Unit Overview	Elementary Unit Overview
Suggested Class	Science
Suggested Lessons	Five of 45 minutes each (optional single day lesson at end of unit)
Topic	Each integrated unit of five lessons contributes to a cumulative social activism project to spread awareness for the Don't mess with Texas® campaign. For the elementary culminating project, students will research and design an awareness campaign geared at reducing litter in their surrounding school environment. It is recommended to complete this unit during the science block, as it primarily focuses around answering a scientific question.
TEKS covered in unit	**English/Language Arts**: (1) Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking — oral language. The student develops oral language through listening, speaking, and discussion. (6) Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. **Math**: Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. **Science**: (1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate practices. (2) Scientific investigation and reasoning. The student uses scientific practices during laboratory and outdoor investigations. **Social Studies**: (9) Citizenship. The student understands characteristics of good citizenship as exemplified by historical and contemporary figures and organizations.
Lesson 1 Overview	**Lesson 1:** Building Background Knowledge

	a. Assess and build knowledge around the Don't mess with Texas®" campaign. i. Discuss why people litter b. Introduce problem: What is the most common type of litter found in our school community? c. Hypothesize the most common types of litter on the school grounds. (Include visual anchor chart) i. Visible litter (soda cans, food wrappers) ii. Microlitter (cigarette butts, bottle caps) d. Map a course for cataloging and picking up litter e. Students complete the question/hypothesis section of the scientific method page Objective: Students will define litter and related vocabulary, hypothesize why people litter and the most common types of litter in their school community. Resources needed: Booklet pages 1) Don't mess with Texas® sign; 2) Types of litter images; 3) School map; 4) Scientific method page (question, hypothesis, procedure, data, conclusion)
Lesson 2 Overview	Students will identify the procedure for testing their hypothesis: a. Review the hypothesis about the most common types of litter on school grounds and if they predict it will match their assigned area. b. Review the course for picking up litter and assign areas for each group. c. Complete procedure portion of scientific method page Objective: Students will create a plan to test their hypothesis and record their procedures. Resources needed: Chart paper. Students will use the scientific method page.
Lesson 3 Overview	Students will conduct a litter walk according to their map and data plan to collect litter in their assigned area. a. Class reviews litter pickup safety

	b. Review procedure c. Students will engage in litter pickup d. Groups share out the types of litter most commonly seen in the school environment based on their observations. Ask groups guiding questions to ascertain why they believe there is litter/specific type of litter on the school grounds (close to fast food, no trash cans available, etc.) Objective: Students will conduct the experiment using the procedure they identified. Resources needed: DMWT reusable trash bags, gloves
Lesson 4 Overview	Students will sort litter and organize collected data to determine what types of litter and in what areas are most common and affected. Students will plan for a targeted campaign to build school awareness and provide solutions or alternatives for littering. a. Sort litter into visible vs. microlitter and record on group data sheet b. Students identify litter subgroups (recyclable, soda cans, food wrappers, cigarette butts, etc.) and record on data collection sheet. Note that litter may be in more than one subgroup c. Preview menu of targeted campaign options. Each group selects one — must use DMWT in the project ○ Trifold science experiment board ○ Art project incorporating collected litter ○ Poster/bulletin board about how to reduce litter ○ Weekly morning announcement (using DMWT) to school community ○ Other idea (approved by teacher) Objective: Students will collect, sort, and record data and select a method of delivery for their targeted campaign. Resources needed: identified by group

Lesson 5 Overview	Objective: Students will execute a campaign targeted at their peers and teachers to build awareness and reduce litter in their school environment.

Lesson Plan	Campaign to decrease litter at school — Day 1
Suggested Class	Science
Suggested lessons	One of five (45 minutes)
Topic	What is the most common type of litter found in our community?
Learning Objectives	Students will define litter and related vocabulary, hypothesize why people litter and most common types of litter.
Standards	Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate practices. Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking — oral language. The student develops oral language through listening, speaking, and discussion.
Materials	Don’t mess with Texas® booklet
Introduction	Teacher asks students, “Who has heard of Don’t mess with Texas?” “What do you think it means? (Turn and talk suggested) Students should turn and talk with a partner, sharing what they know about Don’t mess with Texas® for one minute while the teacher is circulating listening to responses. Teacher asks (either volunteer or cold-call) three groups to share. Teacher gives students the Don’t mess with Texas® booklet and has them turn to the first page (Don’t mess with Texas® logo). Stamp the purpose of the campaign is to get people to stop

	littering.
Instruction	**Students and teacher discuss to create a working definition of "litter".** Students use the images on page 2 to guide the creation of the definition of "litter" and write their class definition of litter in the provided space. (Litter is any trash that is not properly disposed of in a bin.) **Teacher refers to images on the page of microlitter and visible litter.** Teacher asks students what they notice about the differences between the two images of litter. Students define "microlitter" and "visible litter" and list several examples of each for the teacher to create an anchor chart (teacher lists all the students ideas in a T-chart on the board/chart paper/slide). **Teacher shares that for the remainder of the week, students will be completing a scientific investigation with all the steps of the scientific method (refer to page 3 of the booklet).** At the end of the investigation, they will complete their own campaign to reduce litter in their school community. **Discussion guiding questions**: 1. Why do people litter? 2. What types of litter do you most often see? 3. Where do you most often see litter? Teacher shares they will be creating a campaign to stop litter at school to impact change. To know what to target, they must answer the following investigation question: **Question:** What is the most common type of litter found in our school community? (Students copy the question on the Scientific Investigation page) **Activity**: Teacher explains that they will be completing a litter walk the following day to pick up and catalog litter. In order to figure out what types of litter are most common and what areas in the school have the most litter, they must have a plan for where they will conduct their litter walk. Teacher displays a map of the school. Students identify where they think they will find litter, and they chart a course together as a class.
Assessment	Students independently create their own hypothesis to the investigation question on the scientific investigation page. Teacher can provide the following sentence stem, if needed. I think the most common type of litter found in our school

	community is _____ because _____.
Follow-up/Reflection	Teacher tells students to keep an eye out for litter as they are walking around the school or their home community.

Lesson Plan	Campaign to decrease litter at school — Day 2
Suggested Class	Science
Suggested Lessons	One of five (45 minutes)
Topic	What is the most common type of litter found in our community?
Learning Objectives	Students will create a plan to test their hypothesis and record their procedures.
Standards	Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate practices
Materials	Don't mess with Texas® booklet, chart paper, markers
Introduction	Teacher asks students what they noticed about the types/location of litter as they walked around the school/home community. Teacher asks if students have any litter to add to the T-chart. Teacher gives students option/time to revise their hypothesis and planned course.
Instruction	Teacher assigns students to a group/area for school litter clean up (note: teacher will need to be strategic in keeping all students in an area that can be supervised simultaneously). Teacher explains that every scientific investigation has a procedure that names each step they will take to complete the investigation. Teacher gives each group a piece of chart paper and marker.

	Groups number/write their procedure for completing the investigation. Groups conduct a gallery walk to view others' procedures. Groups return to their own chart, revise their procedure as necessary, and copy their procedure on page 3 of the Don't mess with Texas® booklet.
Assessment	Students write/revise the procedure for conducting their investigation.
Follow-up/Reflection	Teacher asks students to discuss in their assigned groups what cooperation will look like and what they will commit to their teammates in order to be cooperative and helpful the following day during the litter walk.

Lesson Plan	Campaign to decrease litter at school — Day 3
Suggested Class	Science
Suggested Lessons	One of five (45 minutes)
Topic	What is the most common type of litter found in our community?
Learning Objectives	Students will conduct the experiment using the procedure they identified.
Standards	Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate practices Scientific investigation and reasoning. The student uses scientific practices during laboratory and outdoor investigations.
Materials	Don't mess with Texas® booklet, DMWT reusable trash bags, gloves
Introduction	Teacher asks students to review litter pickup safety precautions in a class discussion (i.e. do not pick up anything sharp, always wear your gloves, do not leave the group, wash your hands

	when done). Groups review the procedure they created the day before prior to beginning their litter walk.
Instruction	Using their charted map course, students get into groups and conduct their litter walk. Students collect as much litter as they can in their designated area. Students make sure to label their reusable trash bag for their designated collection area.
Assessment	Students are asked to complete the rubric for their own participation and cooperation with the group members. Each student will rate themselves. (Note: for early readers, the teacher will need to read aloud the criteria for students to rate themselves.) Rubric is differentiated based on age/reading level.
Follow-up/Reflection	When students return from the litter walk, the teacher asks them to identify any additional litter they found (microlitter and visible litter) that they had not already thought of on the T-chart. The teacher adds their responses to the ongoing anchor chart.

Lesson Plan	Campaign to decrease litter at school — Day 4
Suggested Class	Science
Suggested lessons	One of five (45 minutes)
Topic	What is the most common type of litter found in our community?
Learning Objectives	Students will sort litter and organize collected data to determine what types of litter and in what areas are most common and affected. Students will plan for a targeted campaign to build school awareness and provide solutions or alternatives for littering.
Standards	Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate practices

	Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data.
Materials	Don't mess with Texas® booklet, collected litter, butcher paper, markers
Introduction	Teacher reviews the litter T-chart and asks students to review the criteria for microlitter and visible litter to prepare them to sort and categorize their own group's litter. Students will determine what their roles will be and how they will work together to sort and categorize their litter (roles: recorder, sorters)
Instruction	Teacher provides each group with a piece of butcher paper and a marker. Teacher instructs groups to make a T-chart on the butcher paper. Teacher reviews litter handling safety and ensures groups have gloves. Teacher instructs groups to sort litter on their butcher paper T-chart and when complete, record the data on page 5 of their Don't mess with Texas® booklet. Teacher may need to review how to tally items.
Assessment	Students will take their group's collected litter data to create self-selected subcategories of litter (i.e. recyclable, soda cans, food wrappers, cigarette butts, etc.). Students will label their tally chart/graph (differentiated based on lower/upper primary grades).
Follow-up/Reflection	The teacher previews a menu of targeted campaign options. Each group selects one option to conduct a campaign with peers and staff at school to reduce litter. The campaign should be displayed in a strategic area of the school for students and staff to see. *must use Don't mess with Texas® in the project Options:

	1. Trifold science experiment board 2. Art project incorporating collected litter 3. Poster/bulletin board about how to reduce litter 4. Weekly morning announcement (using DMWT) to school community 5. Other: group proposal

Lesson Plan	Campaign to decrease litter at school — Day 5
Suggested Class	Science
Suggested lessons	One of five (45 minutes)
Topic	What is the most common type of litter found in our community?
Learning Objectives	Students will execute a campaign targeted at their peers and teachers to build awareness and reduce litter in their school environment.
Standards	Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate practices. Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data.
Materials	As needed: trifold boards, poster boards, markers, scissors, glue, butcher paper, construction paper
Introduction	Teacher reviews the campaign menu items and groups identify their selection. Teacher notes that campaigns and ads have a target audience. Students identify potential audiences for their campaign (i.e. students leaving the cafeteria, students waiting for afternoon pick-up, etc.). Teacher asks groups where campaign projects should be displayed.

Instruction	Teacher shares and reviews the rubric used to assess the group projects so students know criteria for success (rubric can be found on the last page of the booklet). Groups select their target audience/project and collect necessary materials. Groups work on projects while the teacher circulates providing feedback and support as needed.
Assessment	Teacher assesses the project based on rubric.
Follow-up/Reflection	The following weeks, students should assess if their campaign was successful in reducing litter in their school community. The teacher should probe what evidence they have for the success of their campaign (i.e. “how do you know?”).

Single Day Option

Lesson Plan	Single Day Option
Suggested Class	Science
Suggested Lesson	60 minutes
Topic	Identifying and reducing litter at school
Learning Objectives	Students will collect data to determine what types of litter and what areas are most commonly affected. Students will plan for a targeted campaign to build school awareness and provide solutions or alternatives for littering. Students will execute a campaign targeted at their peers and teachers to build awareness and reduce litter in their school environment.
Standards	Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate practices.

	Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data.
Materials	Clipboards, paper, pencils As needed: trifold boards, poster boards, markers, scissors, glue, butcher paper, construction paper
Introduction	Teacher informs students they are creating a mural to be shown to other classes and on social media (check parent waiver/media releases first).
Instruction	Teacher introduces the concept of litter. Students and teacher discuss to create a working definition of “litter”. Students predict the most common types of litter in their school community. Teacher and students take a litter walk. Students record the types of litter seen on school grounds. Students discuss potential solutions for reducing litter in their school community and how to communicate that in their mural. Students create a mural featuring the Don’t mess with Texas® slogan. (i.e. drawing students picking up litter and throwing it in trash cans; a before and after of their now litter-free school community)
Assessment	Commitment/certificate for students to sign (agreeing to not litter)
Follow-up/Reflection	The following weeks, students should assess if their campaign was successful in reducing litter in their school community. The teacher should probe what evidence they have for the success of their campaign (i.e. “how do you know?”). Students will commit to reminding friends and family not to litter and why it’s important to keep Texas litter free.