



Trash Timeline

OBJECTIVE:

In a small group setting, participants will be able to determine how long it takes different items to disintegrate in water.

GRADE LEVEL: all levels (youth – adult)

TIME: 10 -15 minutes

MATERIALS:

- Marine Debris Timeline poster
- Paper towel
- Newspaper
- Wax juice or milk carton
- Six-pack ring
- Cigarette butts (in a zip loc bag)
- Aluminum soda can
- Plastic water bottle
- Styrofoam cup or bait box
- fishing line (in a zip loc bag)

BACKGROUND:

Although many communities have recycling and community litter collection campaigns like those of Keep America Beautiful and their affiliates, litter continues to be a problem in many neighborhoods, parks, cities and around the world. Sometimes litter ends up in the environment accidentally – it may blow out of a trash can, out of a truck or car.

A lack of awareness is also part of the equation. Many people do not realize that litter tossed into the street gutters eventually ends up in the creek or river. Since all rivers flow to a lake or the ocean, some of this litter ends up in our aquatic habitats. This is especially true for cigarette butts. The Texas Department of Transportation states, *"Each year more than 1 billion pieces of litter will accumulate on Texas highways. Of those, 13 percent are cigarette butts. That means 130 million butts will be tossed out in Texas alone this year."* The biggest myth is that cigarette filters are biodegradable. However, cigarette butts are made of plastic (not cotton) and contain many toxins that can be harmful to aquatic habitats and wildlife.

Keep America Beautiful, Inc. found that people litter for one of three reasons. They feel it's acceptable to litter because:

- they feel no sense of ownership for the property;
- they think someone else will clean up after them;
- litter has already accumulated in the area

We can all make a difference to help prevent litter, teach others about litter and recycling options, and by picking up litter when we see it.

KEY TERMS:

Disintegrate: to break down or decompose into small particles

ACTIVITY PROCEDURE / SCRIPT:

Explain to the participants, *"We are going to Test Your Trash IQ!"* Explain that on the table is an imaginary timeline. On the participant's left side is the shortest time, for example 1 week and the other end of the table is 600 years (or infinity).

Define or ask participants to define disintegrate. Hand a litter item to each of the participants and ask them guess how long it take the item to **disintegrate** and place it on the imaginary timeline.

After all items are placed, review the order of items and ask if any re-arranging needs to be done (rearrange if necessary). Now ask the participants, *"Are you ready to check your Trash IQ? Or do we need to re-arrange some of the items?"*

Either read the answers shown below or show the marine debris timeline and compare it with the table timeline, ask the participants, *"Do we have the items in the right order?"* Rearrange the items if needed.

Remind them about the importance of picking up litter even if it's not theirs to protect the habitat and the wildlife.

Answers:

Item	Time to disintegrate
Paper towel	2-4 weeks
Newspaper	6 weeks
Wax juice carton	3 months
Cigarette butts (in a zip loc bag)	10 years
Styrofoam cup	50 years
Aluminum soda can	200 years
Six-pack ring	400 years
Plastic bottle	450 years
fishing line (in a zip loc bag)	600 years

RESOURCES:

Don't Mess with Texas, <http://www.dontmesswithtexas.org/>

Leave No Trace, <https://lnt.org/>

Keep America Beautiful – cigarette litter,
<https://kab.org/programs/cigarette-litter/resources/>

Texas General Land Office-Adopt-A-Beach Program,
<http://www.glo.texas.gov/adopt-a-beach/>

Texas General Land Office – Marine Debris Poster,
<https://texasadoptabeach.org/pdf/marine-debris-poster.pdf>

