

Eco Audit



Perform a sustainability audit for a local business, including an analysis of waste, water, greenhouse gas emissions, and procurement. Practice professional communications

Eco Audit

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Sample Thank You Note75



Lesson 1 Overview

Estimated Time

Activity 1: 1 class period (45 minutes)

Activity 2: 1 class period (45 minutes)

Standards Covered

CCSS ELA Literacy:

Language Standards: 3, 6

Writing Standards: 2.a-f, 4, 5

Speaking and Listening Standards: 4

CA Technical: Energy and Utilities Industry:

2.0 Communications: 2.2 (1.4), 2.3 (1.4)

Objectives: Students will be able to:

- Understand what a sustainability audit is and why performing one for a business is valuable
- Use professional communication skills that will be used to directly communicate with a local business

Prep Time

- 2-3 hours

Handouts

- 1.1 Into to Unit Handout
- 1.2 Confidentiality Expectations
- 1.3 The Anatomy of an Eco Audit
- 1.4 Sample Report
- 1.5 Business Contact Information
- 1.6 Sample Recruitment Letter
- 1.7 Business Contact Log

Materials: per small group

- 1" Binder
- All Eco Audit documents electronically - either on a USB Thumb Drive (at least 2G) or on a CD
- For the instructor: Teaching Tool_Eco Audit_PowerPoint

Lesson 1: Introduction to Eco Auditing

In this lesson, students will learn what an Eco Audit is and why is it beneficial to both businesses and students. They will then learn the basics of business recruitment and begin the recruitment process.

KEY WORDS

Audit: an inspection of an aspect of an organization. In this case, an audit inspects the sustainability practices in place in an organization with the intent of finding opportunities to save money and reduce the organization's impact on the environment

Carbon Footprint Analysis: a detailed examination of the amount of and source of greenhouse gases emitted to the environment by a person or group

Professionalism: the demeanor, behavior, and personal presentation expected in a professional setting

PREPARATION

In this curriculum unit, students will work in small groups of 4-6 students to perform sustainability audits of local businesses. Each group will be in charge of recruiting a business to audit and will complete an audit, generally outside of school time. By the end of this module, students will: recruit a business to receive an audit; perform an audit on that business; present their findings to the business; and present their findings and experiences to their peers.

Because they will be working in the real world, students will need guidance and support as the module progresses. Students will need to keep very careful records of everything they do, and take extra care not to lose any of the worksheets they use.

They will also need to be aware of the confidentiality expectations that need to be kept when working with businesses. These are laid out in Handout 1.2, which students must read and sign before participating in this module. You will be in charge of keeping the audit information in a secure electronic location after the students complete their audits in the event that you decide to complete a re-audit in six months to a year (which is optional but will give students the chance to see what kind of changes they inspired in the business they audited). In order to publicize the effectiveness of Eco Audit impact on the community, you can choose to report annual data comparisons and population impacts to the greater community in publications such as newspapers or magazines.

An adult mentor should accompany students to the audit when they complete it. Work to identify mentors, like parent volunteers, in advance. It may also be helpful to create a schedule, using the example below, for students to complete different components of the audit.

Eco Audit Instruction Schedule Template

Sample Timeline		Tasks (for students, unless otherwise noted)
6 weeks before audit	March 4	Instructor: develop schedule for Eco Audit Project
6 weeks before	March 4	Instructor: Begin outreach to potential mentors for Eco Audits
6 weeks before	March 7	Identify list of 5 businesses they may want to work with
6 weeks before	March 8	Draft a letter to businesses to request permission to conduct the Eco Audit, ensuring that they will be able to interview employees on-site
5 weeks before	March 12	Send letters to businesses in order of priority
4 weeks before	March 19	Instructors: Confirm mentors for each group
3 weeks before	March 26	Students must have a business confirmed & Eco Audit scheduled
3 weeks before	March 27	Send Audit preparation Data Sheet and Administrative Interview Questions to Company Representative
1 week before	April 5	Send Company Audit Tips and Company E-mail Notification to Employees to company representative. Ask them to arrange for volunteers to participate in the Staff Survey
Audit	April 10 – April 19	Complete Eco Audit
1 week after	April 22 – April 26	Practice presentations
2 weeks after	April 28 – May 3	Present findings to their business and deliver Final Audit Report PDF
3-4 weeks after	May 6 – May 17	Send Thank You letter(s). Showcase results (Presenters must adhere to confidentiality standards). Get feedback from businesses. Optional: Schedule re-audit within a year.

Of course, the time frame you set for the steps above is entirely up to you and can be as short or as drawn out as you would like.

As a part of this curriculum, you may decide to have your students help the businesses they are auditing become Green Businesses. Information on how to become a Green Business varies county-by-county and state-by-state and can be found online by searching for your county's or state's name followed by "Green Business Certification." Many counties have their own green business certification program but in case your county does not, make sure to check for a statewide program. By assisting a business become a Green Business; students may have an easier time recruiting businesses to participate in the Eco Audit.

As students begin to recruit their business, they may have trouble thinking of businesses to audit. The curriculum is particularly designed for offices, as opposed to retail or food services businesses. Some ideas include City Hall, a local YMCA or community center, local state or federal government offices, school district offices, fire stations, or the workplace of a parent. For more ideas, see the Audit Process PowerPoint. Students can audit as big or small an office as they would like, but they would probably be able to get better data from offices with at least 10 employees.

Even if businesses do not have utility data available, they can still participate in the program. Default values will automatically be substituted for missing information in the Carbon Footprint Calculator Worksheet and through the online carbon calculator (<http://carboncalculator.erm.com>). Businesses can also participate if they have data for their whole building but occupy only a small part of it. By finding the square footage of the office itself, which is often available online, students can calculate what proportion of the building the office occupies.

CURRICULUM PACKAGE OVERVIEW

This unit includes electronic documents that students will need in order to complete their audit report. These electronic documents are included in the curriculum download, and are also listed on the back of Handout 1.1, Introduction to Unit Handout. In addition, further information on these documents can be found in the Information for Audit Checklist, Administrative & Staff Survey PowerPoint. The curriculum package includes the following:

Folder	Document Name	Purpose
Curriculum	1. Eco Audit Curriculum	This document. The curriculum guides teachers through preparing for and implementing the Eco Audit project with students in class or with an after school group, like a Green School Leadership team.
Audit Toolkit	1. Audit Prep Data	Students give this worksheet to the business they are auditing. It includes a description of the audit process for the business, a sample letter to send employees, and the pre-audit data collection worksheet.
	2. Audit Prep Data Sheet & Carbon Calculator	Students will use the information from the Audit Data Prep to fill out this spreadsheet to calculate the office's carbon footprint using this Excel worksheet.
	3. Walk-Through Checklist	Students use this worksheet during their walk-through audit, recording their observations by

Eco Audit Curriculum
Lesson 1: Introduction to Eco Auditing and Recruiting a Business

		circling “Yes” or “No” for each question, and taking notes.
	4. Administrative Interview	Students use this worksheet to record responses to questions asked during the administrative interview. This document should be sent to the interviewee ahead of time.
	5. Staff Survey	Students use this worksheet as they interview staff members during their audit, tallying responses to their questions.
	6. Score Card Worksheet	Students use this worksheet to determine how many points to award the business for each portion of the audit. (1 point is awarded for the environmentally friendly response). They then determine the business’s overall audit score.
	7. Report Template	Students use this Word document to create an audit report for their business by inputting information specific to their audit.
	8. Insertable Notations	Students can use these pre-made tips to strategically insert into their audit report. They should not blindly insert any tips included in this document, as not all are relevant for all businesses. Students can also find quantitative information to demonstrate the effect of environmentally friendly upgrades and changes in this document.
PowerPoint Trainings	1. Teaching Tool – Eco Audit PowerPoint	This PowerPoint contains an overview of the Eco Audit program so that students have an understanding of what their audit will entail and why it is important
	2. Information for Audit Checklist, Administrative Interview and Staff Survey	This PowerPoint provides information about the three day of audit components – the Walkthrough Checklist, Administrative Survey and Staff Survey. It includes relevant background information as well as pictures that will help students identify items during their audit.

Before beginning Lesson 1.1: Ensure that each student has received the 4 pre-lesson handouts: Introduction to Unit Handout, Confidentiality Expectations, The Anatomy of an EcoOffice Audit, and the Sample Audit Report, with instructions to read them and return the signed letter by the first day of this unit.

Read through this lesson to familiarize yourself with the concepts, and go through the Teaching Tool – Eco Audit PowerPoint to make sure you are ready to present its content to your class.

Make a class set of each of the four handouts for this lesson (You may decide not to print the Sample Final Report and assign it as electronic reading instead). Determine how you will distribute electronic handouts to your students - by a thumb drive, CD, or online. Each student group will need to have access to the electronic Audit Toolkit to complete their business audit, as well as a few other electronic handouts during their training.

SETTING THE STAGE: WHY PERFORM AN ECO AUDIT?

Introduce the unit using Handout 1.1, Introduction to Unit. Explain the purpose of the curriculum, briefly describe the components of an Eco Audit so students understand the skills they will gain, and review the importance of privacy and confidentiality when working with a local business.

Sustainable businesses seek to have high performance on social, financial, and environmental aspects of business. How can we increase performance in all three of these areas?

- Ask students: what are the social benefits of business? Examples:
 - Providing a needed product or service
 - Job creation
 - Providing a living wage with benefits to their employees
- How can businesses increase financial performance? Examples:
 - Increasing revenue
 - Decreasing expenses
- How can businesses increase environmental performance? Examples:
 - Decreasing waste
 - Decreasing energy consumption
 - Producing or purchasing renewable energy
 - Decreasing water use
- What are the benefits to performing a sustainability audit? Examples:
 - Being informed about problems and opportunities for improvement is the first step to taking action
 - Decreasing resource consumption leads to decreased costs
 - Decreasing resource consumption decreases our negative impact on the environment
 - Jobs are created for the auditors
 - Anything else?

This curriculum unit focuses on an Eco Audit, a full sustainability audit that students perform on local businesses. Sustainability is about all areas, and the Eco Audit helps improve performance on all three.

Ask students what they thought of the assigned reading. What did they notice? Do they have any questions about it? Tell them that they will be completing an audit like those outlined in the handouts.

Show students the Audit Process PowerPoint. This is an overview of the process of completing an Eco Audit at a business, from start to finish, and includes information that may be helpful in business recruitment.

ACTIVITY 1: BUSINESS RECRUITMENT

- Break students into groups of between 3 and 7 students. We recommend having around 4 students per group. Explain to students that they will be responsible, within their groups, for recruiting a business to participate in the Eco Audit program, and that they will be performing an audit of this business. Before performing the audit, they will be trained on how to use the audit tools by completing a Demo Audit in class, during these three lessons. They will not be collecting data for this Demo Audit, but will use documents in their electronic Audit Toolkit to analyze data that is provided to them.
- Ask groups to begin by generating a list of 5 businesses that they might like to audit and arrange them in priority order. If you would like, ask one student in each group to be the recorder, or note-taker. They will also record their business outreach plan, outlined below.
- Ask students to generate a list of ideas about how they would go about recruiting a business to participate. If they are struggling, ask them to think of the slide in the Audit Process PowerPoint that outlines the benefits for the business. Have them share the strategies they would use to reach out to businesses (i.e. writing a letter, sending an email, calling the business). Record answers on the board and ask students to take notes. Then have them share what they would say in the letter to convince businesses to participate. Write these concepts on the board and have them take notes.
- Ask students to work with their group to brainstorm a business outreach plan: how will they contact the business? Who will do the contacting? What will be the most effective way to appeal to businesses to participate? After groups brainstorm a list of outreach strategies, they should develop an Outreach Action Plan.

Outreach Action Plan Template

Task	Person Responsible	Target Date	Date Completed