CapeNature Cubs Club

Kids Conserving Nature

GROUPS

Cubs Club lesson plan
Fearless Fire

Use this lesson plan to support your action projects for this term.

Date

August to October 2026

Duration

Between 1 to 8 hours (depending on projects selected)

Support material from toolbox



Kai & Friends Book

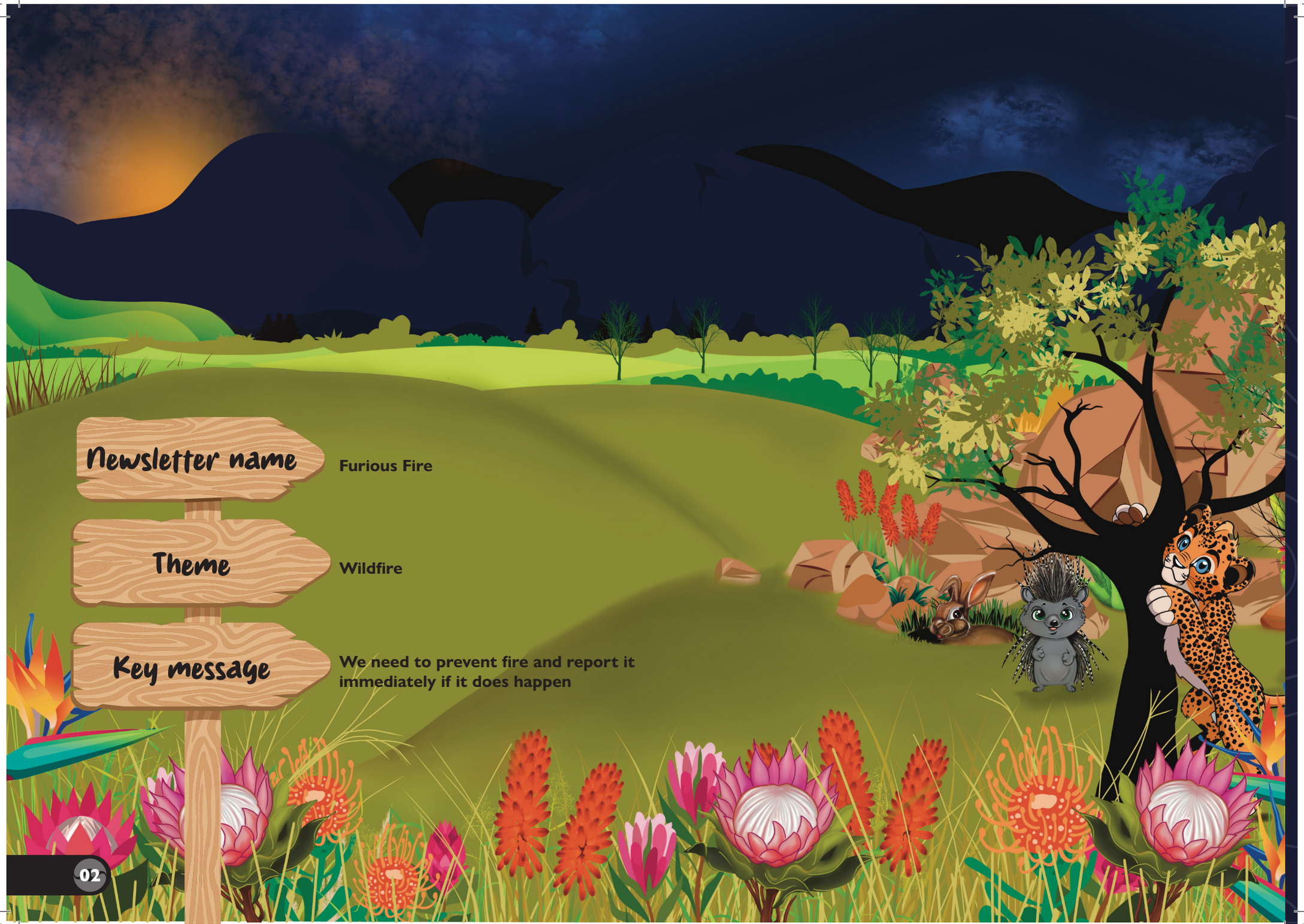

Fire booklet


Stationary



112 Pamphlets




Newsletter name
Furious Fire
Theme
Wildfire
Key message
We need to prevent fire and report it immediately if it does happen

Topics covered

Fire

- The fire triangle
- Causes of fire
- Fire prevention
- Types of fire

Curriculum links

Subject: Natural Science and Technology Grade 5/ The Fire Triangle

Natural Sciences and Technology/ Topic: Fuel Energy / Grade 5

Life Skills Grade5 / Strand: Personal and Social Well Being/ Topic: Health and Environmental Responsibility – safety measures at home and the environment

Outcomes

Know

- What fire is
- What causes fire
- What the fire triangle is and how it relates to being able to prevent or put out fire

Do

- Actively do something to prevent or report fire

Value

- Believe that it is our responsibility to prevent fire

LESSON PLAN

1. Introduction to the day's activities

THINGS TO REMEMBER BEFORE STARTING YOUR LESSON

- Introduce staff
- Outline of the day/what to expect
- Rules of engagement
- Safety brief (if any)
- Divide into groups if applicable

2. Setting the scene/tuning-in

You want to teach the group a little bit about what fire is before completing your action project. Use the article in the newsletter as background information.



PART 1: TUNING IN TO FIRE

ACTIVITY

OPTION 1
STORYTELLING

DURATION

30 minutes

RESOURCES

Kai & Friends Story Book

CIRRICULUM LINK

Subject: Natural Science and Technology

Grade 5: The Fire Triangle

READ THE "KAI & HIS FRIENDS ESCAPE A WILDFIRE" STORY TO THE LEARNERS.

Use parts of the story to be interactive. For example, when Kai counts to ten for hide and seek, let the class count with you or when Siya goes to warn other animals, let the class help call out to warn other animals.

KNOW: Read the part about the fire triangle again after the story. Explain that fire needs three things – heat, fuel and oxygen. Explain that if one of these are removed, you can stop the fire or put the fire out. Use examples as with the additional information provided about the fire triangle.

DO: Ask learners some probing questions such as:

- What did Kai and friends do to get away from the fire? (they ran to a wet, safe spot). Explain how this relates to the fire triangle – an open area has no fuel to burn, and water will remove heat to put the fire out.
- Ask learners what they can do when in a nature area and there is a fire? Explain they can do the same, get to a road and call for help immediately.

VALUE: Ask learners why they think fire is bad for wildlife and why we need to prevent it. Explain that fire can hurt animals like Poki and Monty and Kai, but also that it destroys the plants and with this, their homes and food. Ask them to think about where Kai would live after the fire destroyed his home or what Siya would eat with all the plants burned down. Explain that we need to prevent wildfire and we need to report it is we see it.



"One, two, three, four, six, seven…," shouted Kai.

'Nonsense, Kai, it's one, ttt-two, three, ffff-four, five, six…," corrected Monty.

"Alright, whatever," replied Kai, "we're coming to get you, Poki!"

As they were exploring every nook and cranny looking for Poki, the sun peaked over the eastern horizon, and they felt a strong wind stir the fynbos. Monty looked up and saw dark clouds of smoke billowing in the distance. Monty and Kai felt the wind blow hot against their fur as a bitter burning smell hit their nostrils.

"Wh-wh-what's happening?" Monty asked, his long ears twitching with worry.

"It's a fire!" squeaked Poki, as he came lumbering out of the fynbos, his quills standing on end. "We need to get out of here!"

The three friends knew the dangers of fire and they knew that they had to get to safety quickly. They had been told about the fire triangle many times. In order to start a fire, it needs a combination of three things: heat (for example, a flame), fuel (such as fynbos), and oxygen (in the air).

"The fire is getting closer very quickly," screeched Kai. "It's because of the strong wind blowing towards us!"

Together, they dashed through the hills, the heat of the flames growing closer and closer with every step.

"You bbb-etter make sure that I get out of here alive," said Monty. "I tttt-told you that I am one of the most threatened species in the world."



"And I'm the largest porcupine and rodent in Africa," quipped Poki.

"Tell that to my mom," yelled Kai, "…and she might eat you alive if we don't all make it!"

But as they ran, Kai suddenly yelped in pain and stumbled. He had stepped on some burning cinders that the wind had blown into their path.

"My paw! It's burning!" Kai cried, cradling his injured paw.

Monty and Poki rushed to Kai's side, their hearts pounding with fear. "W-w- we have to keep moving, Kai," Monty urged, his nose twitching with urgency.

"It hurts," Kai whimpered, tears welling up in his blue eyes. "I can't run." Poki pondered for a moment, then said, "Old chap, we'll help you! We'll all stick together and we won't leave anyone behind."

Monty and Poki came up with a quick plan. Monty wrapped Kai's injured paw in a leaf and hopped under it, helping him to walk, while Poki, who moved surprisingly fast, used his quills to clear a path through the thick underbrush. They moved slowly but steadily, each friend supporting the other.

As the fire roared closer, Poki was tiring, and Monty was sobbing from fear, while bravely hopping along, supporting Kai's injured paw. Kai was trying to be brave and live up to the meaning of his name: fighter, warrior, and protector of the earth.

As they missioned on, they heard overhead the high-pitched warning call of their friend, Siya, the orange-breasted sunbird.

"Eet-eet eet-eet dzeeu dueeu," he warbled, warning all his friends of the danger of the fire, and bidding them to follow him. Siya kept looping back, encouraging Kai and his friends to hurry up and stay close behind him.



With their eyes watering from the heat and soot, they finally reached a clearing. There was a sand road ahead of them, next to a burnt area of fynbos.

"Stay here, it's safe as there is no fuel for the fire to burn," shouted Siya, as he flew off to warn and guide the other animals.

"W-w-we made it!" Monty exclaimed with relief.

Kai's paw throbbed, but he nodded bravely. "We need to help Siya warn other animals about the fire. We can't let anyone else get hurt," he said, determination shining in his eyes.

The three friends gathered their strength and began calling out to the other animals across the landscape, warning them of the approaching wildfire. The air echoed with their cries, and soon, other creatures joined in the effort to spread the word to move to a place of safety. As the fire raged through the fynbos, everyone huddled together on the sand road, comforting one another in the face of the danger.

After what felt like an eternity, the crackling of the flames grew faint, and the air cleared of smoke. The once vibrant green hills were charred and blackened, but the animals were safe.

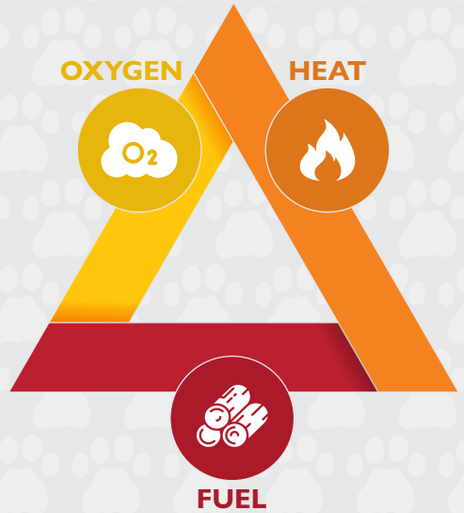
Kai, Monty, and Poki looked around at the devastation, and all of their hearts ached for home. "The fire may be gone, but the damage it caused will take time to heal," said Poki solemnly.

Monty nodded in agreement, his one ear flopping down. "W-w-we must remember today and the dangers of fire. We have to be c-c-careful and work together to stay safe."

Kai thanked his friends for rescuing him. They all walked slowly home, thinking about how lucky they were to escape the wildfire. They had a great adventure to share with their families. For the first time they had experienced a real wildfire. They had learnt some valuable lessons about its dangers, as well as the strength of friendship.



THE FIRE TRIANGLE



HEAT SOURCE. A fire needs a spark or flame to start. Fuel needs to be brought to ignition temperature in order for it to ignite. If the fuel drops below ignition temperature, the fire will go out. The most effective way to reduce this temperature is by cooling the fire with water.

FUEL OR COMBUSTIBLE MATERIAL: Dry vegetation, dry wood (furniture/ house structure), paper, plastics, rubbish, etc. The most effective way of preventing a fire is by removing or reducing the fuel.

OXYGEN is essential to sustain combustion (burning). Air is made up of 21% oxygen and the rest is a mixture of other gases predominately nitrogen (78%). The last 1% is made up of water vapour, carbon dioxide and other gases. If the level of oxygen drops to 15% or less, neither people nor a fire will survive. An effective way to remove oxygen from a fire is to starve it by smothering or covering it, usually with sand or soil.

- Take one of these elements away and the fire will die/be extinguished/not start.
- Every year, weather conditions (prolonged high temperatures, wind and dryness) combine to produce an optimal environment for wildfires. Dry debris on the ground (fuel) is ignited by lightning or careless humans (heat), and the resultant fire is supported by the surrounding air (oxygen).
- Use the analogy of a 3-legged stool - take a leg away and the stool no longer stands.

Remove air/oxygen:

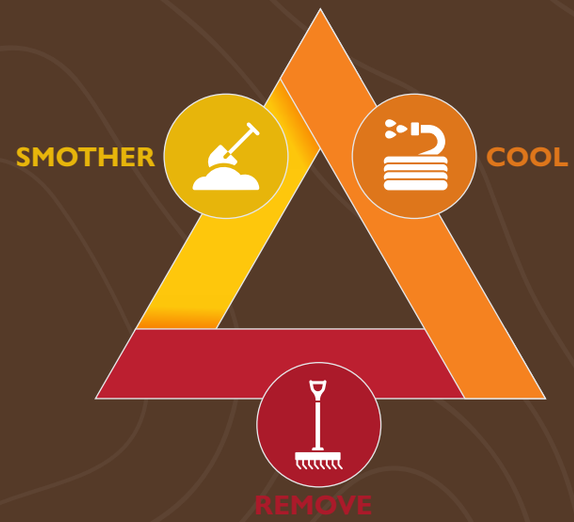
- smother with a blanket/clothes/sand/water/fire extinguisher/foam.

Remove heat/ignition source:

- add water/use fire extinguisher (water cools the heat, drops the fuel temperature to below ignition temperature and it adds moisture to potential fuel, thus stopping it from catching alight).

Remove fuel:

- take anything flammable out of the fire-path;
- remove invasive alien vegetation;
- create a fire break/prescribed burning.



COOL
Lower the temperature of the fire (usually with water) so the fuel can no longer burn.

SMOTHER
Cut off the fire's oxygen supply by covering it with soil, foam, sand, or a fire blanket.

REMOVE
Take away the fuel by clearing or separating burning material so the fire has nothing left to burn.

ACTIVITY

OPTION 2
GOOD FIRE BAD FIRE ACTIVITY

DURATION

15 minutes

RESOURCES

Fire booklet and good fire/bad fire activity, pen/pencils

CURRICULUM LINK

Life Skills Grade5 / Strand: Personal and Social Well Being

Topic: Health and Environmental Responsibility – safety measures at home and the environment

KNOW: Ask learners if they can tell you what fire is. Explain that there are two types of fire, useful or good fire and harmful fire.

DO: Ask them to complete the good fire/bad fire activity in the fire booklets. Ask them to write down other useful and non-useful examples of fire.

VALUE: Ask learners why they think fire is bad for wildlife and why we need to prevent it. Explain that fire can hurt nature. Explain that fynbos needs fire every now and again for seeds to grow, but that would be through natural causes usually – like lightning. If fire happens too often, it can destroy plants, their homes and everything else. Ask them to think about what would happen to animals and plants after a fire. Explain that we need to prevent wildfire and we need to report it as we see it.

WHAT IS FIRE?

INTRODUCTION LESSON



Background information:

- There are two kinds of fire - USEFUL and HARMFUL (dangerous).
- Words associated with USEFUL fire: warm, cooking, comforting. braai, bonfire, romantic, gives light, etc.
- Words and phrases associated with HARMFUL (dangerous) fire: deadly, fast, scary, hot, things get burnt, homes get burnt, uncontrolled, life of its own, dangerous, kills, possessions get destroyed, people get hurt and even die, smoke, destroys environments, veld, animals' homes, wild.
- An 'innocent' fire, such as burning garden rubble or cooking on a fire, can easily get out of hand if the wind picks up, turning it into a harmful or dangerous fire.



AGE ADAPTATIONS

OLDER CHILDREN

Have older children write down more complex examples of useful and harmful fire. You can also add in the causes of fire, both natural and unnatural.

2. Action Projects

Ensure to consult your newsletter for point allocations for each activity. Any number of activities below may be completed and is entirely optional. The more projects that are completed, the more points your group will earn.

ACTIVITY

OPTION 1
CREATE A DEFENSIBLE SPACE AT YOUR SCHOOL/CLUB/ COMMUNITY

DURATION

1 hour to 8 hours (depending on complexity)

RESOURCES

Items needed to create defensible space – depending on each scenario.

POINTS

Your group will earn 200 points for a defensible space created.

EVIDENCE

Send us a before and after picture of a building/ home/ area that had no defensible space before – but after mowing, cleaning up, removing, changing – it now does, and earn a whopping 300 points for the group!

CURRICULUM LINK

Natural Sciences and Technology/ Topic: Fuel Energy / Grade 5

The term "defensible space" describes vegetation management practices aimed at reducing wildfire threats to homes. A defensible space is the area between a house/ building/community and an on-coming wildfire where the vegetation has been changed to lessen the wildfire threat and to provide an opportunity for firefighters to protect the area. Sometimes, a defensible space is simply a homeowner's properly maintained backyard.

Many people do not see the plants growing on their property as a threat. In terms of wildfire, the plants next to the property can have a very big influence upon the ability of the fire to survive. If plants are properly cut or removed, a wildfire can be slowed, the length of flames shortened, and the amount of heat reduced, all of which assist firefighters to protect the property.

Select a home/building or other space. Identify the fire risks. Resolve as many of the risks as possible and then reduce the fire risk by creating a defensible space around the area.

Defensible Space (keeping your home safe)



ACTIVITY

OPTION 2
SPOT THE DIFFERENCE ACTIVITY

DURATION

10 min to 20 mins

RESOURCES

Pens/pencils and copies of the spot the difference activity

POINTS

Earn your group 50 points for completing the spot the difference activity.

EVIDENCE

Submit your completed spot the difference activities to us.



Outdoor safety



Spot the different dangers

Can you find all 17 dangers in the bottom picture?



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ACTIVITY

OPTION 3
DECREASE FIRE HAZARDS AT YOUR SCHOOL/CLUB/ COMMUNITY

DURATION

30 min to 8 hours (depending on how long it takes to make arrangements and implement

RESOURCES

Clean-up resource's dependant on type of hazards (rake/ trash bags etc.)

POINTS

Earn 150 points for decreasing the fire hazards around your community/home.

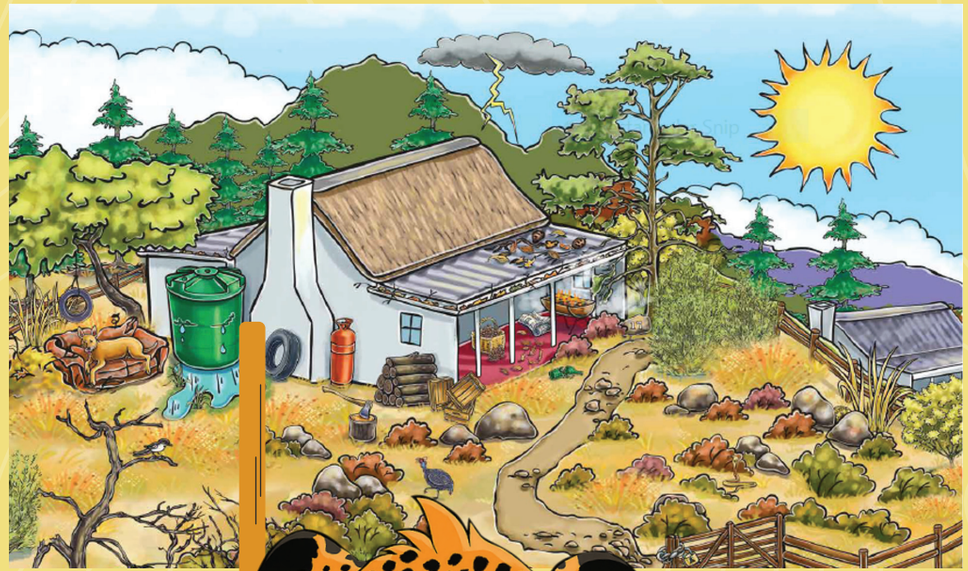
EVIDENCE

Before and after picture

CIRRICULUM LINK

Natural Sciences and Technology/ Topic: Fuel & Energy Grade 5 /

Fire hazards are those things that act as fuel or a heat source for fire. Garbage, litter, oil, gas tanks, dry leaves, old tyres…the list is endless. For this action project we would like to see a before and after picture of an area where the fire hazards were removed.





ACTIVITY

OPTION 4
REPORT SMOKE OR FIRE

DURATION

10 min - 1 hour

RESOURCES

Emergency numbers posters or pamphlets.

POINTS

Earn your group 100 points for displaying the emergency numbers in a prominent place in the community. Earn an extra 50 points for each display after the first.

EVIDENCE

Submit a picture of the emergency number posters.

CapeNature

REPORT
FIRE AND SMOKE

Reporting a fire quickly can mean the difference between minor damage and total devastation.

Help us act quickly and report smoke or fire



112 from a cell phone
10177 from a landline

4. Consolidation



CONSOLIDATION OF FIRE ACTIVITY



15 minutes



Paper and pen, flipchart board or something to stick papers onto, and prestick.

Ask kids to think about one thing they can and will do to prevent fire in future. Ask them to make a pledge and write this down on a piece of paper. Let each child come up to the front, tell you what their pledge is and stick it on a wall or the flipchart.

CAUSES OF WILDFIRE

BACKGROUND INFORMATION:

WILDFIRE: *An unplanned and uncontrolled fire spreading through vegetation, at times involving buildings.*

- More people are building their homes in what is called the wildland-urban interface. This is where development meets the natural environment. The danger of wildfire is very real in these areas. especially when surrounded by mountains. As the number of homes and other structures increases, so does the threat of wildfire to people and property.
- Every wildfire requires some spark or fire to start it.
- More than 90% of wildfires in the Western Cape are started by people.
- The main causes of wildfires are:
  - **Heavy equipment** or machinery being used in rural areas: harvesters, tractors, grinders, etc.
  - **Lightning:** Lightning is a cause of both wildfires and structural/house fires. In the Western Cape lightning is usually accompanied by rain. However. this is not always the case. Sometimes there is lightning on hot days or nights often accompanied by strong berg (warm) winds. This can easily ignite dry vegetation and rubbish. If a person has a house with a thatch roof, there should be lightning deflecting rods on the roof that will stop the lightning from hitting the thatch and igniting it
  - **Cooking fires:** Open fires for cooking and discarded hot ashes can cause wildfires, particularly in natural areas or on farms.
  - **Smoking:** Discarded cigarette butts can cause wildfires, be these from people working in the veld. passing pedestrians or motorists.
  - **Burning of debris:** Permitted and unpermitted burning of debris if badly managed, or if weather conditions change suddenly. can cause wildfires.
  - **Intentional:** Riots and unrest are also common causes of wildfires. Fires are sometimes set on purpose - this is called MALICIOUS INTENT.
- Human ignition: In large fynbos areas that are located close to major population centres, wildfires are largely due to human ignition. A careless match. cigatette butt, an unattended campfire, the use of fireworks, the uncontrolled burning of debris or

the sparks from equipment - these unplanned but deadly occurrences destroy lives, the environment and property. With forethought and care. many wildfires can be prevented.

- Youth/juvenile fire setting behaviour: Some studies show that youth between the ages of 11 and 14. particularly boys, are at the greatest risk for setting fires. The vandalism category is most closely associated with juvenile and adolescent fire setting. The fires are "set when the opportunity arises. often after school or on weekends. Boredom and frustration among youths, sometimes lead to peer. group challenge to create some excitement".
- Prescribed burns are conducted under very controlled conditions to promote growth and prevent uncontrolled wildfires.

WHEN CAMPING:

- Children must never be allowed to make a fire without adult supervision.
- Fires should ONLY be made in designated fire areas - not anywhere else. In the Western Cape. campsites have allocated areas for campfires.
- Never leave a burning or smouldering outdoor fire unattended.
- Before leaving the site or going to sleep, soak the fire with water and stir sand into the ashes or coals until every spark is out. Be careful of the hot steam and splashes when the water comes into contact with the hot coals.
- Never use candles, matches or gas stoves in a tent; it can burn within minutes trapping its occupants inside.
- Place tent upwind and well away from a campfire.
- Build the fireplace downwind, away from the tent, clear away all dry vegetation, dig a pit and surround it with rocks/stones.



Acknowledgment to the partners involved in the creation of the Fire Activity Book and Flipchart, from which much of the background information has been sourced.



Kai

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