

# **FIRE ED EVALUATION FORM**

**Student name:**

Blackline  
Master # 1

# Evaluation Rubric

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
"Tapping Prior Knowledge"	Given assistance, the student was able to cooperate with the lesson's objectives.	The student demonstrated active listening skills and made good attempts to participate.	The student fully participated in the lesson and was engaged by the materials/subject.	The student's participation in this lesson enriched both the class and the student.
"Fire Starts"	Given assistance, the student was able to attempt completing the pie graph.	The student demonstrated some grasp of the concepts learned through the creation of his/her pie graph.	The student was able to complete the assignment accurately and enjoyed participating in the lesson.	The student's participation served to enrich the lesson and the pie graph produced was exceptional.
"Only YOU Can Prevent Forest Fires!"	Given assistance, the student attempted to create an appropriate poster.	The student's poster demonstrated an understanding of the assignment.	The student completed the poster effectively and with enthusiasm.	The student's poster clearly demonstrates his/her understanding and was an outstanding effort.
"A Bird's Eye View"	Given assistance, the student was able to attempt the mapping process.	The student's map of the classroom demonstrated some understanding & effort.	The student completed his/her map successfully - demonstrating understanding.	The student's map was outstanding - presented in a clear & effective way.
"Our Team, Our Tools"	Given assistance, the student made efforts to participate in the skits.	The student's participation in the process was satisfactory.	The student participated well in the process and his/her performance was good.	The student showed thoughtful leadership and his/her performance was excellent.
"Grow A Class Tree"	Given assistance, the student endeavored to express understanding of community/ecological responsibility.	The student participated in the activities and expressed understanding of environmental responsibility.	The student participated in activities with enthusiasm & interest.	The student demonstrated exceptional enthusiasm & interest, expressing genuine concern for trees.
"Fireline Safety"	Given assistance, the student will correctly identify a risky or hazardous part of firefighter's work.	The student is able to correctly identify 2-3 risky or hazardous parts of firefighter's work.	The student is able to correctly identify 3-5 risky or hazardous parts of firefighter's work.	The student can correctly identify more than 5 risky or hazardous parts of firefighter's work.

**“Tapping Prior Knowledge” Topics**

trees of the forest	summer weather
forest animals	helicopters
smoke	camping
firefighters	hiking
camp fires	lightning

## Fire Start Information:

The B.C. Government confirms the [ten-year average number](#) of forest fires is about 1,352 each year.

The [Ministry of Forests](#) categorizes the cause of these fires into two broad groups: lightning and human-caused activity. **Human-caused** activity in the forests of BC includes: logging operations, railroads, construction and tree planting. Many of these activities bring workers into remote areas of the province and create a potential for accidental fire starts. Working in the forests of BC requires care and attention, especially in the hot summer months. Sometimes, train brakes and track friction creates [sparks](#) that can fly off the rails and ignite nearby grass.

**Lightning** starts typically occur when lightning strikes contact the ground and dry fuels like leaves and grasses are ignited. These starts are closely monitored by special satellite tracking systems, which monitor the number of lightning strikes in the province. Initial attack firefighters are often dispatched to an area in which many lightning strikes have been detected.

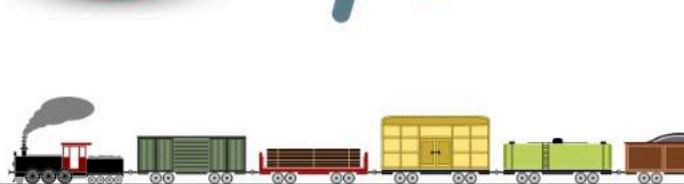
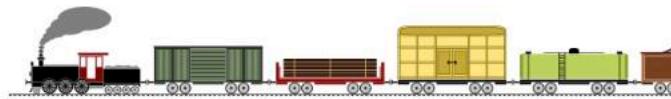
**Recreational** activities in the province of BC include many things: camping, hiking, biking and even driving on our highways can result in possible fire starts. Any time people recreate in the dry woods, there is potential for fire. Most people are very careful to not start fires, but some are careless, leaving cigarettes burning and not fully extinguishing their campfires. In addition, arsonists, drawn by the awesome power of a forest fire, have been known to intentionally start fires in this province.

*The public plays a major role in reporting wild fires. When individuals notice a fire burning, they are asked to phone the Provincial Forest Fire Reporting Centre **1-800-663-5555**. This important number can be called from anywhere in the province; you may have noticed it before on road signs and on the sides of Ministry of Forests trucks.*

## "Fire Starts" role-playing cards

Blackline master #4

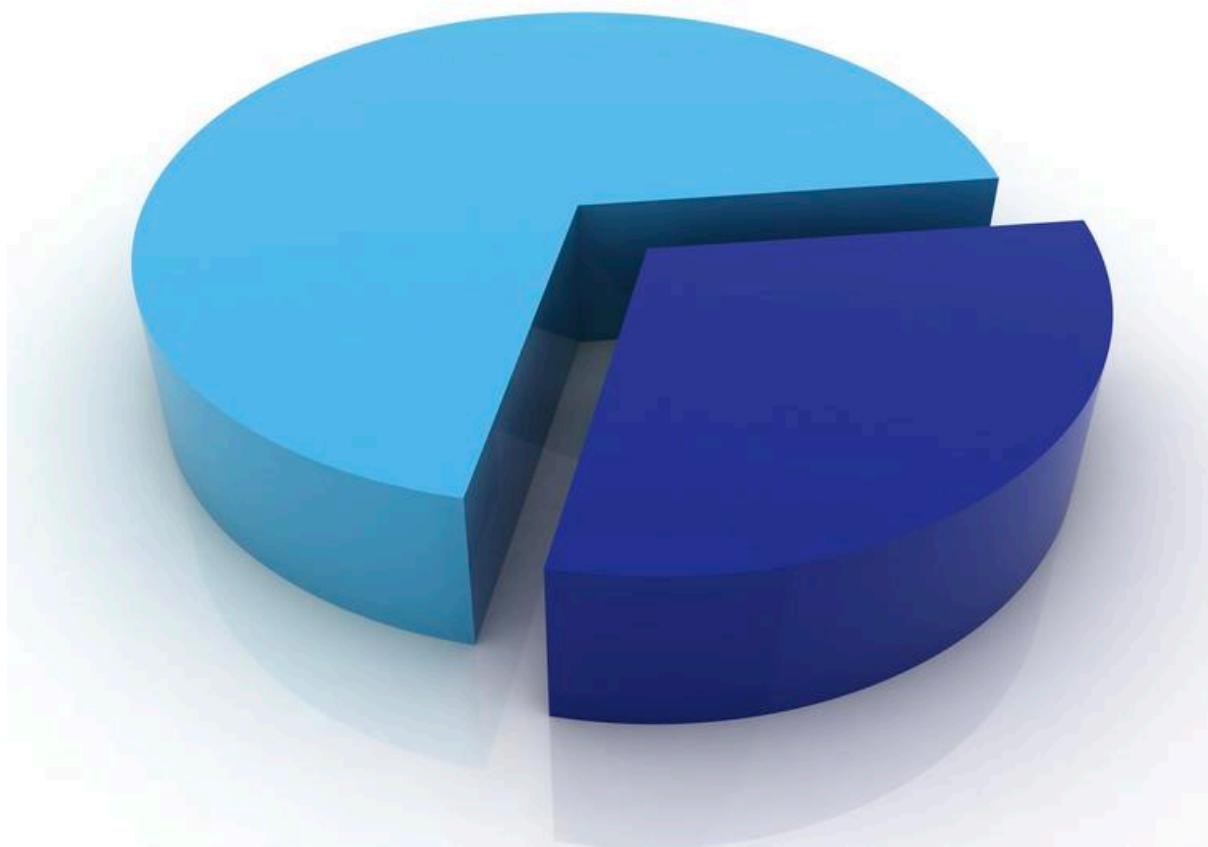
(18 lightning icons and 12 human-caused icons for class of 30 to cut out)



Name: \_\_\_\_\_

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# Graphing Fire Starts



Example of a 60/40 pie chart. Students may create their own or do one together on the whiteboard in class.

How many lightning strikes should be in the light blue and how many human-caused starts should be in the dark blue, based on the fire start role-play cards?

60% Lightning & 40% Human-Caused (Industry, recreation, etc.)



This activity taken from Alberta's "Fire, Forests and Me: The Bertie Beaver Activity Book"

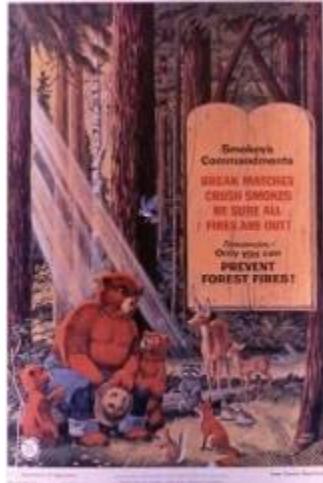
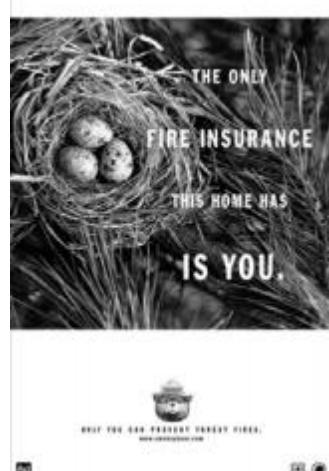
When you live "in the wild" near a forest, it is important to keep your home safe from fire. Look for examples of fire-safe practices in the picture. When you find an example, look for the hidden letter and write in the box to discover an important message.



This activity taken from Alberta's "Fire, Forests and Me: The Bertie Beaver Activity Book"

# Smokey Bear Poster Samples

blackline master #7



## Firefighter's Journal Entry

When the fire call came, my fellow crewmembers and I immediately sprang to life, dressing in our fire clothes quickly and packing our firefighting gear in the trucks. Just before leaving, our crew leader made sure every squad had a radio; these are very important for our safety. We all loaded into the trucks and headed out on the highway.

On the drive to the fire, everyone was excited. We wondered how steep the ground would be. Would there be a water source nearby for us to pump water to the fire from? Would there be any houses close to the fire? All this information was given to our crew leader on his phone. It seemed like forever before we finally reached the location of the fire.

The first thing we did was to drop our crew leader, Paul, off at the helicopter. His first job was to fly over the fire and decide how to best attack the fire. I went with the rest of the crew to park the trucks in a safe spot and get myself ready. Just as we finished loading our backpacks with some food, drinking water and extra gear, Paul returned from his helicopter ride. The trees were so tall and the sky was filled with smoke. It was hard to see anything. I was glad that we would be getting a good map and a plan from Paul.

Paul knelt down in the dirt and broke off a small stick. He used it to draw us a map of what he saw from the helicopter. He said, "Well basically, we've got a fast-moving fire. The winds are strong and pushing the fire North to the top of this mountain. Paul drew the mountain in the dirt. Then he said, "Lucky for us, there's a pretty big creek running through this gully that we can use as a water source (he drew the creek on his map), and another firefighting crew is being flown in to build a helipad on the East side of this peak (he uses a small rock to represent the helipad which is basically an area cleared of trees where helicopters can safely land)." This was the first fire of the year

where we would get to work with a “[Rapattack crew](#)”—it would be interesting to see these specialized firefighters rappel down out of their helicopter on ropes. (we watched a cool video [here](#)). Paul continued, “I want one squad to hike down to this little lake, it’s about 500 metres down the mountain from here (he used a little pine cone to represent the lake on his map). You can set up a pump in the lake and run hose from there up to this open meadow on the West side of the fire (he pointed to his simple map). The other two squads will work up the East side of the fire towards the helipad (he pointed to the rock – symbolizing the helipad). One squad will mark a good trail and then use their chainsaws to fall all the dangerous trees in the area we will be working, the other will load up with hose and begin laying it toward the fire’s edge.” Paul used his stick to draw a little line in the dirt to show us where he wanted the hose to be placed.

The meeting finished after we discussed safety hazards, weather and escape routes so everyone gets back to our fire camp where we sleep and eat. Then we loaded up with our gear and began our tough hikes out to do our work. Even though the air was still thick with smoke and it was difficult to see far ahead, I felt safe knowing that I understood the map Paul had drawn and I was aware of my surroundings. The simple little map in the dirt had given me enough information to do my job and be safe.

## Firefighter's boots

A firefighter's boots are a very important piece of equipment because they protect their feet. There are a lot of things that can harm a firefighter's feet while they are working. Sharp rocks, extremely hot embers and burning logs could really hurt without good boots to protect you. A firefighter's boots have to be tough and waterproof. Even if your feet get wet, sore or your toes get blistered, you have to still keep working. Because a firefighter's boots are so important to them, firefighters try to take really good care of them. You will often see firefighters carefully cleaning their boots and applying all different kinds of oils and waxes to the leather parts of their boots to keep them in top condition.



## Pulaski

A pulaski is a very valuable tool for firefighting. Firefighters can use it for many different jobs because it has two sides to its head. One side is sharp, like an axe for chopping roots and logs. The other side is called an adze; it is more blunt and used to grub, or dig up the dirt. A man named Ed Pulaski invented this tool. He was a firefighter who got tired of carrying two tools, an axe and an adze, so he combined them into one. The pulaski can be used to chop open burning logs or to dig down into the earth to find burning roots. Firefighters use this tool mostly for making a fire-guard – a path around a fire that has all the fuels (roots, branches & trees) removed and only dirt remains.



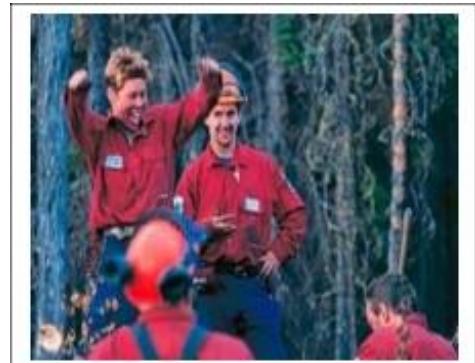
## Helmet

A firefighter's helmet is also a very important piece of equipment. It protects them in many ways. It is made out of very hard plastic so that if branches or rocks fall from above, the firefighter's head will be protected. Also, firefighters clip a face shield onto their helmets, to cover their face if they are using a chainsaw, walking through the thick bushes or digging into the ground. They also clip ear muffs onto their helmets to pull down and protect their ears from the loud noise a chainsaw or pump motor makes when it is running. Helmets are so important, firefighters are not allowed to take them off while they are working. Photo from [CBC's Meet the Firefighters Battling BP Forest Fires](#).



## Nomex Clothing

A firefighter's clothing is made out of a special fire-resistant material called, NOMEX. This special material is not very flammable, which means it takes a long time to catch on fire. Because of this, firefighters can have hot embers and ash from the fire land on them and their clothes won't catch on fire. Firefighters in British Columbia wear red NOMEX shirts and blue NOMEX pants. In other provinces and in the United States, many firefighters wear yellow. Can you think why red and yellow would be good colour to wear in the forest? That's right, these colours show up very well against the background of green trees!



## Hoses and Nozzles

The hose that a forest firefighter uses come in two different sizes. The large hose that is used to pump water from lakes, rivers, streams and out of trucks is 1.5 inches in diameter. It is about as thick as your teacher's arm. This hose is capable of pumping lots of water right to the fire. Firefighters call it "mainline" because they hook lots of these hoses together to form a main line from the water source right to the fire. Near the edge of the fire, a different type of hose is used. This hose is smaller (only 5/8 of an inch) and looks more like a regular garden hose. This hose is lighter and easier to move around when it is full of water. Firefighters use this kind of hose to "mop-up" or make sure all the fire is out. This hose is often called "econo", because it economizes how much water is wasted.



## Fire Shelter

There is one piece of equipment that firefighters depend on, but hope they will never have to use. This is called a fire shelter. Like a helmet, this piece of equipment is essential for safety – a firefighter is not allowed to fight fires without one. A fire shelter is kept folded up in a small box and, when needed, it is opened like a little tent. But this is no ordinary tent. Its shiny silver material is highly fire-resistant and it is used to protect firefighters who become trapped in the fire. If the fire gets too close, they lie inside the shelter and wait for the fire to pass over them. Luckily, the firefighters of B.C. are so well trained and careful that they almost never have to use their fire shelters.



## **Firefighting Equipment Vocabulary Quiz**

Fill in the blanks using the words given below.

Firefighters use lots of important equipment to do their jobs. They wear \_\_\_\_\_ to protect their feet from things that are sharp or hot. The pants and shirts firefighters wear are made from a special fire-resistant material called \_\_\_\_\_. These uniforms usually come in bright colours like red or yellow. On their heads, firefighters must wear a \_\_\_\_\_. They attach a \_\_\_\_\_ to this helmet, so nothing scratches their face or eyes. To keep their ears safe from loud noises, firefighters also clip \_\_\_\_\_ on their helmets. A special tool that the firefighters use is called a \_\_\_\_\_. This tool is very useful because it can do two different things: chop wood and dig in the dirt. Another very important tool for firefighters is used to get water to the fires. These \_\_\_\_\_ come in two different sizes. The thick one is called “mainline” and the thin one is called “econo”. Firefighters all carry a \_\_\_\_\_ with them at fires, but they hope they never have to use it. These special tents are used only in emergencies, when a firefighter is trapped.

Vocabulary to have on the white board:

Fire shelters

Ear Protection

Helmets

Pulaski

NOMEX

Face Shield

Boots

Hoses

## B.C.'s Fire Hazard Map for Current Season Danger Ratings:

**Low:** Fires may start easily or spread quickly with minimal involvement of deeper fuel layers or larger fuels.

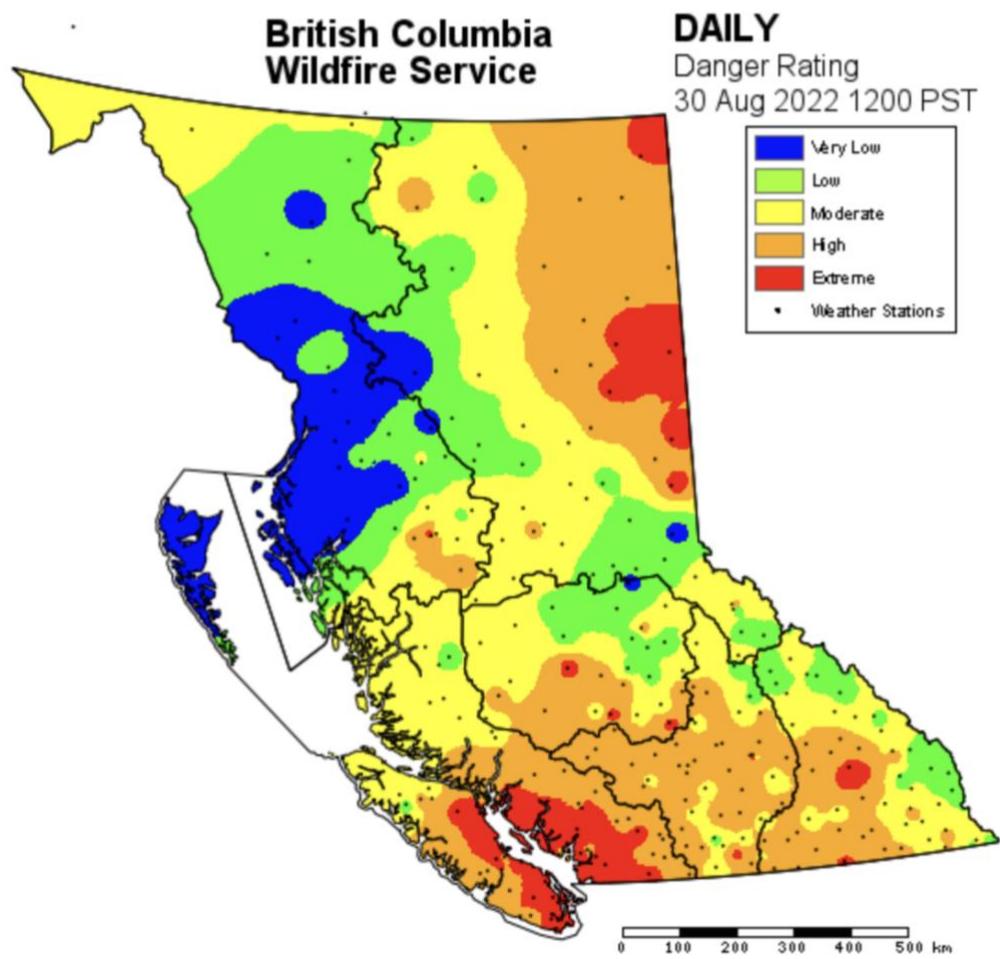
**Moderate:** Forest fuels are drying and there is an increased risk of surface fires starting. Carry out any forest activities with caution.

**High:** Forest fuels are very dry and the fire risk is serious. New fires may start easily, burn vigorously, and challenge fire suppression efforts. Extreme caution must be used in any forest activities. Open burning and industrial activities may be restricted.

**Extreme:** Extremely dry forest fuels and the fire risk is very serious. New fires will start easily, spread rapidly, and challenge fire suppression efforts. General forest activities may be restricted, including open burning, industrial activities and campfires.

## Fire Danger Rating

The fire danger rating (i.e. the risk of a wildfire starting) for the province is updated daily at approximately 2 pm.



*NOTE: The danger class map is intended for general public information only. Click for current status below:*

<https://www2.gov.bc.ca/gov/content/safety/wildfire-status/wildfire-situation/fire-danger>

## **"The Importance of Trees"**

Trees are as important to human beings as food and water. Trees help keep city air cool by providing shade, and produce most of the oxygen on Earth.

The trees lining city streets can save up to 50% on air-conditioning bills during the summer. In cold places, trees provide windbreaks that can reduce heating bills by as much as 30% in the winter.

Trees keep our air breathable by removing carbon dioxide and pollutants. They add moisture through transpiration.

Forests hold soil in place. They keep rainwater from running off the land too quickly and so, help control floods. Trees take care of our soil and water. Trees provide shelter, food, recreation, beauty, and homes for birds, insects, and other animals and, even chocolate (the Cocoa Tree!).

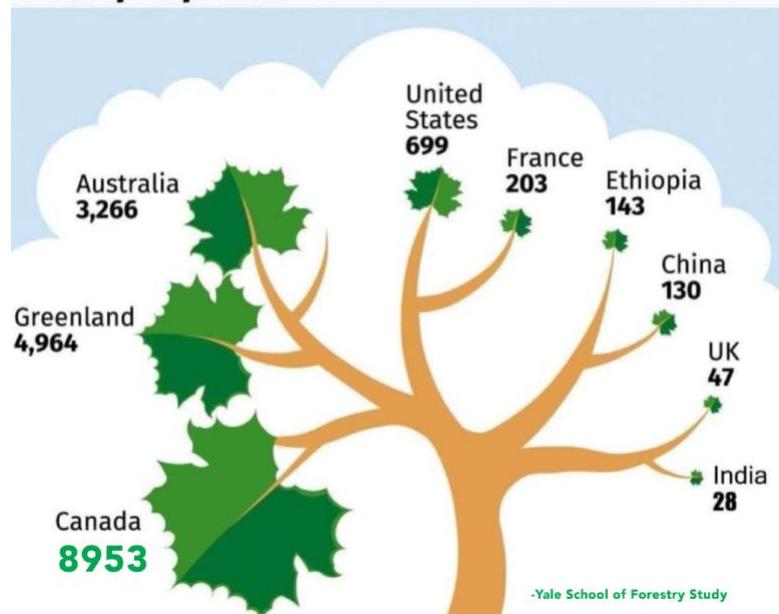
Imagine how many trees are used all over the world. People remove trees to make room for new farms, communities, computer paper, furniture, houses and many other products we need for our daily lives.

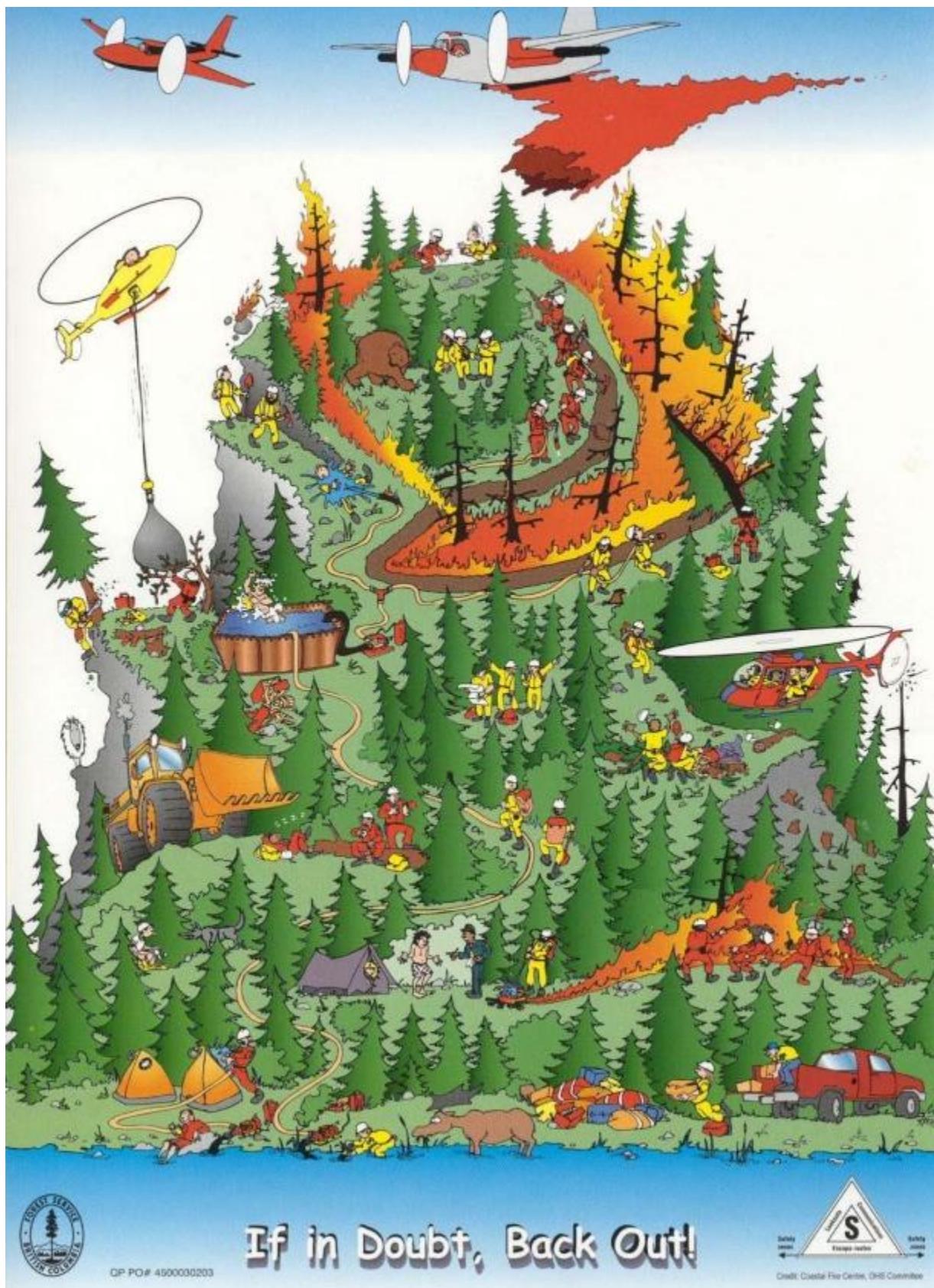
In Canada, we plant trees to replace those we use so they grow back. Did you know that in B.C. alone, 200 million Tree seedlings are planted annually? In fact, Canada has the second-largest number of trees in the world at [318 billion](#) and 8,953 trees per person! The global average is [422 trees per person](#), according to a recent Yale University School of Forestry study.

We all need to take care of trees in our world. We can help prevent forest fires and recycle everything we use that is made from trees, like paper and cardboard. The good news is Canada is one of the world leaders in sustainable forest management. Learn more below at these links.

- Naturally Wood BC <https://www.naturallywood.com/>
- Tree Canada Foundation: <https://treecanada.ca/resources/>
- BC Forest Enhancement Society: <https://www.fesbc.ca/>
- BC Ministry of Forests:  
<https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/ministries/forests-lands-natural-resource-operations-and-rural-development>

**Trees per person :**





QP PO# 4500030203

If in Doubt, Back Out!



Credit: Coastal Fire Center, DHS Committee