



Hawai'i Wildlife Fund: Marine Debris Keiki Education and Outreach (MDKEO) Program

Grade levels: K-5

Mahalo for your interest in this marine debris prevention curriculum! Funding to create and implement this program at 20 elementary schools on Hawai'i Island was provided by a 2014 grant award from the NOAA Marine Debris Program. More info at <https://marinedebris.noaa.gov/>.

Lesson 1 - What is Marine Debris?

Time: 60 minutes

Summary Students are introduced to the subject of marine debris, its composition, its impact on marine wildlife, and the land-to-ocean connection in an informative talk story session utilizing visual aids and activities.

Objectives Define "marine debris" · Discuss ways marine debris enters the ocean by learning the connection between land and sea (*ahupua'a*) · Understand the difference between natural debris (biodegradable) and manmade (photodegradable) debris · Define single use plastic and its' association with marine debris · Predict and identify threats to marine wildlife and humans posed by marine debris

Lesson 1 Links

[Lesson Plan \[pdf\]](#)

[Follow Along Handout \[pdf\]](#)

[Presentation \[pdf\]](#)

Lesson 2 - Sorting Marine Debris

Time: 60 minutes (grade K-1) or 90 minutes (2-5)

Summary Students will have a short review from Lesson 1 focusing on impacts of marine debris. After the review, students will participate in a hands-on activity where they will be asked to utilize parts of the scientific method including, observing, hypothesizing, experimenting (classifying), and conclusion forming. Depending on grade level and ability, this may include graphing/ charting, and communicating results. Students will be introduced to the science of understanding and solving problems related to marine debris.

Objectives Utilize the Scientific Method and emphasize the cooperation/teamwork that is needed in sciences · Predict the effects that different types of debris will have on marine animals · Categorize different types of marine debris · Learn the difference between biodegradation and photodegradation as related to plastic marine debris · Create a group poster with information gathered from the classification exercise (grades 4-5 may produce bar graphs or pie charts)

Lesson 2 Links [Lesson Plan \[pdf\]](#) [Sorting Activity \[pdf\]](#) [Presentation \[pdf\]](#)

[Lesson 3 - Solutions at Work](#)

Time: 60 minutes or 120 min (extended)

Summary Students will participate in a comprehensive review of repeated concepts and vocabulary words. They will explore and discuss different solutions to and prevention for the marine debris problem. Students will also brainstorm new creative solutions through art. Students will be asked to make a commitment to decreasing their plastic consumption by signing a Plastics Pledge.

Objectives Review current solutions to the marine debris problem · Brainstorm new solutions to the marine debris problem utilizing art

Lesson 3 Links [Lesson Plan \[pdf\]](#) [Plastics Pledge \[pdf\]](#) [Presentation \[pdf\]](#)
 [Bingo Handout \[pdf\]](#) [Bingo Teacher's Key \[pdf\]](#) [Bingo Slideshow \[pdf\]](#)

[Other Available Resources](#)

See each of the following links for teacher resources that may be used before, during, and after the three MDKEO Lessons described above:

[Vocabulary \[pdf\]](#)

[Keiki Assessment \(pre / post\) \[pdf\]](#)

[Beach Cleanup Datasheet \[pdf\]](#)

[Campus Cleanup Datasheet \[pdf\]](#)

[O-H-E-C-K Worksheet \[pdf\]](#)

[Teacher Evaluation \[pdf\]](#)

[Other Educational Resources \[pdf\]](#)

This curriculum was created collaboratively by Hawai'i Wildlife Fund (HWF) mentors: Kallie Barnes, Stacey Breining, Catherine Spina; program director: Megan Lamson; and the support of 52 elementary-school teachers on Hawai'i Island. This version was updated in 2020 – please contact us at the email address below with any suggestions to improve it further.

Have any questions? Please don't hesitate to contact us at education.HWF@gmail.com or check out our website for more resources / opportunities at <http://wildhawaii.org/>.