

DESIGN DOCUMENT

San Diego Zero Waste Sorting Game

Designer & Developer: Brook Mesenbrink
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Date: 12/7/21

<i>Background & Business Purpose</i>	<p>According to CalRecycle, California has been experiencing extreme climate changes over the past few years as seen in numerous wildfires, record breaking temperatures, extreme drought, and eroding coastlines, caused by pollution and greenhouse gasses from human activities and food and yard waste in landfills. Organic waste in landfills turns into methane gas which is a more toxic air pollutant than carbon dioxide and contributes to poor health conditions. As a response, CA Senate Bill 1383 will require residents and organizations to reduce food and yard waste to landfills by 50% in 2020 and 75% by 2025, through composting and food recovery services.</p> <p>Sorting organic waste, in addition to other recyclables, is a new challenge for San Diego residents. They will need to learn what goes where and develop new habits, which will require unlearning, developing new skills, and practice, to form automatic habits.</p>
<i>Target Audience</i>	<p>San Diego residents; diverse ages, ethnicity, culture and languages. In particular, K-12 and adult learners who attend outreach programs or find the game on their websites: cleansd.org, wastefreesd.org and sandiego.gov</p>
<i>Training Time</i>	<p>10 minutes for eLearning game</p>
<i>Training Recommendation</i>	<p>eLearning: A scenario sorting game for local city websites and environmental education vendors. The game will be accessible through a website link for PCs and/or a mobile app.</p> <p>Microlearning: Provide links to existing content from sandiego.gov recycling program such as posters of graphic charts showing “What Goes Where” to display in homes and businesses. Include links to informational videos.</p>
<i>Deliverables</i>	<ul style="list-style-type: none">● 1 storyboard outlining the specific components of the course before development.● 1 eLearning course (game format) developed in Articulate 360 Storyline, uploaded and accessible on organization websites: cleansd.org, wastefreesd.org and sandiego.gov.● Copyright will be retained by Brook Mesenbrink and licensed for use by San Diego recycling education programs.

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Learning Objectives	<p>After this course, Learners will be able to:</p> <ul style="list-style-type: none">● Identify and sort items into organic waste for composting, recyclable materials, trash, hazardous waste, donation/reuse.● Discover the impacts to the environment when items are sorted incorrectly and correctly.
Training Outline	<p>SORTING GAME</p> <p><u>Rules:</u></p> <ul style="list-style-type: none">● Game will incrementally progress through several scenes of difficulty.● Each scene will be set in a real world scenario such as the kitchen, lunch room, dinner table, backyard and garage. Items will be grouped into familiar subjects such as breakfast, lunch, dinner, things found in the yard and garage.● Each scene will have several rounds in which the learner will sort 3 items at a time.● Reward points are given for correct sorting of items.● Feedback is given for incorrect sorting, instructing learners where it goes and why (impacts).● The game starts with familiar items then becomes more challenging with obscure, unfamiliar items.● Items that are commonly sorted incorrectly in real life will be repeated through many scenarios for extra practice. <p><u>Categories and some possible items to sort:</u></p> <ul style="list-style-type: none">● ORGANIC: apple core, coffee grounds with filter, egg shells, used paper towels, dead flowers, banana peel, scraps of food (salad, sandwiches, fruit, pasta, bones, corn cob, etc.), napkins, food scraps & napkins, leftover pizza crust, grass clippings, leaves, tree trimmings, unpainted wood, untreated wood● RECYCLE: empty & dry milk carton/jug, empty styrofoam egg carton, newspaper, glass jar, aluminum tray, foil, soda cans, clean styrofoam containers, cardboard boxes from frozen food, water bottles, plastic food containers, aluminum cans, glass bottles, clean pizza box, old plastic sand toys, empty plastic gardening containers, cardboard boxes flattened, empty laundry jugs, old magazines and phone books, shredded paper

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	<ul style="list-style-type: none">● TRASH: dirty diaper, sanitizing wipes, paper coffee cup, broken glass/dishware, paper plates, plastic utensils, extra salad dressing (oil), plastic wrap food covering, paper take out containers, plastic bag, plastic utensils and straws, pizza box with grease, dog poop, painted wood, food bags (chips), compostable trash bags (for animal waste, etc.), empty aerosol cans, broken glass/dishware, animal poop with compostable bags, used paper towels● HAZARDOUS WASTE: old paint, used motor oil, propane tank from BBQ, gasoline, old car and home cleaning products, electronics non-operational, bulbs, batteries● DONATION: bricks, rocks, dirt, small appliances and electronics (operational), clothing, sporting goods, toys, fake christmas tree.● REUSE OR RETURN TO RETAILER: decorations, plastic bags, styrofoam peanuts, rechargeable batteries <p>REFERENCE LIBRARY Contains pictures and descriptions of each item and where it goes.</p>
<i>Evaluation Plan</i>	<p>Game Scoring: Learners will receive reward points for successful item sorting. At the end of the game, learners will receive feedback for their points in 3 groups, with corresponding feedback and images. (Low point scores, medium point scores, high point scores)</p> <p>Learners will be able to increase their scores by choosing to play again.</p>