Top Ten Littered Items Matching Game

Method

Educators will have an interactive game for use at outdoor educational events such as fairs, festivals, and other tabling outreach events. The game shows viewers how many single use items are found littering local outdoor areas including parks, beaches, bays, and trails. These items can often be replaced with reusable items or refused all together.

Materials

- Puzzle pieces to match together - the clue on one side and the photo of the littered item on the other side.
- Answer key included below, with exact figures here:

#1. Cigarettes/Cigarette Filters	7,535,411	36.96%
#2. Food Wrappers/Containers	2,193,018	10.76%
#3. Caps/Lids	1,861,923	9.13%
#4. Bags (paper and plastic)	1,572,241	7.71%
#5. Cups/Plates/Utensils	1,113,129	5.46%
#6. Straws/Stirrers	863,481	4.24%
#7. Glass Beverage Bottles	679,709	3.33%
#8. Plastic Beverage Bottles	554,825	2.72%
#9. Beverage Cans	496,117	2.43%
#10. Construction Material	367,729	1.80%

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Information provided by the California Coastal Commission and the annual California Coastal Cleanup Day event: https://www.coastal.ca.gov/publiced/ccd/history.html

Background:

Litter is not only unsightly, but also poses a public health threat and negatively impacts wildlife. Animals are harmed and killed each year from accidental ingestion and entanglement in litter polluting their habitats. Plastics are particularly harmful as they never biodegrade, rather photo-

degrade into smaller pieces that persist in the environment and throughout the food chain. Millions of pounds of litter is cleaned by numerous non profit and governmental organizations throughout the state, costing millions of dollars each year.

Procedure:

1. Place puzzle pieces scattered around an area of the table. There will be clues and corresponding photos of the top ten littered items found in the state of California that fit together. Attendees can read the clue and look for a photo they think matches the description of the littered item. In addition to the top ten items, there will be additional photos of other littered items that are not in the top ten pictured to make the game more challenging. There will be more photos than clues, as the object of the game is to match the clue to the correct photo of a littered item in the correct order. **Answer key is included below.**
2. Ask individuals approaching the table to look over the puzzle pieces and try to pair the clue with the correct image, which are numbered in order of the most commonly littered items.
3. As attendees play the game, you can inform them of litter facts and ways to prevent litter, such as:
   a. Litter can be reduced by reducing how many single use items are used daily by Californians. Note how the average Californian sends 6.7 LBS of trash per day per person to the landfill, adding up to 4,445 pounds per year, which equals the weight of a subcompact car. Helpful questions include:
   b. How do you think these items end up in local outdoor areas and waterways?
   c. How can we reduce how much litter is in the environment as well as what ends up in overcrowded landfills?
      i. Recycling
      ii. Reusing
      iii. Composting
4. Let interested individuals know how they can get involved:
   a. Volunteer for a local non-profit
   b. Set up more recycling or composting at their home or office
   c. Pledge to personally commit to reducing their waste

Answer Key:

1. **Clue:** Millions of these were found littering local beaches, bays, parks, and streets. These contain hazardous chemicals including benzene, arsenic and formaldehyde that leach into local waterways when littered on the ground. **Answer: Cigarette butts**
2. **Clue:** These single use items are easy for food on the go yet hard to recycle, meaning most end up in landfills. **Answer: Food wrappers/containers**
3. **Clue:** Billions of these items are opened every day in the US, and unfortunately many end up in our oceans and on our beaches instead of staying attached to the bottle. Marine mammals, birds and fish often mistake these small, often plastic items for food and eat them, leading to injury and death. **Answer: caps/lids**

4. **Clue:** These items hurt animals at all levels of the food chain. They are often accidentally eaten by ocean animals or cause animals to get tangled up or trapped. They are difficult to recycle and often clog recycling machines. **Answer: Bags (Plastic and Paper)**

5. **Clue:** Americans use billions of these commonly littered items each year. These items are typically not able to be recycled, and most end up in landfills or out in the environment as litter. Reduce your waste with a reusable choice instead. **Answer: Cups/plates/utensils**

6. **Clue:** More and more Californians choose to refuse these single use disposable plastics with their drinks, with restaurants offering them more and more by request only. **Answer: Straws/stirrers**

7. **Clue:** This item may break apart when it hits a hard surface into dangerous sharp pieces that cause cuts and injuries to humans and animals when found on beaches and other public areas. **Answer: Glass beverage bottles**

8. **Clue:** This single use item found commonly littered in public areas are convenient to take along on a walk or run but can be reduced by switching to a reusable alternative. **Answer: Plastic beverage bottles**

9. **Clue:** This commonly littered item can be recycled over and over again forever. Creating these from recycled material saves up to 95% of the energy it takes to create from new material. **Answer: Beverage cans**

10. **Clue:** This item can be many different things when dumped and can hurt humans and animals alike. It is often sharp and/or broken items with different sizes and weights. **Answer: Construction debris**

Percent

- #10. Construction Material 2.1%
- #9. Beverage Cans 2.9%
- #8. Plastic Beverage Bottles 3.2%
- #7. Glass Beverage Bottles 3.9%
- #6. Straws/Stirrers 5.0%
- #5. Cups/Plates/Utensils 6.5%
- #4. Bags (paper and plastic) 9.1%
- #3. Caps/Lids 10.8%
- #2. Food Wrappers/Conta… 12.7%
- #1. Cigarettes/Cigarette F… 43.8%