



## Marine Debris Sorting Race

### *Read to students before activity:*

- **Ask:** Has anyone ever heard of marine debris? Do you know what it is?
  - Marine debris: Marine debris is any man-made, solid material that enters waterways directly through littering or indirectly via rivers, streams and storm drains.
- **Read:** We protect ocean dwellers and ourselves by keeping the ocean clean. We produce trash as a part of everyday life. Trash can travel through storm drains, streams, and rivers and end up in your community, as well as in the ocean. When traveling trash reaches the ocean, it is called marine debris, and marine debris is everyone's problem. Marine debris affects everything from the tiniest coral polyps to giant blue whales. Remember that the land and the sea, no matter where you are, are connected.
  - About 80% of marine debris starts on land.
- **Ask:** What items would you consider marine debris?
- **Ask:** What do you think the most common marine debris items are?
  - Answer: cigarette butts, food wrappers, plastic bottles, straws, plastic bags, paper bags, cans, etc.
- **Read:** It takes long amounts of time for debris to break down, or decompose. You will be split into two teams and each given a set of marine debris items and the time it takes for them to break down. Each group will race to see who can correctly match the trash items with the time it takes them to break down. All cards must be used. \*\* Note: Review the times listed (weeks, decades and centuries) to make sure that all students understand the terms. \*\*

### *Read to students after activity:*

- **Review answer key. Go over student matches.**
- **Ask:** How could marine debris cause problems in the ocean?
  - Possible answers:
    - Animals can become entangled
    - Animals can mistake it for food
    - Debris can damage shipping vessels
    - Debris on beaches can hurt people
    - When beaches are littered with debris, people don't want to visit them.
- **Ask:** What can you do to reduce marine debris?
  - Possible answers:
    - Make sure to dispose of trash or recycle
    - Pick up trash you see on the beach
    - Use reusable shopping bags and water bottles
    - Cut 6-pack rings before throwing them away
    - Organize or join cleanups in your community
    - Tell other people! (your parents, friends, community)

**Facts to consider when talking to students:**

- **Watershed:** an area of land where all the water that falls in it and drains off of it goes into the same place. We are all connected to the ocean through our local watershed, no matter where we live.
  - Trash travels through watersheds. It is carried by wind or rain to storm drains
  - Storm drains carry trash to waterways like streams and rivers
  - Rivers then transport the trash to the ocean
  - Once the trash reaches the ocean, winds and currents can move the trash around
- Plastic and Styrofoam never fully break down. They just break down into smaller pieces, which can still be harmful to animals.

**Answer Key:**

TYPE OF DEBRIS	DECOMPOSITION RATE
Paper Towel	2-4 weeks
Newspaper	6 weeks
Apple Core	2 months
Cardboard Box	2 months
Cotton Shirt	2-5 months
Waxed Carton	3 months
Plywood	1-3 years
Wool Sock	1-5 years
Plastic Grocery Bag	10-20 years*
Foam Cup	50 years*
Tin Can	50 years
Aluminum Cans	200 years
Disposable Diaper	450 years*
Plastic Beverage Bottle	450 years*
Fishing Line	600 years*

*\*Items are made from a type of plastic. Although no one has lived for 450 or 600 years, many scientists believe plastics never entirely go away. These decomposition rates are estimates for the time it takes for these items to become microscopic and no longer be visible. Sources: EPA, Woods Hole Sea Grant*

[Source: Talking Trash and Taking Action- NOAA Marine Debris Program and Ocean Conservancy](https://sanctuaries.noaa.gov/education)

**Weeks**

Months

# Years

(1-10)

# Decades

(10-99 years)

# Centuries

(100-999 years)



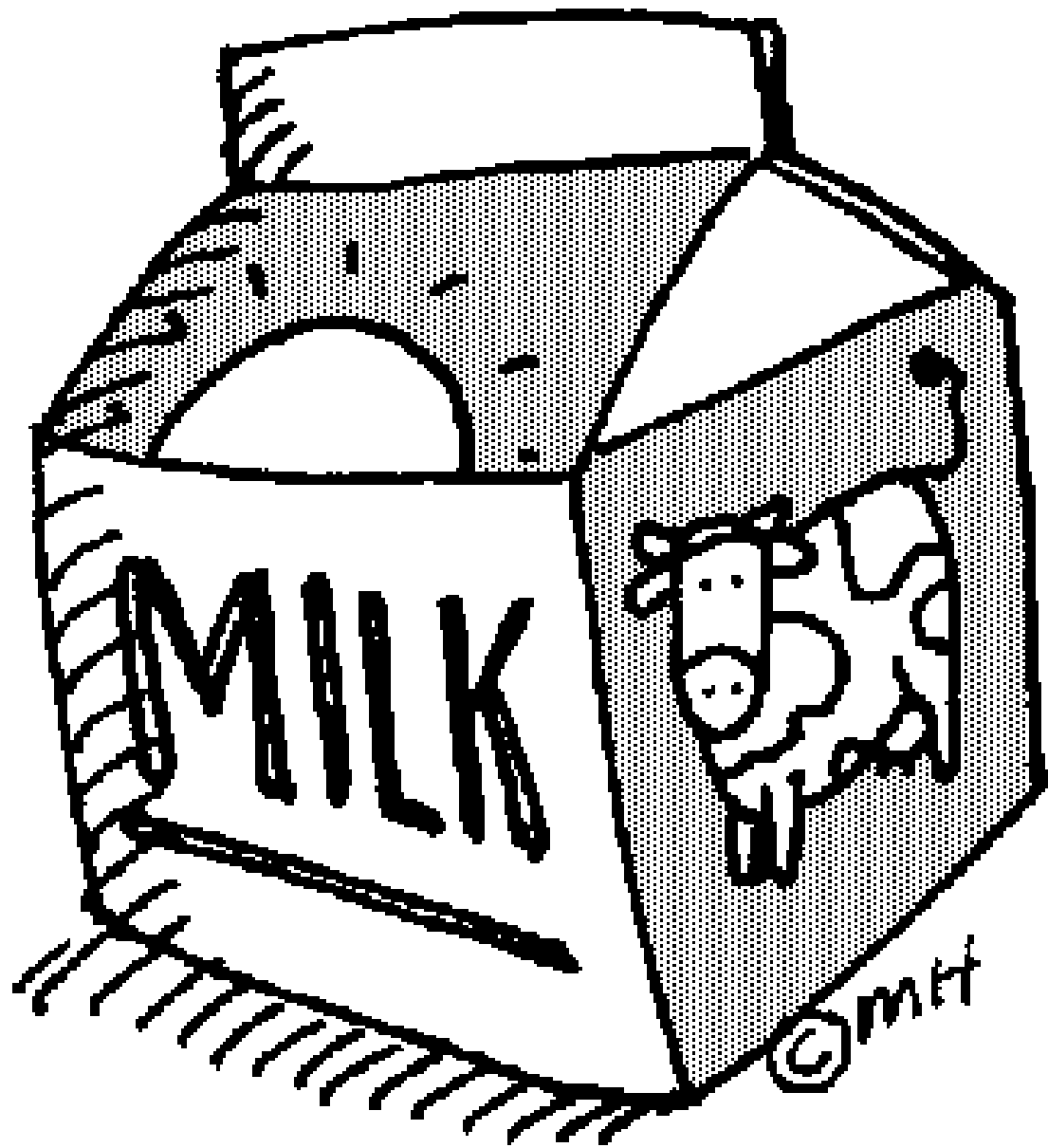








































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