



# All About Plastics

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## The Bottle Bill Battle

Grades: 9-12

**Materials:** Computers with Internet access, list of websites for creating Power Point presentation (included), video camera or digital camera (optional), presentation grading rubric

**Activity Time:** 3-4 class periods

**Concepts Taught:** Environmental Science, Recycling, Computer Skills, Research Skills

**Correlations to NCSCOS:** **English I** Objectives 2.01, 2.02, 2.03, 2.04, 3.01, 3.02, 3.03, 3.04, 6.01, 6.02; **English II** Objectives 2.01, 2.02, 2.03, 3.01, 3.02, 3.04, 6.01, 6.02; **English III** Objectives 2.01, 2.03, 3.01, 3.02, 3.03, 3.04, 4.03, 6.01, 6.02; **English IV** Objectives 2.01, 2.03, 2.04, 3.01, 3.02, 3.03, 6.01, 6.02; **Computer Technology Skills** Objectives **2.01**, 2.02 **CT Science** Objectives 3.02, 3.03, 3.05, 3.06 and **CT Social Studies** Objectives 3.01, 3.03, 3.04, 3.05; **Biology** Objective 5.03; **Earth/Environmental Science** Objective 1.06; **AP Biology** Objective 7.03; **AP Environmental Science** Objectives 5.04, 7.01, 7.02, 7.03, 7.04; **Civics and Economics** Objectives 2.04, 2.09, 3.04, 3.07, 3.09, 4.03, 4.04, 4.05, 4.06, 4.07, 4.08, 4.09, 5.01, 5.04, 5.05, 5.06, 6.04, 6.05, 6.06, 7.01, 7.02, 7.03, 7.04, 7.05, 8.03, 8.04, 8.05, 8.07, 8.08, 9.01, 9.02, 9.04, 9.08, 10.01, 10.04, 10.05, 10.06; **US History** Objectives 11.03, 12.03; **American Government** Objective 4.02; **Contemporary Issues in North Carolina History** Competency Goals 1, 6, and 10.

### Objectives:

- Students will review the process of creating, introducing, and approving legislation for local and national governments.
- Students will investigate bottle bill legislation by completing a webquest.
- Students will form an opinion regarding bottle bill legislation and develop a presentation to state their position.

### Lesson:

Prior to introducing the lesson, review with students the process by which a bill becomes a law.

1. Idea - ideas for legislation can come from individuals (legislators themselves or citizens) or groups (advocacy groups, lobbyists, business alliances, etc.)
2. Draft – a draft is written and approved by the legislator who is introducing the bill
3. Committees – the bill is sent to the appropriate committees for approval
4. Assembly & Senate – the bill must be approved by both houses
5. President / Governor – they can decide to make the bill into a law or veto the bill - if the bill is vetoed, it goes back to the Assembly & Senate – if both houses again approve the bill by 2/3 majority, the veto is overridden and the bill becomes a law.

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## **PART 1:** Webquest

Students will visit the following websites to research bottle bill legislation and answer the questions on the student worksheet:

<http://www.bottlebill.org>

<http://toolkit.container-recycling.org/GetTheFacts/index.htm>

<http://www.bottlebill.org/resources/news/thisyear.htm>

<http://www.bottlebill.org/resources/slideshows.htm> - "Bottle Bills: Past, Present, & Future"

<http://www.cra-recycle.org/HHW/bottle%20bill.pdf>

[http://en.wikipedia.org/wiki/Bottle\\_bill](http://en.wikipedia.org/wiki/Bottle_bill)

<http://www.container-recycling.org>

<http://grnr.org/beverage>

<http://www.americanrecycler.com/oct03/plastic.html>

[http://www.ameribev.org/pressroom/2002\\_consumerchoose.asp](http://www.ameribev.org/pressroom/2002_consumerchoose.asp)

## **PART 2:** Campaign/Presentation

1. Many educators believe that the best way to learn about a topic is to prepare oneself to teach or explain the topic to others. After completing the webquest and examining a variety of resource material, students are to be encouraged to develop an informed opinion about bottle bill legislation.

2. It has been suggested that NC should pass a bottle bill. Have students read the News & Observer editorial "Trails of Trash."

They will then work individually or in groups to create a multimedia presentation to present their position on bottle bills and campaign for or against bottle bill legislation in the state of North Carolina. The project should focus not only on general information about bottle bills, but also examine and describe the impact in our state. The presentation should be brief yet extensive enough to convey the topic adequately.

3. Students should then present their teaching tool to the class and receive feedback comments from the class.

## **Extension:**

- The North Carolina General Assembly recently passed House Bill 1518 (Session Law 2005-348) which requires all holders of Alcoholic Beverage Control permits to recycle all recyclable beverage containers.
- H1518 is viewable at <http://www.p2pays.org/ref/38/37334.pdf>.
- Business owners will have several options for how to handle their recyclable materials to be in accordance with this legislation. They could contract with and pay for another company to handle the materials and take them off-site. Or they could haul it off-site themselves, in which case they would have to pay for on-site storage containers and transportation to/from drop-off facilities.
- Have students briefly research these and any other options, and then generate discussion concerning students' opinions about the "best" option for a business to recycle these containers.

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## Bottle Bill Legislation Webquest

Use the following websites to research bottle bill legislation and gather information.

<http://www.bottlebill.org>  
<http://toolkit.bottlebill.org/facts.htm>  
<http://www.bottlebill.org/resources/news/thisyear.htm>  
<http://www.bottlebill.org/resources/slideshows.htm> - "Bottle Bills: Past, Present, & Future"  
<http://www.cra-recycle.org/HHW/bottle%20bill.pdf>  
[http://en.wikipedia.org/wiki/Bottle\\_bill](http://en.wikipedia.org/wiki/Bottle_bill)  
<http://www.container-recycling.org>  
<http://grrn.org/beverage>  
<http://www.americanrecycler.com/oct03/plastic.html>  
[http://www.ameribev.org/pressroom/2002\\_consumerchoose.asp](http://www.ameribev.org/pressroom/2002_consumerchoose.asp)

Then answer the following questions. Answer in complete sentences and provide thorough responses including relevant details from your research.

1. Define and describe a "bottle bill."  
What responsibilities fall on the consumer? On the retailer?
2. How does a bottle bill reduce waste and encourage recycling initiatives?
3. What US states currently have bottle bill legislation in place?  
What state was the first to pass a bottle bill?  
What state has the highest deposit amount?  
What states are currently campaigning for new bottle bill legislation?
4. List some countries that have national deposit laws.
5. What is the name of the US Senator who has advocated for a national bottle bill?  
From what state is he?  
What is the name he proposed for this bill?  
What year did he introduce this bill?
6. What are some of the major advantages of having bottle bill legislation in place?
7. What are some of the major disadvantages of having bottle bill legislation in place?  
Who are some of the principal opponents of bottle bills? Why?
8. How do you think bottle bills are enforced? What are some issues that could arise with enforcement?

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## **Bottle Bill Legislation Webquest – ANSWER KEY**

<http://www.bottlebill.org>  
<http://toolkit.bottlebill.org/>  
<http://www.bottlebill.org/resources/news/thisyear.htm>  
<http://www.bottlebill.org/resources/slideshows.htm> - "Bottle Bills: Past, Present, & Future"  
<http://www.cra-recycle.org/HHW/bottle%20bill.pdf>  
[http://en.wikipedia.org/wiki/Bottle\\_bill](http://en.wikipedia.org/wiki/Bottle_bill)  
<http://www.container-recycling.org>  
<http://grn.org/beverage>  
<http://www.americanrecycler.com/oct03/plastic.html>

**Note:** *Answers printed here represent only one possible web source. Student responses may vary slightly depending on the sites used for webquesting.*

**1. Define and describe a “bottle bill.”**

The term “bottle bill” is actually another way of saying “container deposit law.” A container deposit law requires a minimum refundable deposit on beer, soft drink and other beverage containers in order to insure a high rate of recycling or reuse. ([www.bottlebill.org](http://www.bottlebill.org))

**What responsibilities fall on the consumer? On the retailer?**

When a retailer buys beverages from a distributor, a deposit is paid to the distributor for each can or bottle purchased. The consumer pays the deposit to the retailer when buying the beverage. When the consumer returns the empty beverage container to the retail store, to a redemption center, or to a reverse vending machine, the deposit is refunded. The retailer recoups the deposit from the distributor, plus an additional handling fee in most U.S. states. The handling fee, which generally ranges from 1-3 cents, helps cover the cost of handling the containers. ([www.bottlebill.org](http://www.bottlebill.org))

**2. How does a bottle bill reduce waste and encourage recycling initiatives?**

In response to the growing litter problem of the 1960's and 1970's, activists and policymakers in Oregon and Vermont fought successfully to secure mandatory refundable deposits on throwaway beverage containers. Encouraged by their success, advocates in dozens of other states campaigned for deposit laws, and by 1986, bottle bills were in place in 10 states. Today, litter prevention is still a potent motivation for activists, although many bottle bill efforts are also being driven by the desire to increase recycling and promote producer responsibility. Government-funded studies conducted pre- and post-bottle bill in seven states showed reductions in beverage container litter ranging from 69% to 84%, and reductions in total litter ranging from 30% to 65%. (<http://toolkit.bottlebill.org/facts.htm>)

**3. What US states currently have bottle bill legislation in place?**

California, Connecticut, Delaware, Hawaii, Iowa, Maine, Massachusetts, Michigan, New York, Oregon, and Vermont ([www.bottlebill.org](http://www.bottlebill.org))

**What state was the first to pass a bottle bill?**

Oregon, 1972 ([http://en.wikipedia.org/wiki/Bottle\\_bill](http://en.wikipedia.org/wiki/Bottle_bill))

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**What state has the highest deposit amount?**

Michigan, 10¢ ([http://en.wikipedia.org/wiki/Bottle\\_bill](http://en.wikipedia.org/wiki/Bottle_bill))

**What states are currently campaigning for new bottle bill legislation?**

Arkansas, Illinois, Tennessee, West Virginia ([www.bottlebill.org](http://www.bottlebill.org))

**4. List some countries that have national deposit laws.**

Canada, Austria, Belgium, Denmark, Finland, Germany, Switzerland, the Netherlands, etc. ([www.bottlebill.org](http://www.bottlebill.org))

**5. What is the name of the US Senator who has advocated for a national bottle bill?**

Jim Jeffords

**From what state is he?**

Vermont

**What is the name he proposed for this bill?**

NATIONAL BEVERAGE PRODUCER RESPONSIBILITY ACT

**What year did he introduce this bill?**

2002

(<http://www.cra-recycle.org/HHW/bottle%20bill.pdf>)

**6. What are some of the major advantages of having bottle bill legislation in place?**

Reduces waste, encourages recycling initiatives, reduces litter, creates jobs ([www.bottlebill.org](http://www.bottlebill.org))

**7. What are some of the major disadvantages of having bottle bill legislation in place?**

The arguments bottle bill proponents encounter most frequently include the following: deposits duplicate curbside recycling, are a public health threat, are inefficient, are outdated, are a regressive "tax," and will damage local businesses and lead to closures or layoffs. This section includes rebuttals to the most common industry arguments, as well as reports and legislative testimonies written by bottle bill opponents. (<http://toolkit.bottlebill.org/facts.htm>)

**Who are some of the principal opponents of bottle bills? Why?**

The Coca-Cola Company, PepsiCo and Anheuser-Busch and their bottlers and distributors are the biggest opponents of bottle bills. Retail grocers and liquor storeowners also oppose deposit laws. They know that there is a cost to disposal, recycling and cleanup of littered beverage bottles and cans, and they don't want to be saddled with those costs. They would rather have government and taxpayers pick up the tab. This is not the story they tell in committee rooms or to the press, however; instead they paint a picture of community-mindedness, purporting to be in favor of "comprehensive recycling," and maintaining food safety and sanitation. (<http://toolkit.bottlebill.org/facts.htm>)

**8. How do you think bottle bills are enforced? What are some issues that could arise with enforcement?**

Answers will vary.

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## Trails of trash

**Too many North Carolina roadsides look like landfills. It's time to require a minimum refundable deposit on bottles and cans.**

Nothing about the genetic makeup of North Carolinians explains the volume of trash we unload along public roads. Some of the same people who cheerfully spend their tax dollars dressing up highway vistas with wildflowers turn right around and ruin the mood with their garbage.

As The N&O's Matthew Eisley reported Sunday, the state has battled this boorish behavior for years. The Department of Transportation has set up a hotline for reporting litterbugs and taken thousands of scofflaws to court where they've been slapped with fines and community service. Still, over the last decade, the harvest of litter has doubled.

That didn't happen in Iowa, Oregon and several other states where laws require a minimum refundable deposit on bottles and cans. As a consequence, legislators in Tennessee, Arkansas, West Virginia and Illinois are considering so-called bottle bills, too. North Carolina lawmakers should do the same.

A bottle bill, when approved to become a container deposit law, works this way: The state sets a minimum deposit, usually a nickel, on all bottles and cans. When stocking shelves with soft drinks, beer or other beverages, the retailer pays the deposit to the distributor. The consumer pays the deposit to the retailer and earns the money back by returning the container for recycling.

States count on retailers, redemption centers or, most recently, reverse vending machines to receive empty containers and reimburse consumers. Retailers recoup the deposit from distributors, in addition to a handling fee in most states.

Distributors cover their costs by selling the scrap containers and, in some states, chalk up profits when consumers forfeit their refunds. In Michigan and Massachusetts, though, courts have ordered these profits back to the public, and they are now used to support environmental programs.

Where penalties and PR have failed to stop litter, money motivates -- even in communities that pick up recyclables at the curbside. Government studies in seven of the 11 container-law states

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found that the volume of bottles and cans littering public spaces dropped 70 percent or more in comparison to volumes recorded before the laws took effect. Not only that, all seven states reported reductions in all forms of litter and trash buried in landfills.

North Carolina is especially well equipped to recycle containers, with some of the nation's largest plastic recyclers located here. To those companies, empty plastic drink bottles are the raw materials needed to keep hundreds of North Carolinians employed making countless other products.

In fact, Governor Easley and the General Assembly could use a bottle bill to put even more Tar Heels to work in recycling, as well as to protect the state's vital tourist industry. Surely more travelers could be lured off our highways for a visit if they saw more wildflowers than trash.

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## Presentation and Campaign Rubric

CATEGORY	4	3	2	1
<b>Research/Statistical Data</b>	Students include 4 or more high-quality examples or pieces of data to support their campaign.	Students include at least 3 high-quality examples or pieces of data to support their campaign.	Students include at least 2 high-quality examples or pieces of data to support their campaign.	Students include fewer than 2 high-quality examples or pieces of data to support their campaign.
<b>Accuracy and Originality</b>	Students create an original, accurate and interesting product that adequately addresses the issue. Product shows a large amount of original thought. Ideas are creative and inventive.	Students create an accurate product that adequately addresses the issue. Product shows some original thought. Work shows new ideas and insights.	Students create an accurate product but it does not adequately address the issue. Uses other people's ideas (giving them credit), but without paraphrasing or re-stating.	The product is not accurate. Uses other people's ideas, but does not give them credit.
<b>Technical Elements</b>	Students use more than 4 marketing tools (logos, jingles, etc.) efficiently in their campaign.	Students use at least 3 marketing tools (logos, jingles, etc.) efficiently in their campaign.	Students use at least 3 marketing tools (logos, jingles, etc.) somewhat efficiently in their campaign.	Students use fewer than 3 marketing tools (logos, jingles, etc.), possibly in an inefficient way.
<b>Effectiveness of Campaign</b>	The campaign is highly persuasive in convincing the audience to make a decision for / against bottle bill legislation, as evidenced by persuasive language and accurate product knowledge.	The campaign is persuasive in convincing the audience to make a decision for / against bottle bill legislation, as evidenced by some persuasive language and some accurate knowledge of the product.	The campaign has some persuasive elements in convincing the audience to make a decision for / against bottle bill legislation.	The campaign is not persuasive in convincing the audience to make a decision for / against bottle bill legislation.
<b>Attractiveness and Organization</b>	The campaign has exceptionally attractive formatting and well-organized information.	The campaign has attractive formatting and well-organized information.	The campaign has well-organized information.	The campaign's formatting and organization of material are confusing to the reader.
<b>Knowledge Gained</b>	All students in the group can accurately answer all questions related to facts in the campaign and to technical processes used to create the campaign.	All students in the group can accurately answer most questions related to facts in the campaign and to technical processes used to create the campaign.	Most students in the group can accurately answer most questions related to facts in the campaign and to technical processes used to create the campaign.	Several students in the group appear to have little knowledge about the facts or technical processes used in the campaign.
<b>Workload</b>	The workload is divided and shared equally by all team members	The workload is divided and shared fairly by all team members, though workloads may vary from person to person.	The workload was divided, but not equally.	The workload was not divided OR several people in the group are viewed as not doing their fair share of the work.