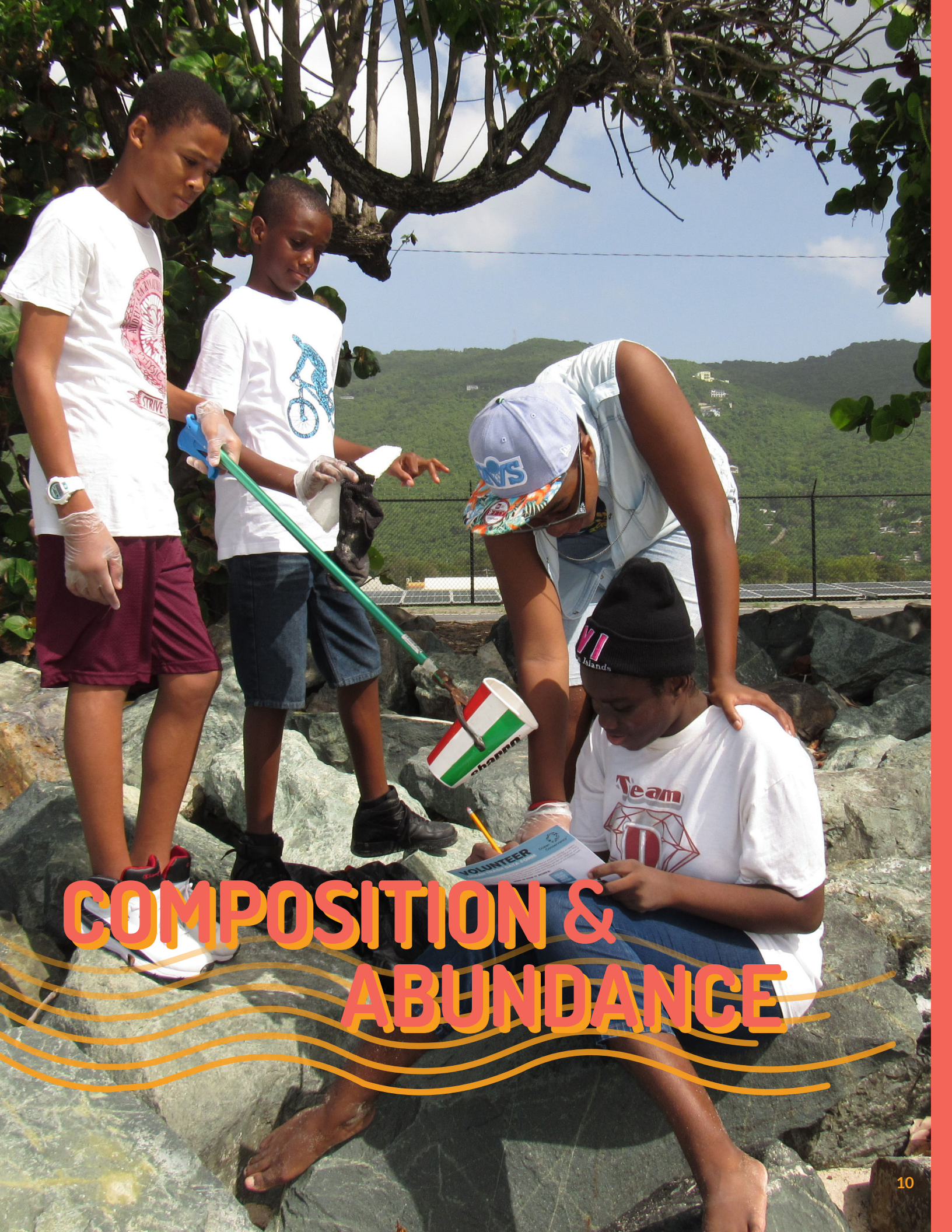


KEEPING OUR COASTLINES CLEAN

A U.S. Virgin Islands
Marine Debris Curriculum





COMPOSITION & ABUNDANCE

Links to the Next Generation Science Standards, Quick Reference Guide

Curricula by Sub-Section		Middle School						High School					Sci & Engineering Practices
		ESS 3-1	ESS 3-2	ESS 3-3	ESS 3-4	ETS 1-1	ETS 1-2	ESS 3-1	ESS 3-3	ESS 3-4	ETS 1-1	ETS 1-2	
Composition & Abundance	Beach Box Exploration			✓									✓
	Investigating Oceanic Garbage Patches			✓					✓				✓
	A Degrading Experience			✓					✓				✓
Sources & Transportation	Watershed Walk	✓		✓				✓					✓
	Sources of Microplastics: Microbeads			✓									✓
Impacts	Entanglement Problems			✓	✓				✓	✓			✓
	Natural Disasters and Marine Debris		✓	✓	✓			✓					✓
Solutions	Linked Beach-Ghut Clean Ups	✓		✓					✓				✓
	Mitigating Microplastics			✓					✓				✓
	Upcycling Plastic Bags					✓	✓				✓	✓	
	Making Connections Through Art			✓					✓				✓

SPOT LIGHT

Common Marine Debris Items in the U.S. Virgin Islands

Recently, former University of the Virgin Islands Masters of Marine & Environmental Science student, Zola Roper, has examined more than 30 years of marine debris data collected by the U.S. Virgin Islands community during beach cleanup events associated with Virgin Islands Marine Advisory Service Coastweek events, which happen every fall. Data are for beaches on the islands of St. Thomas, St. John, and St. Croix, so they provide a good picture of marine debris trends across the territory.

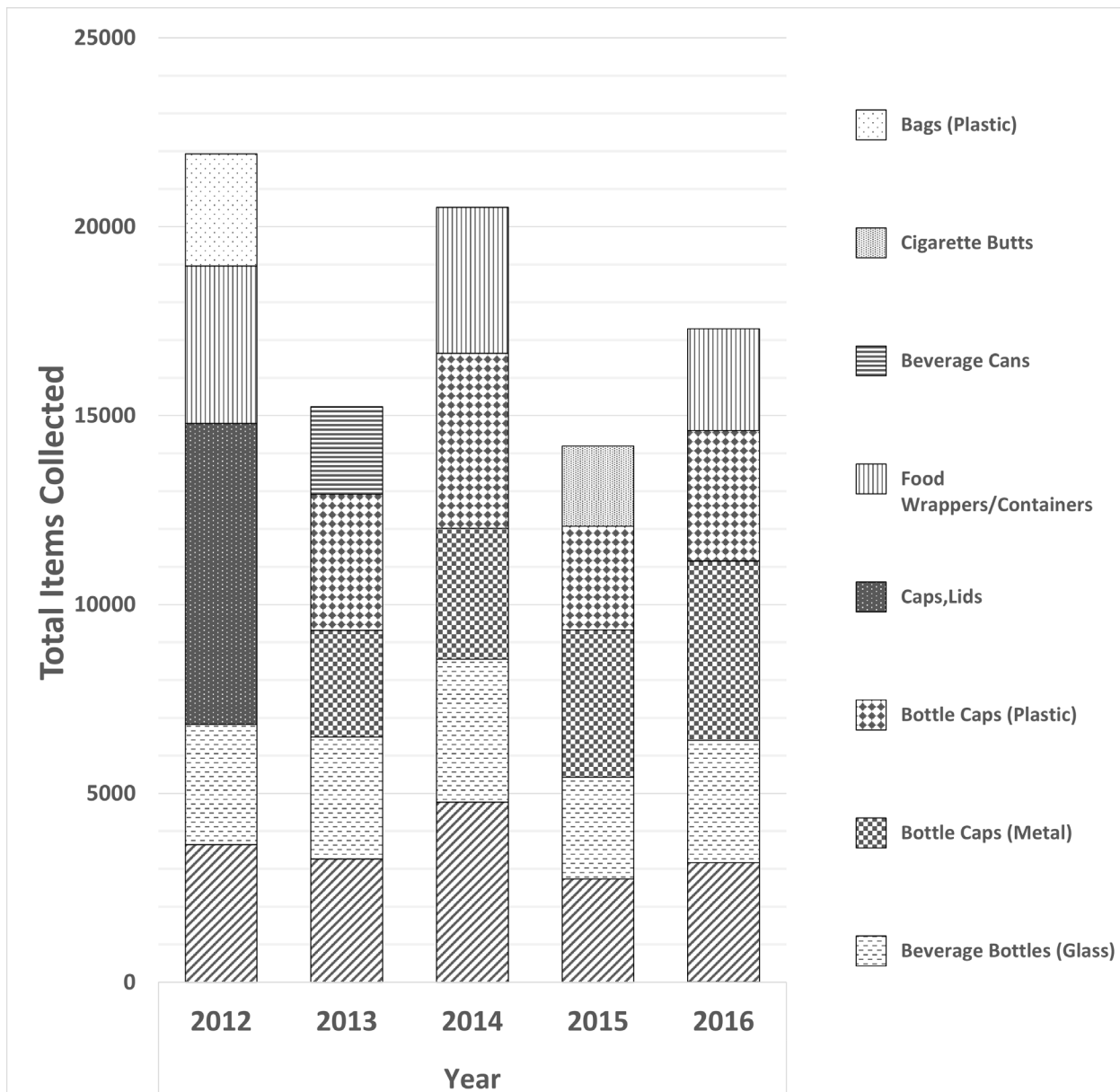
What are the most abundant marine debris items we find along the territory's beaches? Well, when you look at the data from 2012-2016 (the years for which we have the most recent data), you find that the most abundant marine debris items are pretty much the same, year after year: beverage bottles (glass or plastic), bottle caps (metal or plastic) and food wrappers (See Figure 1). The bad news? We find A LOT of these items - thousands of them in any given year. The good news? Most marine debris globally, comes from land-based sources and the data for the U.S. Virgin Islands certainly supports that trend. That means we have a shot at reducing marine debris in the territory if we consume fewer single-use items (like plastic beverage bottles), and make sure that the waste we create gets disposed of properly in waste bins, rather than left on the beach, thrown out a car window, or tossed on the ground. This includes properly disposing of waste at important public cultural events like Carnival and the St. Croix St. Patrick's Day Parade. We can make a difference, if we all do our part!



Metal bottle caps, like this one pictured at Magen's Bay on St. Thomas, are a commonly-found marine debris item on U.S. Virgin Islands beaches (Photo credit: Kristin Wilson Grimes).



Important cultural events like Carnival on all three islands and the St. Patrick's Day Parade on St. Croix (pictured), have the potential to produce marine debris, if trash items are not properly disposed of in waste bins (Photo credit: Kristin Wilson Grimes).



The total number of marine debris items collected from U.S. Virgin Islands beaches for the years 2012-2016. Only the top 5 items (by number) found in each year are included here, for simplicity (Figure courtesy of Zola Roper, data from the International Coastal Cleanups for the U.S. Virgin Islands).