

## Safe Debris Burning Lesson Plan

Keywords: debris burning, recycling, flammable, public safety, wildfire

Lesson Plan Grade Level: 5<sup>th</sup>-8<sup>th</sup> grade

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Total Time Required for Lesson: 2-30 minute or 3 -20 minute sessions

Setting: Classroom

Subject Covered: science, social science

Topics: wildfire, weather, topography, public safety

Goals for the Lesson:

Students will be able to list and explain five steps to reduce wildfire risk.

Students will be able to identify five things wildfires effect.

Students will be able to recommend alternatives to debris burning.

Students will be able to identify items illegal to burn.

Materials Needed:

PowerPoint slide

Safe debris burning DVD

Safe debris burning DVD worksheet

Debris burning vocabulary activity

Debris burning vocabulary list (for teacher)

What to burn cards

What to consider cards

Safe debris burning homework (journal/writing exercise)

Pencils (1 per student)

State Standards Addressed:

4.2.7 B. Examine the renewability of the resources.

4.3.7 B. Describe how human actions affect the health of the environment.

4.2.10 B. Evaluate factor affecting availability of natural resources.

4.3.10 B. Explain how multiple variables determine the effect of pollution on environmental health, natural processes and human practices.

Preparation:

Read through the entire lesson to ensure you understand the materials. Be sure to have all the materials before beginning the class. Print enough “What to burn” cards and “What to consider” cards for student small groups (5-6 students per group). Cut the handout into cards.

If you have a Smartboard, convert “What to burn” and “What to consider” images into flipcharts to be sorted during the lesson.

Doing the Activity:

Introduction to the lesson plan:

“How many of your families/parents burn trash and debris? Have bonfires or campfires? Debris burning is a common practice in Pennsylvania especially during spring and fall yard clean up. In addition, many people have outdoor fire pits or fireplaces for recreation.”

Steps:

1. Think-pair-share: Let’s start with a vocabulary activity to familiarize you with words you will hear during this lesson. This activity takes 10 minutes. Hand out the vocabulary activity sheet. Students spend a few minutes quickly writing definitions for each word. Students pair up come up with a definition for the word and write it in the second column of the vocabulary list. Each pair is assigned a word to find in the dictionary and write it in the third column of the vocabulary list. The class reviews each word and each pair provides a dictionary definition.
2. Now we are going to play a game. Break students into groups. Half the groups get the “What to Burn Cards” and the other groups get the “What to Consider Cards.” Imagine we are going to burn debris. The groups with “What to Burn Cards” sort the cards into what we can and can’t burn. The groups with “What to Consider Cards” sort the cards into what kind of weather and time of day we will burn the debris. You have ten minutes. On the blackboard write “What to Burn/Not burn” and “Good burn condition/bad burn condition”. When the groups are finished, ask the groups to report out how they sorted the cards and write the items under the appropriate heading on the blackboard. If you have a Smartboard, have the groups sort the cards on the Smartboard. Save the master flipchart and the blackboard lists.
3. Today we are going to watch a movie on safe debris burning. The movie has three sections. (Distribute safe debris burning DVD worksheet). To help understand information in the movie, I want you to fill in the blanks on this worksheet as you watch the movie. We will review the worksheet after each section of the movie.
4. Play “Introduction” of the DVD. Students complete the “Introduction” section of the worksheet. When the Introduction video is finished, have the students work in pairs or groups to review their answers.
5. Bring the class together and have each group/pair share their answers for one or more of the fill in the blanks. Why can’t you burn tires, toxic chemicals, and other materials? For example, chemicals can leak into the soil and groundwater, contaminating them. How do you dispose of them? Take them to the landfill on days when they accept toxic chemicals. They know how to safely dispose of such materials.
6. Play “What Went Wrong.” Follow the same format as before. Students complete the designated worksheet section and meet in pairs/groups to review their answers.
7. Bring the class together and have each group/pair give their answers for one or more of the fill in the blanks. Show the students the PowerPoint slide with the picture of safe and unsafe debris barrels. Review the differences. Unsafe – close to tree, leaves and a piece of wood near it, no screen, no ventilation holes at barrel base, broken at bottom allowing burning material to fall out, and no water hose or rake to extinguish embers that escape. In addition, no one is watching over the burn barrel.

8. Play “Wildfire Impact.” Students complete the designated worksheet section and work in groups to review their answers. Have each pair/group answer one or more of the fill in the blanks.
9. Divide the students into the same groups as in Step 2. Have them sort the cards again. Using the blackboard, write new lists or use the Smartboard to sort the images on a new flipchart. Review the blackboard or Smartboard – “This is what you thought at the beginning and this is what you think now. What changed and why?”

#### Assessment:

Ask students to journal about what they learned in class. Their journal exercise needs to include the following words: debris, compost, dew, and flammable (5<sup>th</sup> and 6<sup>th</sup> grade students) or debris, vegetation, evaporation, ventilation, ordinance, and flammable (7<sup>th</sup> and 8<sup>th</sup> grade students). Have them look at their home. Does their family burn? If so, what do they burn? What do they need to change to safely burn debris? Grade students journal exercise.

#### Conclusion to the Lesson:

“When we burn debris or have recreational fires it is important to remember safe burning steps. Check with the local fire company or Bureau of Forestry about burn bans. Check the weather, clear an area around the barrel, watch over the burning debris, and have a water hose ready.”

Alternative: Use the “What to burn” and “What to consider” cards as a memory game. Give individual students or student groups two sets of the same cards to pair and sort into categories.