# Fire Safety: Fire Facts

Instructor's Guide: Grade 7-9



# **Preface**

The First Nations Technical Services Advisory Group Inc., (TSAG), provides technical services and training for First Nations in Alberta in Asset Management, Circuit Rider Training, Water and Wastewater Management, Environmental Management, Housing Support Services, Fire Safety, Rural Addressing, Information Technology Services, and Virtual Healthcare. As a third-party service provider, we are funded by Indigenous Services Canada (ISC), and the First Nations and Inuit Health Branch of Canada (FNIHB) to deliver these services.

TSAG's values are:

Integrity: We value honesty, trust, and confidentiality in our

relationships and re committed to achieving excellence.

**Accountability:** We accept responsibility for our actions and decisions.

**Respect:** We will respect the rights of First Nations, our partners,

and our employees.

These values are the foundation on which TSAG is built. We continually strive to create programming and build capacity within our First Nations to support our people today and expand to future generations. We welcome your feedback, hope that you utilize this information as lesson plans and share the knowledge with those around you.

# **Forward**

Fire has always been an important symbol in First Nations Culture It brings warmth, prepares food and water for safe consumption, acts as a defense against predatory animals and has a spiritual meaning. It can bring new growth, but it can also bring destruction and devastation. An element as important as this requires the utmost respect and care.

The TSAG Fire Keepers initiative was created in 2022 to continue to bring awareness and education to youth about the importance of Fire Safety in and around their home and community.

As your students learn about <u>Fire and Fire Safety</u>, we hope that they will continue to develop respect for fire and recognize the significance of this element to their family, community, and culture. It is with that sentiment that TSAG is honored to share these lessons with you

# **Lesson Overview**

This lesson begins by reviewing basic fire facts in a "jeopardy like" game. Students learn about the fire triangle and how to reduce the incidence of fire. The lesson also briefly explores different kinds of fuel and highly flammable household items. Lastly, classes of fires are discussed as well has how to operate a fire extinguisher.

# **Lesson Length:**

30-45 minutes

## Materials Needed:

- Computer with projector/screen
- TSAG PowerPoint
- Fire Facts Jeopardy game
- Paper, beaker, matches, candle on a glass plate, coil of copper wire (if you plan to do the experiment in this lesson)
- Small fire extinguisher (if this is not available, a PowerPoint slide has been inserted with a labelled fire extinguisher).

# **Lesson Preparation:**

- Review this lesson plan and PPT (and speaker notes) before the class.
- Preview the videos embedded in the Power Point slides to ensure your students will not be alarmed by them.
- Practice using the "Fire Facts Jeopardy" game. To use this game, you must be in presentation mode. Ask the student to select a letter and a number. Click on that number and a new slide will appear with a question on it. Click anywhere on the slide to get the answer. When complete, click on the small blue house on the lower right corner to return to the main "Jeopardy" page.
- Preview the video https://www.youtube.com/watch?v=kGGUNM9D78A&t=2s
  and conduct a trial run of the 3 experiments from the video above. If you are
  not able to conduct these experiments, the video can be viewed, although it
  is intended for younger audiences.

# How to Make This Class Successful:

# **Before Class**

- Come prepared with examples from your own background/experience.
- Set up laptop and projector and make sure they are working properly.

# **During Class**

- Be prepared to share your thoughts on various topics.
- Keep the class on track and focused on the issues.

# After Class

• Write down your feedback on the lesson and submit it to TSAG.

# **Alberta Education Objectives:**

This lesson aligns with Alberta Education's Grade 7 Program of Studies Science

- describe ways in which thermal energy is produced naturally (e.g., solar radiation, combustion of fuels, living things, geothermal sources, and composting)
- investigate and describe practical problems in controlling and using thermal energy (e.g., heat losses, excess energy consumption, damage to materials caused by uneven heating, risk of fire

https://education.alberta.ca/media/3069389/pos\_science\_7\_9.pdfGrade 7:

# This lesson aligns with Alberta Education's Grade 9 Program of Studies Science

- investigate and describe properties of materials (e.g., investigate and describe the melting point, solubility and conductivity of materials observed)
- identify and evaluate dangers of caustic materials and potentially explosive reactions
- observe and describe evidence of chemical change in reactions between familiar materials, by: – describing combustion, corrosion and other reactions involving oxygen – observing and inferring evidence of chemical reactions between familiar household materials
- distinguish between materials that react readily and those that do not (e.g., compare reactions of different metals to a dilute corrosive solution)

Please note that TSAG has a BullEx laser training extinguisher that simulates fires and extinguishing them. If you would like a TSAG Representative to come to your school and demonstrate it for your students, please contact fire@tsag,net.

# **Fire Safety: Fire Facts**

# **Lesson Objectives:**

Together, you and your students will:

- 1. Provide examples of types of fuels.
- 2. Give examples of putting out fire by removing one of the three elements of fire.
- 3. Recognise the flammability of common household items and determine where/how they should be stored.
- 4. Classify types of fuel/fires.
- 5. Describe how to use a fire extinguisher and its contents.

| Introduction  | Check as you complete each task |
|---|---------------------------------|
| <ul> <li>Let's Begin: Teacher Introduction to Fire Safety:</li> <li>To introduce this program on Fire Safety we are going to start by building on your knowledge of fire, but first let's look at our thoughts on fire.</li> </ul>  |                                 |
| Ask the class:  ➤ Is fire good or bad?  ➤ What are the positive ways we use fire?  ➤ What are the negative ways we use fire?  ➤ What are ways we use fire that are unique to our culture?   |                                 |
| Basic Fire Facts  |                                 |
| <ol> <li>Class Activity:         <ol> <li>Play the Fire Facts Jeopardy game to review basic fire facts.</li> <li>Open the PowerPoint deck and show and discuss "The Fire Triangle" PowerPoint slide.</li> <li>Do the three experiments you viewed in the video and discuss. If this is not possible, please feel free to show the video.</li> </ol> </li> </ol> |                                 |
| Fuel Flammability and Burn Rates  |                                 |
| Topics to Discuss with your Class:  • Different materials burn at different rates depending on what they are made of.   |                                 |

# **Class Activity:**

- 1. Show the video how different fabrics and materials burn and discuss any questions in the speaker notes.
- 2. Show the movie embedded in the video "10 Household items" that are highly flammable and discuss any questions in the speaker notes.

# **Fire Extinguishers**

# **Topics to Discuss with your Class:**

 Fuel Types are classified into 5 groups, but only 3 pertain to home fires.

# **Class Activity:**

- 1. Show the PowerPoint slide on the classes of Fires and types of Fire extinguishers.
- 2. As you review it ask what they see in terms of types of fire extinguishers needed for types A,B, and C fires.
- 3. Show the sample fire extinguisher (or the PowerPoint slide) and discuss the parts of the extinguisher.
- 4. Show the video on how to use a fire extinguisher and discuss as per the speakers notes.
- 5. Show the PowerPoint slide on the process.
- 6. If you have a real fire extinguisher, demonstrate how to do the sweeping motion.

# **Concluding Activity**

## Ask the class:

- What does a fire need to survive?
- How can you prevent a fire?
- How can you extinguish a fire?
- Why are flammable materials more dangerous?
- > What does flammability have to do with clothing?
- What are the 3 classes of fire?
- What is the acronym for using a fire extinguisher?

# **Class Activity:**

1. Ask the students to share the most surprising thing they learned today.

# **Take Home Activity**

- 1. Ask the students to check to see if their home has a fire extinguisher and check the expiration date.
- 2. If the extinguisher has expired, they must tell their parents.
- 3. They must also look through their house and note any fire hazards they learned about today.
- 4. Discuss their findings on the next school day.

# Bibliography

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