

EXPLORATION:
Grades 3-5

MAKING OUR HOMES SAFE FROM WILDFIRE



ENDURING UNDERSTANDING:

Much of Alaska is ready to burn! But there are many things people can do to avoid causing a wildfire and also to make our homes safe.

Part 1 (30 minutes)

STUDENT DIRECTIONS

You will read a brief explanation about how you can keep your home safe from wildfires. Take notes on how fires start and things people do to stay safe. Afterwards you will answer 3 questions and then write an essay to reflect on how you and your family can be “firewise.”

NGSS STANDARDS:

4-ESS3-2	Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.
5-ESS3-1	Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment

Wildfires are probably going to happen during summer in Alaska. Humans can do their part to keep their homes safe, and to avoid starting them in the first place!

SPRUCE TREES AND GROUND PLANTS CATCH FIRE EASILY.

Summer wildfires are common in much of Alaska because the forests and tundra here have just the right combination of plants and weather that makes wildfires spread. Spruce trees burn the best, but when grasses, mosses and lichens are dry, they can catch on fire faster than you can shout “FIRE!”



Spruce trees often have branches that hang close to the ground, so fire easily jumps from grasses, lichens and mosses to the trees. Shorter trees and brush can also carry fire from the ground to the tops of spruce trees. These types of burnable plants that make a ladder from the ground to the top of spruce trees are called “ladder fuels”. Once spruce trees catch on fire, if they are growing close together, a small fire can turn into a huge wildfire in hours, especially if it is hot!

EXPLORATION: **MAKING OUR HOMES SAFE FROM WILDFIRE**



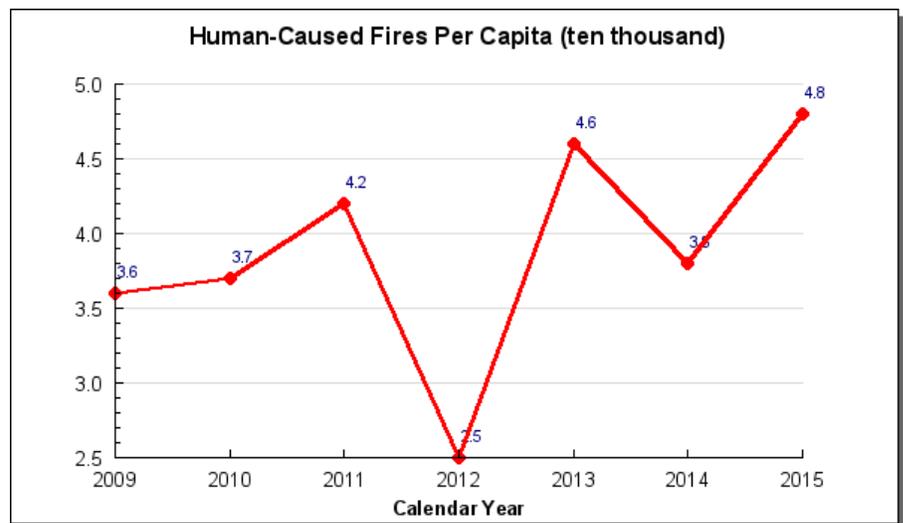
THE MOST RISKY TIME OF YEAR FOR HUMAN-STARTED FIRES IS IN EARLY SUMMER.

In late spring and early summer, before plants grow their new leaves, trees and plants are as dry as they can get. During this season if a person is careless while burning brush, or leaves a campfire without putting it out, these dry trees and plants can catch fire easily!! Later in June after plants are green with new leaves, trees and plants usually have a lot more water in them, so they don't catch on fire as readily.



HUMANS CAUSE LOTS OF FIRES!

Humans cause fires in many ways. In 2015, humans in Alaska caused 351 fires! The most common causes are not being careful while burning brush around the home and being careless with campfires. We can avoid causing fires by not burning on days that the foresters say it is too hot and dry to burn. We can also make sure fires are completely out before walking away. You know a fire is completely out if you can touch the ash where it was burning!



From: <https://www.omb.alaska.gov/html/performance/details.htm>

LIGHTENING CAUSES FIRES DURING HOT SUMMER MONTHS.

June and July are often when Alaska gets big thunderstorms. Lightning may strike the ground thousands of times during the summer! Some of these lightning strikes start fires on the ground. If it is a hot day, these fires may quickly spread to the trees.

EXPLORATION: **MAKING OUR HOMES SAFE FROM WILDFIRE**

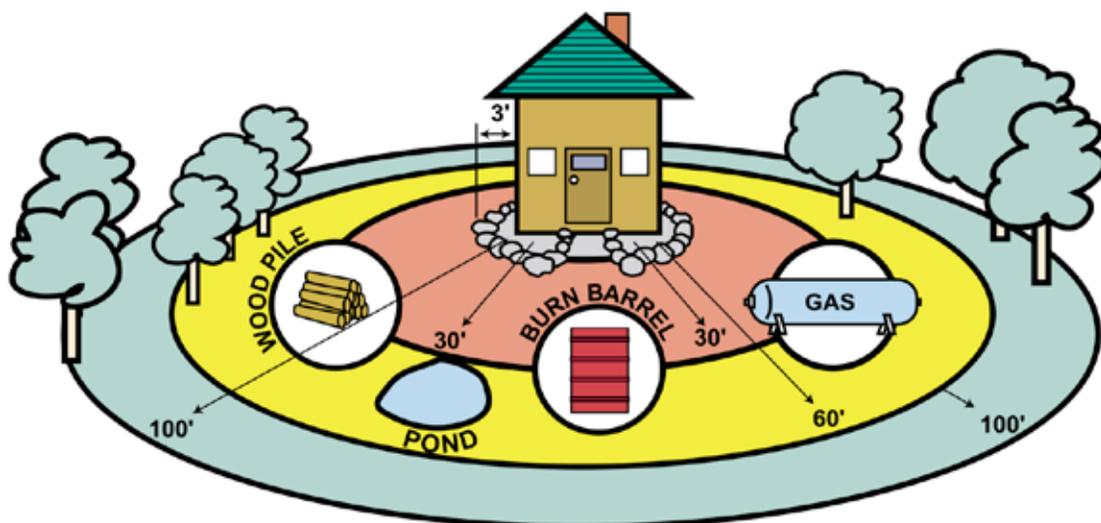


HOMES CAN BE “FIREWISE”!

In 2014 a big fire called the Funny River Fire burned 196,000 acres near Soldotna. The wildfire came close to many homes, but because people had been careful to make their homes “firewise”, none of the homes burned!

Here are some of the things the smart home owners did before the wildfire started to make their homes safer:

1. They mowed the grass all around their house.
2. They made sure there was not any grass touching the sides of their house.
3. They stacked their firewood more than 30 feet away from their house.
4. They made sure there weren't any gas-powered machines like lawnmowers or snow machines stored near their house.
5. They moved all of their propane and oil tanks more than 30 feet away from their house.
6. They removed spruce trees that were growing closer than 30 feet from the house.
7. They sawed off the lower branches of other near-by spruce trees so the branches could not touch any plants growing on the ground.
8. They put a metal screen all around underneath their houses and porches so burning pieces of wood from a wildfire could not blow underneath their homes.



Use the zone concept for thinning, limbing, and clearing flammable vegetation from around from your home.

EXPLORATION: **MAKING OUR HOMES
SAFE FROM WILDFIRE**



MY NOTES

How can we keep our homes fire safe?

Benefit	Details

EXPLORATION: **MAKING OUR HOMES SAFE FROM WILDFIRE**



Part 2 (30 minutes)

STUDENT DIRECTIONS

You will now have 30 minutes to review your notes and sources, plan, draft and revise your essay, which will be based on the essay topic below. You may use your notes and refer to your sources, but please work on your own! You may also refer to the answers you wrote to earlier questions, but you cannot change those answers. Now read your assignment and the information about how your essay will be scored, and then begin your work!

ESSAY TOPIC:

Some new neighbors are moving into a neighborhood that is next to a large spruce forest. The spruce trees are growing close together. The new neighbor's house has tall grass, trees and brush growing all around it. You have been asked by a group of homeowners to give the new neighbors some information that will help them to make good choices around fire and to make their home as safe as possible from a wildfire.

Write an article for the homeowner's association's newsletter that explains how people can make their homes safe in the event of a wildfire, and how they can do their part to prevent a wildfire. Be sure to explain why the new neighbors should take each of your suggestions. Your article should be about five paragraphs.

Part 3 (15 minutes)

SCORING YOUR ESSAY

Your essay will be evaluated based on:

1. **Organization:** How well you included an introduction, reasons that are supported with details, and a clear conclusion.
2. **Use of examples to support your opinion:** How well you used various examples and scientific information to explain your opinion and new concepts.
3. **Scientific accuracy:** How accurate the facts were that you presented.
4. **Language and vocabulary:** how well you used precise language and vocabulary to explain your opinion.

How well did you think you did? Score yourself by giving yourself 1-5 (5 is highest and 1 is lowest) for each of the above evaluations.

- | | |
|------------------------|-------|
| 1. Organization | _____ |
| 2. Examples | _____ |
| 3. Accuracy | _____ |
| 4. Language and Vocab. | _____ |
| TOTAL | _____ |

EXPLORATION: **MAKING OUR HOMES SAFE FROM WILDFIRE**



Follow-up activity: Is Your Home or School Firewise?

Take a walk around your home or school and find out how firewise it is using the following check list.

		YES	NO	CAN'T TELL
1	Is the grass mowed all around the building?			
2	Is grass NOT touching the sides of the building? (Ideally 3 feet from the building)			
3	Is firewood stacked more than 30 feet away?			
4	Are gas powered machines stored 30 or more feet away from the building?			
5	Are all propane and fuel tanks stored 30 or more feet away from the building?			
6	Is the nearest spruce tree 30 or more feet away from the building?			
7	Are ladder fuels cleared out and branches of lower spruce trees (within 100 feet) removed?			
8	Is there a metal screen all around underneath the building and porches or balconies?			
Count the checks in each column				

Adapted from Fire Works 2005.

EXPLORATION:

MAKING OUR HOMES SAFE FROM WILDFIRE



Part 4

OTHER RESOURCES

Funding for this project was made possible by a partnership with the USDA Forest Service