, and surveys.

RQ 5. How successful has the implementation of the overall project been in meeting its targeted goals of educational outreach?

Hypothesis 5a: We hypothesize that the project will be successful in meeting its targeted goals.

Hypothesis 5b: The success of the implementation will be evaluated by analyzing the numbers and types of participants, overall changes in environmental knowledge and awareness as determined by the survey results, and review of implemented activities and milestones.