What is the Mālama ‘Āina Marine Debris Research Project?
Nā Pua No‘eau, the Center for Gifted and Talented Native Hawaiian Children, in partnership with Kua‘ana Native Hawaiian Student Development Services is presenting a new pilot program “MAMDRP (Mālama ‘Āina Marine Debris Research Project) Pathways”. There have been recent concern of a huge influx of marine debris arriving on the south shores of O‘ahu, traveling in the ocean from Japan, the results of the tsunami occurring there earlier this year. The Mālama ‘Āina Marine Debris Research Project (MAMDRP) is designed to answer the question “Where does marine debris drift to from specific sites on O‘ahu?

Who will be involved?
MAMDRP is designed by Native Hawaiian University of Hawai‘i at Mānoa upper division undergraduate and graduate STEM students, who along with other UH students will mentor a cohort of 20 Native Hawaiian middle and high school students to guide them through a process to determine how ocean currents affect the flow of marine debris to specific sites on O‘ahu.

What skills will students learn?
All activities will be designed to be hands-on with students learning to read ocean currents from marine maps and traditional Hawaiian methods of way finding, mapping incoming debris at various pre-determined locations of O‘ahu, analyzing data collection of marine debris, conducting literature searches on marine debris, and researching the Hawaiian cultural significance of specific sites. They will also assist in organizing and writing a final report on their research. MAMDRP also hopes to have the middle and high school students attend the TCBES Research Symposium at the University of Hawai‘i at Hilo campus, along with the University of Hawai‘i at Mānoa student mentors, to present their research, and ultimately publish their findings in an appropriate journal.

Integration of Hawaiian culture, knowledge and practices
A Native Hawaiian component will be integrated in all of the classes to provide students with Hawaiian role models, culture, values, history, protocol, and language. In addition to enrichment in academic areas, most students will be in a “living classroom” and experience cultural activities and personal development. Students will be able to share their experiences with their family and the community at the Hō‘ike (closing activity) scheduled at the end of the program.

Involving the ‘ohana
Involvement will begin with an orientation session for students and their parents to learn about pathways project activities. Parents may also attend the Hō‘ike at the program closing to experience their child’s advancement in a scientific investigation process.

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What is MAMDRP Pathways?
The goal of Na Pua No`eau is to raise the educational and career aspirations of Hawaiian students and their families. The MAMDRP Pathways program is designed to provide a continuum of programs that serve as a pathway to higher education. The programs are designed to: promote access to educational opportunities, provide educational and career experiences in a variety of science professions, strengthen students’ connection to their Hawaiian culture, and aspire students to higher educational and career goals.

Who is eligible to apply to participate in MAMDRP Pathways?
Students entering grades 7-12 in 2012 school year can apply to participate in the MAMDRP Pathways program.

Is enrollment limited for participation in MAMDRP Pathways?
Yes. Only 20 students will be selected to participate in MAMDRP Pathways.

Is there a time commitment, as a participant in the MAMDRP Pathways?
Yes. MAMDRP Pathways is a 9 month program. We are asking all selected students to commit their participation in the program and not miss no more than 4 scheduled gatherings.

What is the MAMDRP Pathways mentorship component of the program?
Students will be guided by Native Hawaiian UH Mānoa STEM students throughout the year, which will conclude with public presentations of their research project. Activities will include one to three monthly weekends of field work both in the community and on the university campus.

How can parents and/or guardians get involved with MAMDRP Pathways?
The involvement of parents and/or guardians begins with an Orientation session. Throughout the year, parents and/or guardians are invited to attend the students’ public presentations and field research excursions, assist with collecting resources for research activities and preparation of final project.

What is the cost to attend MAMDRP Pathways?
There is no tuition fee to participate in this program.

How do I apply?
• Complete and submit the enclosed Application Form by Friday, August 17
• You will be notified of your status the week of: August 20
• If selected, you will receive an invitation letter to attend. Note: If you do not receive either your letter of status or letter of invitation by August 24, please contact Kinohi Gomes at the Nā Pua No‘eau O‘ahu office at 956-0939.
2012-2013 Calendar

Saturday, September 1, 2012
Mandatory parent and student orientation

Saturday, September 8, 2012
Learn oli with Kainani Kahaunaele (Nā Hōkū Hanohano multi-award winner), icebreakers & begin working on MAMDRP “floaters”.

Saturday, September 22, 2012
Huaka‘i to Hōkūle‘a (tentative) & workshop on ‘ohe kāpala making (Hawaiian bamboo stamp).

Saturday, October 6, 2012
Continue working on MAMDRP “floaters” & literature review.

Saturday, October 20, 2012
MAMDRP “floaters” preparation, present literature review, group games & mo‘olelo/beach day.

Saturday, November 3, 2012
Makawalu (Hawaiian ways of learning) & scientific method (alternative ways of learning).

Saturday, November 17, 2012
GIS mapping & Hawaiian star compass/mapping.

Saturday, December 1, 2012
Huaka‘i to the windward side of O‘ahu to release MAMDRP “floaters” & beach day.*
(*‘Ohana are invited to come and observe.)

Saturday, December 18, 2012
Huaka‘i to the leeward side of O‘ahu to release MAMDRP “floaters” & beach day.*
(*‘Ohana are invited to come and observe.)

Saturday, January 12, 2013
Data analysis & collection workshop & huaka‘i to NOAA (tentative).

Saturday, January 26, 2013
Data collection & huaka‘i to Tsunami Center (tentative).

Saturday, February 2, 2013
Data collection & huaka‘i ma uka.

Saturday, March 2, 2013
Data collection, scientific & report writing.

Saturday-Sunday, March 16-17, 2013 (Sleepover)
Presentation preparation & rehearsal for TCBES conference.

Saturday, April 6, 2013
Final presentation rehearsal for TCBES conference.

April TBA, 2013
TCBES conference in Hilo.

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Saturday, May 4, 2013
Hō‘ike for NPN ‘ohana.
Application Form

- Take the time to think about your reason(s) for applying, then
- Express your reason(s) and ideas on this form as best and thorough as you can.
  (Attach sheets of paper if more space is needed. Please print in your own handwriting.)
- Complete all questions and meet the submission date.

Your application will be reviewed by a 3-member committee who will recommend students for participation. Your answers allow us to know who you are. What you tell us will be taken to heart. You are telling us about what you are interested in and what you can do well. Every student applying will be doing the same. Students who seem to be most interested in their choice, clear about their reasons for participating, are ready to learn, and sincere about participating will be invited to attend.

Mail, fax, or deliver your completed application form by Friday, August 17 to:
Nā Pua No‘eau
2600 Campus Road QLCSS 406
Honolulu, HI 96822
Attention: Kinohi Gomes
FAX (808) 956-9240

O Female   O Male

Name:________________________________________ Date of Birth:________________________

Address:____________________________________ Phone:______________________________

City:________________________________________ State:________________ Zip:_______________

School:________________________________________________ Current Grade:_____

O I can hike in rough terrain for ____miles with a backpack.
O I am very interested in poetry, story writing and story telling.
O I can open-ocean swim ____yds.
O I know I can pass a swim test.
O I can work well in a group.
O I have at least two years of hula or oli experience.
O I have been involved in the dramatic arts.
O I am of Hawaiian ancestry.
O I want to learn what the kumu and the place of learning have to offer.
O I can speak Hawaiian.

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PART II: STUDENT QUESTIONNAIRE

(To be completed by the student, printed in own handwriting)

(GETTING TO KNOW YOU)

1. **We want to know your interests.** *In all the boxes below, rank each word or topic in the order of your interest: 1 = high interest  2 = some interest  3 = little interest  0 = no interest*

   *Place a number on each line, in each box. Use 1, 2, or 3 only once in each box. 0 may be used at any time if you have no interest in the topic.*

   **For example -** 'īlio, my dog, would mark her survey like this:

   | 1 | bones | (‘īlio likes to chew bones best) |
   | 2 | play  | (‘īlio also likes to play)      |
   | 3 | tv     | (‘īlio doesn’t like to watch TV) |

   | 3 | bark  | (‘īlio hardly barks at cats)   |
   | 1 | cars  | (‘īlio likes to chase cars best) |
   | 2 | guard | (‘īlio likes to guard our house) |

   ____ taking charge  | ____ aloha ‘aina  | ____ conservation  | ____ reading maps  | ____ stream life  |
   ____ environment  | ____ history  | ____ science  | ____ creating  | ____ research  |
   ____ water rights  | ____ restoration  | ____ computers  | ____ growing things  | ____ designing  |
   ____ mathematics  | ____ writing  | ____ native forests  | ____ engineering  | ____ land management  |
   ____ hiking  | ____ speaking  | ____ nature  | ____ drawing  | ____ chemistry  |
   ____ aquaculture  | ____ performing  | ____ Hawaiian issues  | ____ experimenting  | ____ designing  |

2. **We want to know what you can do best.** *Circle five things from items listed below that you can do best.*

   - Write
   - Draw
   - Raise (grow) plants
   - Raise (or catch) fish
   - Make people laugh
   - Tell stories
   - Design things
   - Memorize easily
   - Work with hand tools
   - Camping

   - Notice patterns
   - Listen to others (effectively)
   - Read a map and compass
   - Play computer games
   - Maintain an aquarium
   - Use materials wisely
   - Work well with others
   - Communicate effectively
   - Observation skills
   - Explore

   - Care for the ‘aina (land)
   - Know uses of plants
   - Achieve group goals
   - Hike
   - Surf or boogie board
   - Protecting resources
   - Take pictures
   - Identify plants
   - Construct models
   - Math calculations

3. **Name other things, if not listed above, that you can do best**

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4. Are there any other sports, programs or community events you will be participating in this upcoming school year? If so, please list them, and how do you plan on balancing that with attending MAMDRP Pathways.

5. Why do you want to participate in MAMDRP Pathways?

6. There is no correct answer. We just want to know how you might solve the following problem. Use more paper if necessary.

What effects does floating marine debris (‘ōpala) have on our ocean environment?

7. List 2-3 solutions you would recommend for the floating marine debris problem in your Hawai‘i community?

List, draw, discuss, and/or describe:

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