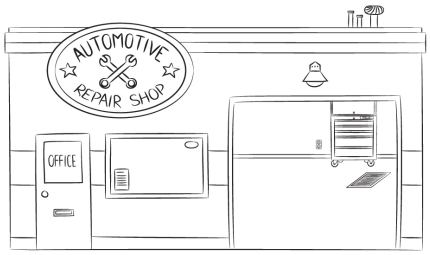

Lesson 2

Preventing Pollution

Student handout

Assessment tools

Resources

Videos

automotive technician

Lesson 2:

Preventing Pollution

BC Curriculum Links

LEARNING OUTCOMES

Address and build on the following :

Work place safety
A1 Demonstrate WorkSafe BC Regulations

A2 Describe Workplace Hazardous Materials Information System (WHMIS)

Regulations
A4 Demonstrate Work Safe Practices

Tools and Assessment
C5 Use shop tools and equipment (e.g. cleaning equipment)

TRAINING STANDARDS

Facility Requirements
Shop area must meet Municipal and Provincial bylaws in regards to waste water management and environmental laws. [*This includes regional regulations highlighted in this resource.]*

Resources

Electronic and hardcopy lesson plans, handouts, maps and more information are available online at:
www.crd.bc.ca/teacher

or by contacting:
education@crd.bc.ca

Purpose

Students view videos about regional automotive shop equipment and procedures required to prevent pollution when connected to the CRD sanitary sewer and learn about the hazardous materials of concern. Use this lesson to build on students' WHMIS and WorkSafe knowledge.

Preparation

Display or prepare copies of the:

- *Pollution Prevention: Automotive Repair Video* student handouts
- *Scavenger Hunt* or *Capture It* student handouts
- *Preventing Pollution* poster
- your automotive shop's Spill Response Plan (1/student or group)

Note: If you do not have a Spill Response Plan, CRD staff can help. Contact 250.360.3030 or **sourcecontrol@crd.bc.ca**

Set up the *Pollution Prevention: Automotive Repair* videos online:

- Part 2: Oil Water Separator
  www.youtube.com/watch?v=LYxEW0UooAA
- Part 3: Dry Shop
  www.youtube.com/watch?v=azl0EI46TGo
- Part 4: Hazardous Waste
  www.youtube.com/watch?v=uIi78uAegHE
- Part 5: Spill Response Plan
  www.youtube.com/watch?v=uBZwee56IOM

Procedure

1. (Optional) Ask or write the following joke on the board as a warm up for this lesson about automotive waste equipment and safety, in particular automotive oil:

   Q: What do you do with crude oil? *A: Teach it some manners.*

2. Play the video clips *Pollution Prevention: Automotive Repair Part 2-5.*

   www.youtube.com/watch?v=LYxEW0UooAA

   - Distribute or display the student worksheets *before* viewing for assessment for learning or *following* viewing for assessment of learning.

3. Scavenger Hunt and/or Capture It
   - Distribute or display the *Preventing Pollution* posters to review what automotive repair shops are required to do to prevent pollution.
   - Challenge students to find these components in the shop using the *Scavenger Hunt* or *Capture It* handout.
   - Express the importance of understanding shop procedures, spill response plans and the location of equipment for worker safety, the community and the environment.
   - Review the answers with the class bringing attention to the shop's Spill Response Plan.
4. Spill Response Scenario
   - Display or provide a copy of the Spill Response Plan and student worksheet(s). Review.
   - Ask for a volunteer, or divide students into groups. If working in groups, assign roles to each member (e.g. Reader: reads the plan; Responder: cleans the spill; Observer: watches for what is working and what is not; Documenter: takes notes).
   - Simulate one or more oil spills in the shop using water or another liquid (e.g. soy sauce).
   - Have students clean up the spill(s) following your automotive shop's Spill Response Plan.
   - Review student worksheet answers. Are there any suggestions to improve the plan, shop layout or signage?
   - Remind students that, although it is the responsibility of the employer to have safe practices in place (e.g. proper working equipment, spill response plan and spill kit), it is the worker's responsibility to follow the practices and to report any concerns.

Learn More About...

Find links to these and other supplementary resources at: **www.crd.bc.ca/teacher**

CRD Sanitary Sewer

- Regulations and best management practices
- Monitoring wastewater and the marine environment

CRD Waste and Recycling

- Hartland landfill
- Hazardous Waste

CRD Storm Drains

- Model Regulation: Storm Sewer and Watercourse Protection
- Model Regulation: Automotive and Parking Lot
- Monitoring stormwater
- Watershed information and maps

BC Product Stewardship Recycling Programs

- Lead Acid Batteries; Used Oil and Antifreeze; Paints; Solvents; Gasoline; Tires.

Natural Resources Canada

- Oil and petroleum markets
- Energy Use Data Handbook

Worksafe BC

- Health and Safety Topics: automotive service technician regulations, resources and tools
- 6 Minute Safety Talks
- Young Worker: resources for students and educators