



Using the FireSmart Models as a Teaching Aide

The great thing about these models is you can generate any type of scenario you want depending on what it is that you are trying to illustrate. Though it has not been taken this far, they could even be used for illustrating the FireSmart property principles.

The Bigger Picture: Fire Ecology

Pair this lesson with a lesson on fire ecology allowing for the larger picture of the purpose and benefits behind wildfire.

Ask and answers questions like:

- What are the benefits of the forest?
- Why we need the forest?
- Why people live in the boreal?
- What does the forest do for us (from economics to health)?

This opens the conversation for talk about:

- the consequences of former fire management practices
- reasons to maintain a natural forest
- why we need to live smarter in a place where forest fires will and do occur naturally.

Talking About Fire

Before burning the models: start with the basics:

- fire triangle: heat, fuel and oxygen
- fire starts with fines and works its way up to larger fuels
- what are some of the fine materials (fines) in a forest?
- what are some of the fuels?
- where does the oxygen come from?
- what are some of the ways that a fire could be started?

Untreated Forest

This model is used to illustrate how a forest burns when there is nothing done to it.

Talk About:

- the untreated forest
- ask about what fuel sources there are
- explain the concept of ladder fuels
 - o how the flame starts in the smalls on the ground and using branches and shrubs spreads to the crown of the trees.

Use a Scenario

- Why did the fire start?
 - o Example: careless camper

- Add some realism to the models by building a small cabin style camp fire over the source (tea light).

Light the Fire

- It should start slow and spread through the undergrowth and up the trees, eventually spreading into the crown. The pattern of the spread varies from model to model, and prevailing winds can play a factor in spread.

Just **watch** the fire, people are intrigued by watching and generally do not focus on what you are saying.

After the fire has burned out (there may be a few hot spots left). **Talk about:**

- What happened?
- How did the fire behave?
- What was its spread pattern?
- Which direction did it move?
- How did it spread?
- What helped it to spread?
- Did it increase in speed?
- Did it slow down?
- When was it the hottest?
- Point out some of the hot spots and explain them.
- There may be a few deciduous trees that are just singed, talk about them as well.

Untreated into Treated

(1/3 trees removed, all trees trimmed, understory burned)

The purpose of this model is to illustrate how a FireSmart treatment can alter the behaviour of the fire and can act as a method to slow the fire down/push the fires back to ground by reducing the amount of fuel present. What FireSmart treatment is illustrated is up to the creator. Adjust your discussion accordingly.

Have the Audience

- make predictions about how the fire is going to burn based on what they saw in the last model.

Talk About

- the differences in the two halves of the model
- have them make predication about what will happen to the fire once it reaches the FireSmart area.

Light the Fire

- use the same scenario as the full forest fire

Watch what happens.

Discuss:

- The fire's behaviour
- Why did the fire slow/ stop at the FireSmart treatment?
- How did it burn differently from the first model?
- What it was hot?
- What was different in the FireSmart area that would cause the fire to behave as it did?

Conclusion

Conclude by turning attention back to:

- the benefits of forest
- why the forest needs fire
- programs like FireSmart which allow the forest to continue to burn naturally while maintaining safety: live Smart be FireSmart