Teacher’s Notes: Science Careers Research Project

Refer to the student project brochure: A Science Career? Me?

Why do this project?

❖ Meeting standards and graduating is great, but most students need more than that to prepare for employment.
❖ There are lots of opportunities in Hawai‘i for students to work in science-related careers, with or without college degrees.
❖ There are science-related career choices for all DOE Career Pathways which many students may find interesting, even those less interested in science - there’s also more jobs with better pay in science-related careers.
❖ Native Hawaiian and non-Hawaiian students need to become Hawaii’s next generation of scientists (and responsible citizens) in order for science to be done pono (appropriately) in Hawai‘i.

How do I teach this? The notes below can be used in 3 ways to help students prepare for science-related careers in your class:

✓ the “Easy Way” in 2-3 lessons give students a quick idea of what careers are out there for them ... OR...
✓ the “Better Way” in 2-3 weeks give them a good look at career options in science ...OR...
✓ the “Best Way” over 1 or 2 terms take an in-depth approach to enable students to take ownership for their career decisions and begin taking steps to reach a science career while in high school

What do I do first?

1. Book computer &/or library time for the class to do research, if possible ... if not, just use the resources in this curriculum (see the Hawai‘i Science Career Cards included with the binder).
2. Introduce the Science Career Projects (Research & Practical) using the brochure *A Science Career? Me?!* and encourage them to seriously consider science-related careers for their future (a class set of brochures is included & extras can be copied & folded). You may want to bring in guest speakers from science fields or college to help you introduce this project (see Unit 2 Menu for good speakers to look for &/or refer to Unit 1 ‘ohana surveys for ideas).

3. Discuss **STEP 1** of the project brochure with students to help them access career assessments they can do – or have already done – in a career course or Special Education (possibly with their transition teacher/counselor), &/or online at [www.careerkokua.com](http://www.careerkokua.com) (click on the ‘Career Assessment’ tab near the top and look for ‘free’ surveys to take … if sign up is required just type in the school’s zip code … it’s very easy and free to all Hawai’i residents). Individually or as a class, students can list all the science-related careers there are. To save time you can use the *Quick Career Assessment Survey*, and the *Science Disciplines List* in this unit. To extend discussion, go over the *Career Assessment “Talk Story”* handout with students. Be sure to also view the DVD included in this curriculum: *Mea ‘Imi Na’auao O Hawai’i (Scientists in Hawai’i)*.

4. Do **STEP 2** as a class in jigsaw groups so students learn about all the science fields in the *Hawai’i Science Career Cards*, or schedule students time to individually search this resource for the disciplines they will research in depth. Discuss the criteria of “in depth” research listed on the *Science Career Research Rubric* handout &/or show the *Example Science Career Research Project* (this is an essay – alternate research formats include video, Powerpoint™, audio or poster). You might allow very shy students to conduct their *Adult Interview* online by contacting a university for information. Also, consider letting students plan a ho’ike to
present their research projects to the class, other classes, younger teens, invited family members &/or other adults in the community.

5. Discuss **STEP 3** before students do the research for this project, to give them more time to consider interesting Practice Project ideas. Once the Research Project is complete, give students the *Science Career Practice Project* handouts (there are 3: Practice Project Proposal Example; Experiment Proposals; final Lab Report). Also, show and discuss the *Example Science Career Practice Project & Rubric*. There are notes for another example - a scientific inquiry related to local waters - in the Unit 9 Appendix. Challenges for teachers in conducting inquiry projects can be lessened if proposals are limited to an overall topic such as soil, water, plants, machines, chemistry, etc.

6. Discuss **STEP 4** with the class by referring to the *Lining Up a Science Career* and *Example Timeline of Science Career Steps* handouts. Also, you, your students and their 'ohana (family) can scan the opportunities listed in Section III of the curriculum that will make a difference for them. These include:

- after school & weekend programs in your area
- tutoring and mentoring options in your community
- summer programs on your island
- advance credit courses to take while in high school
- college tours, peer support groups and transition programs for 1st year
- job shadowing & career-related volunteer activities
- internships & scholarships to apply for

Note: many of these resources can send guest speakers (role models, college staff or students, program staff, etc.) to your classes.
Finally, students can look over the *Create a Resumé & Cover Letter* handouts to prepare a real application (or practice) for a science-related job now.

7. Include **STEP 5** in the timeline assignment above & follow-up with students after projects are done by helping them connect with a mentor and asking how their progress is going. Let students know that having a mentor greatly increases their chances for success. Also, try to connect with their ‘ohana by having students plan, advertise, and host a Science Careers event to attract mentors & to showcase their projects.