

# WILDFIRE



## INTRODUCTION

Fire is an important element on the Gunflint Trail. In the summer, campfires provide entertainment and heat for cooking. In the winter, fires in woodstoves keep our homes warm. The Gunflint Trail's ecosystem – or all of the area's living things like people, trees, animals, water, and rocks – depend on fire to regenerate and thrive.

For centuries, wildfires – fires that burn outside in forest or grass – have burned through the Gunflint Trail area regularly. Most of these fires start from lightning strikes. These fires clean up dead or sick plants and allows sunlight to reach the forest floor.

After wildfires, small plants – like blueberries and wildflowers – flourish. Over time, tree seedlings grow tall enough to produce shade, slowing down the growth of small plants and letting tall trees dominate the forest. After many years, a new wildfire burns through the forest to restart the growth cycle. *(See an illustration of the Fire Regeneration Cycle on the other side of this page.)*

## WHAT'S IN THE WILDFIRE ACTIVITY BIN:

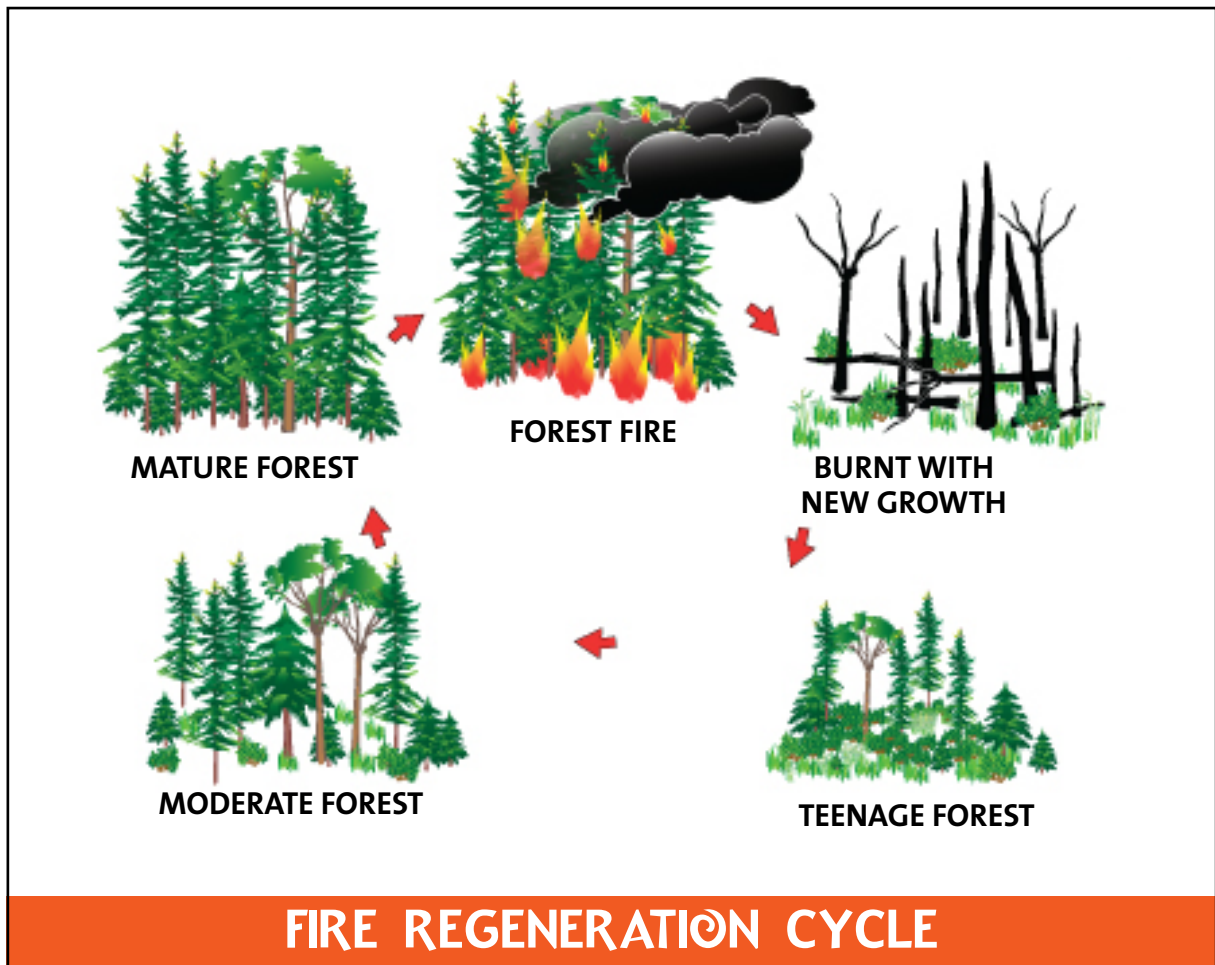
- 1 Fire Shelter
- 2 Pairs of Leather Gloves
- 2 Hard Hats
- 2 Nomex Shirts

## NOTES FOR WILDFIRE ACTIVITIES:

- Bin contains all materials needed to create 2 Wildland Firefighters – just add kids.
- Complete activity inside the museum or outside on grounds
- Activity takes about 30-60 minutes.
- Please do not remove this bin from Chik-Wauk grounds
- If using the bin outside of the museum, check out the bin at museum front desk.



# WILDFIRE ACTIVITIES



# FIRE FIGHTING

*For all of fire's good effects, fire is still extremely dangerous and sometimes even deadly. Fires that become out of control are typically called "bad fires." Unfortunately, humans start a lot of "bad fires" by not paying attention to their good fires, like lit candles, campfires, or burning brush piles.*

Firefighters are men and women who work to put out "bad fires." Firefighters don't only work in cities to put out fires in houses and other buildings, they also work to control wildfires. Men and women who make sure wildfires only have good effects are called wildland firefighters.

Wildland firefighters' work often takes them deep into the forest, so they need clothing and gear that's lightweight, easy to move in, and fire resistant.

## Wildland Firefighter Clothing

**Fire Resistant Pants** Made out of 100% cotton or Nomex, a special flame resistant fabric.

**Fire Resistant Shirt** Long sleeved and usually made of Nomex fabric.

**Helmet** Protects firefighters from falling trees and other hazards.

**Eye Protection** Goggles or glasses help protect firefighters' eyes from heat and smoke.

**Gloves** Leather gloves are worn at all times to protect firefighters' hands from burns.

**Leather Boots** Protects firefighters' feet with a thick sole and a high cuff.

## ACTIVITY

Inside the pack, you'll find several clothing items that you'd need if you were a wildland firefighter. Pull them out and try them on!

# SAFETY FIRST

*Wildland firefighters must focus on safety and avoid placing themselves in dangerous situations.*

Firefighters can't depend on someone rescuing them because their jobs often take them to remote places impossible to reach by car or truck and difficult to reach by airplane or helicopter.

To stay safe, firefighters pay attention to changes in weather that might affect how the fire behaves. They carefully observe their surrounding to avoiding twisting their ankles on rough terrain or standing in a place where a tree or rock could fall on them. Firefighters always carry a fire shelter to protect them in case they get in a situation where they can't escape a fire's path.

## ACTIVITY

Inside the pack, you'll find an old fire shelter. Pull it out!

The shelter looks like a sleeping bag made out of aluminum foil. Wildland firefighters always carry a new fire shelter in a small knapsack either on their belt or in their pack. Fire shelters are designed for one-time use. Ideally, firefighters never want to use their fire shelter.

Firefighters deploy their fire shelters when they think the wildfire they're fighting is heading for them. The fire shelter material helps reflect the heat of the fire away from the firefighter underneath the shelter and creates cool, breathable air for the firefighter.

To deploy their fire shelters, firefighters simply pull out the shelter. They look for a low, flat area as far away from the fire as possible and make sure there aren't any tree branches or burnable materials nearby. Then they crawl underneath and wait out the fire until it's safe to come out again.

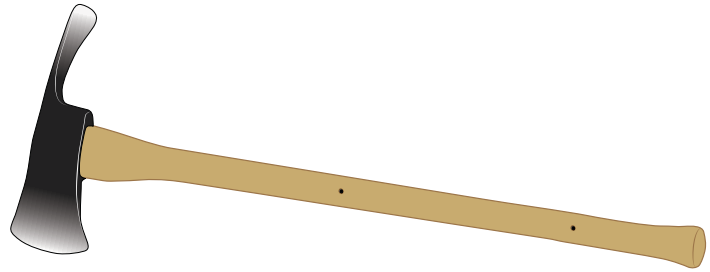
Look around you. Where do you think you'd want to deploy a fire shelter if you were fighting a wildfire in this area? Feel free to open up the fire shelter and crawl underneath.

# TOOLS OF THE TRADE

*Firefighters carry several tools to help them fight fires by creating firebreaks around a burning wildfire. Firebreaks are areas cleared of burnable materials to stop or slow the progress of a wildfire.*

## **PULASKI**

A firefighting tool developed a century ago that combines an ax and an adz and is used to chop wood and dig soil.



## **SHOVEL**

A very basic tool that firefighters commonly use when constructing firebreaks.



## **MCLEOD**

Looks like a combination of a rake and a hoe and used to remove debris from fire breaks. The hoe section cuts branches or sod.

# TYPES OF FIREFIGHTERS

*Although all wildland firefighters work together to control fires and make sure fires only have good effects, wildland firefighters have many different jobs.*

### Some Wildland Firefighter Jobs:

**Hand Crew** These firefighters work in crews of about 20 people and create firebreaks around a wildfire.

**Smoke Jumper** A firefighter who parachutes out of an airplane or helicopter to fight fires.

**Pilot** A pilot looks for wildfires that start in the woods from lightning strikes or careless campers. They pick up water from a lake with their aircraft to dump on the fires they find. Sometimes they transport hand crews and supplies to a fire area.

### What type of wildland firefighter would you like to be?

Even if you don't want to be a firefighter when you grow up, you can help prevent wildfires every day by not playing with matches, making sure people around you only start fires in safe conditions, and fully extinguishing any campfire you make. Smokey Bear says: "Only YOU Can Prevent Wildfires," and it's true!

# FIRE WEATHER

*Sometimes wildland firefighters light fires known as prescribed burns. These fires burn in very specific areas of forest to introduce fire's good effects. Firefighters watch these fires carefully to make sure they don't get out of control.*

Weather greatly affects how fires burn, so before firefighters light a prescribed burn, they make several weather observations to ensure it's safe to start the fire.

## **Firefighters consider these facts before lighting prescribed burns:**

- Fires burn hotter in warm temperatures and burn slower in cooler temperatures.
- Fires burn hotter in low humidity conditions and slower in high humidity conditions.
- Humidity – or how moist the air is – is judged on a 1-100 scale with 1 being extremely dry and 100 being extremely wet.
- When the temperature increases, relative humidity decreases and when the temperature decreases, relative humidity increases.
- Windy conditions make it difficult to control fires.
- Unexpected changes in the weather can change fire behavior and make it harder to control fires.

## ACTIVITY

On the other side of this sheet, is an activity that can help you decide whether or not it is safe to start a fire.

# ACTIVITY

**You can judge whether or not it's safe to start a fire with just a few simple observations.**

<b>HUMIDITY</b>	Does the air seem moist?	Has it rained recently? Are there puddles on the ground?
<b>WIND CONDITIONS</b>	Is it windy?	If yes, does the wind blow steadily, or does it gust?
<b>TEMPERATURE</b>	How warm is it?	Do you think it will get warmer today?
<b>WEATHER STABILITY</b>	Do you think the weather will change sometime today?	Clouds are a great way to tell if the weather might change. Fluffy clouds often mean the weather is changing. Flat or layer clouds often indicate that the weather is "stable" or won't change very quickly.

Answer as many of questions from the table above as you can. Think about your answers carefully and what you know about how weather affects fire behavior. Do you think today is a good day to light a prescribed burn? Why do you think people usually have campfires in the evening?

**WE HOPE YOU ENJOYED USING THIS ACTIVITY PACK!**

Please put everything you pulled out back into the bin and return the bin to the museum front desk. Thank you!