

WOF Fire Awareness Manual: Intermediate Phase



Environmental Affairs
Agriculture, Forestry and Fisheries
Co-operative Governance
Water and Sanitation



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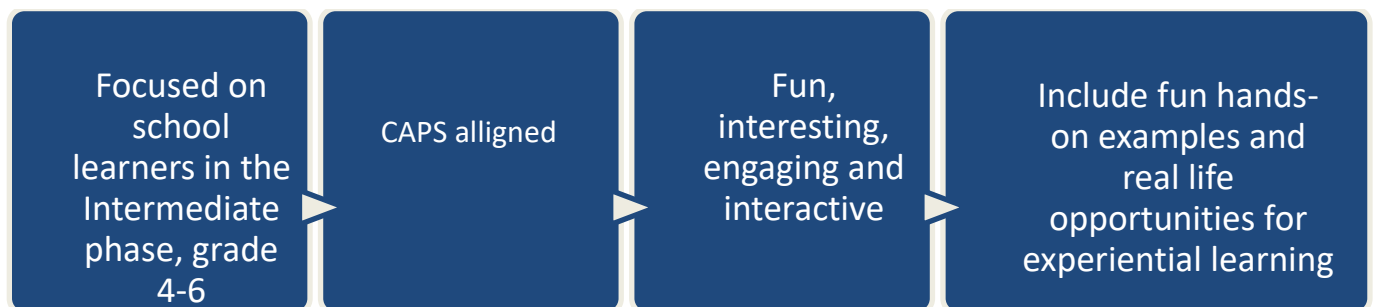
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INTRODUCTION TO THE FIRE AWARENESS FACILITATORS MANUAL

Project Overview:

The Fire Awareness facilitators manual has been developed by the Working on Fire trainers and has been specifically designed for the fire fighters, equipping them with the tools to facilitate education programmes at schools. The manual consists of **16** curriculum aligned lesson plans. The Fire Awareness Education Programme is a component of the Working on Fire Communications structure with the Communication and Marketing functions. The Fire Awareness Education programmatic goals have been aligned with the Department of Environmental Affairs and Working on Fire manifestos.

Focus Points of the guide is to be:



Education Rationale:

The education rationale chosen for this guide and for facilitating the course content is based on an Action Learning approach.

Action Learning – an open-process framework:

5 T's have proved a useful orientating framework for an action learning approach. In this regard the interlinking activities of "Tuning in or finding out what do we know already, "Talk" or dialogue, "Touch" or real-life encounters, Think or reflection and "Take action" are helpful for orientating the learning. Each of the 5 T's are illustrated in the figure and are further outlined below.

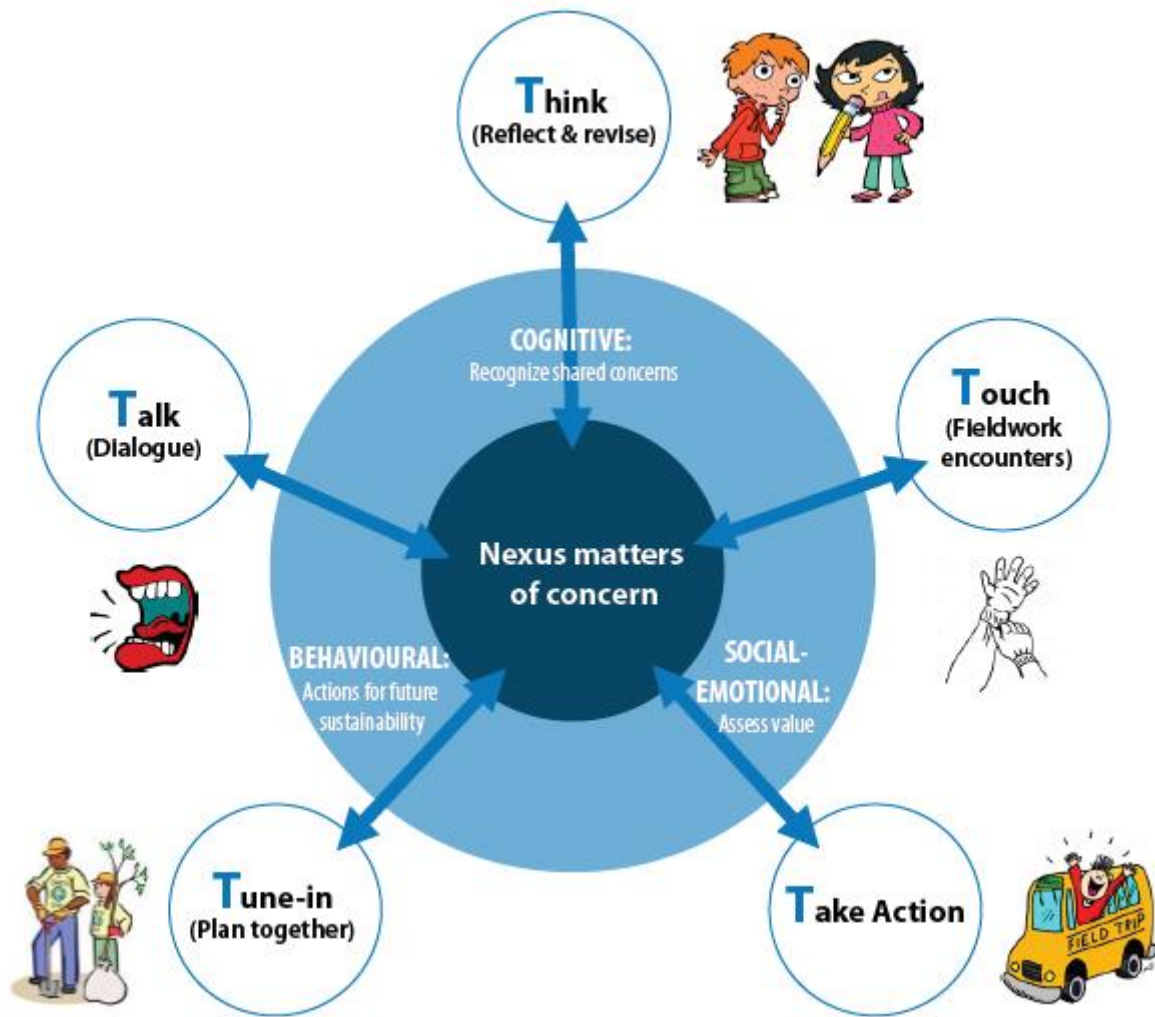


Figure 1: The 5 T's of Action learning, obtained from O'Donoghue, R., Taylor, J. & Venter, V. (2018).

Tuning in and planning – What do we know already?

A key part of any learning experience is careful planning with the group leader and where possible the group itself is important. Here a good facilitator will seek to ask learners the knowledge they already have about the topic. This helps in getting the learners attention and for them to be involved in the lesson about what they are discovering can enhance the learning experience a great deal.

Touch or real-life encounters - “What are we finding out together?”

A learning experience that includes a real-life encounter or ‘doing’ experience is usually more meaningful than learning experiences where facts are simply communicated to learners Encourage learners to share their life experiences concerning the topic.

Thinking and reflection – “What is this issue here and what can be done about it?”

We live in challenging times and most environmental/social issues are complex and difficult to understand. A chance for learners to reflect on what they are learning and to consider questions about the learning helps deepen the understanding and again learners can engage in questioning rather than simply be the receiving knowledge as facts.

Talking and dialogue – “What do we already know and what are we finding out?”

Talking and sharing amongst learners as they seek to clarify what they already know and what other information they need to find out is a further helpful activity in building an “action learning” approach. Where the teacher or facilitator does all the telling, and learners simply listen and try and remember, is not as powerful a way of learning as where learners explain to each other what they are finding out and what the implications are.

Taking Action – “What can we do about the issue we are learning about?”

Taking action is an important part of the active learning approach to change. Its always important to ask learners after learning something to put that into action. This will ensure that learners will remember the topic taught.

Key principles for supporting meaningful learning:

The following principles have been developed in collaboration with Heila Lotz-Sisitka and the Southern African Development Community – Regional Environmental Education Programme (SADC-REEP) in a wide range of learning contexts. When considering learning processes, it is important to remember that it is part of a continuously changing situation.

Thus, our action learning approaches should:

1. Be relevant and appropriate to the situation of the participants.
2. Be aware of, and seek to connect with, the context in which the learning is situated and the topics under consideration.
3. Mobilise, wherever possible, the prior knowledge or understanding that people have so that it can be engaged with,.
4. The learning needs to relate to the environment of the individual rather than be removed
5. Offer participants the opportunity to engage in task or practice-based learning to strengthen the learning experience.
6. Build on existing strengths and opportunities
7. Support Action Learning Rich dialogue opportunities (discussion by, with and amongst participants), practical field-work experiences, reporting on experiences and sharing ideas as well as 'action taking' related to the learning.

How to use the lesson plans:

- The lesson plans provide the foundation of each lesson (awareness session) to be conducted by the fire fighters.
- The visuals contained in the A Frame Flip chart should be used alongside each lesson plan in order to make the lesson more interesting and effective.
- The Fire Awareness Topics guide must inform which topic is to be taught to a specific grade per school term. The topics guide will ensure that the lessons facilitated supports/compliments the school curriculum.

It is therefore important that the lesson plan, topics guide and A Frame flip chart is used for each lesson.

Each lesson consists of the following:

- **Fire Awareness Category:**
- **Lesson topic/theme:**
- **Aim of the lesson:**
- **CAPS Alignment:**
- **Skills:**
- **Resources:**
- **Introduction and welcome**
- **Icebreaker**
- **Expectations and rules**
- **Main lesson**
- **Demonstration/activity**
- **Assessment and conclusion**

TOPICS GUIDE

Use the topics guide below to determine which of the lessons in this Fire Awareness manual is the most relevant topic to be facilitated at a school at a certain time of year for the specific grade which you are visiting.

- Festivals and Special days celebrated by the community should be discussed as they occur throughout the term (Two hours per term are allocated for this)

Term 1: January-March
Term 2: April- June
Term 3: July-September
Term 4: October - December

INTERMEDIATE PHASE GRADES 4-6

TERM	GRADES	SUBJECT	FA TOPIC	ENVIRONMENTAL LINK & ACTIVITY	SKILLS LEARNT
TERM 1	4	Social Science- Geography	-Topography -Fire proof your home	Places where people live- human settlements	Draw up field sketches of settlements
	5	Natural Science/ Technology	Biodiversity	Importance of preserving resources to maintain biodiversity	Identify different types of vegetation
	6	Social Science	Topography	Atlas and maps and terrains	
TERM 2	4	Social science	Topography	Settlements and map work	
	5	Social Science	Topography	Landscapes- different features	Building a makeshift hill
	6	Natural Science	Fire and Wetlands Fire and Alien	Importance of wetlands and how fire can help	Building a model wetland Cleaning up a wetland



			Invasive in wetlands	to preserve them or spread fires	
TERM 3	4	Natural Science	Fire Dynamics and Behaviour -What is Fire	Energy for life-conduction,	Consider a small control burn
	5	Life Skills	Fire Safety- Causes and Prevention. Stop drop n roll, crawl low under smoke, Evacuation Impacts of fires	Fire safety	
	5	Social Science	Inside the house fire safety -What is Fire	Safety with electricity	
	5	Social Science	-Climate change and fire -What is Fire Understanding FDI		Develop an FDI board Check FDI using the FDI metre
	6	Social Science	-Fire and climate change -Biodiversity	Weather climate change and vegetation	Identify different types of vegetation in your area
TERM 4	4	Social Science- Geography	Wetlands and fire Invasive Alien plants- on water resources	Water conservation	
	5	Social Science- Geography	-Topography -Impacts of wildfires	Surface of the earth	
	6	Social science	-Impacts of fire Fire Risks -Dos and Don'ts	Link to importance of nature conservation to facilitate sustainability of all lives	Conduct risk Assessment

LESSON 1: WHAT IS FIRE?

Fire Awareness Category: Fire and Environment

Lesson topic/theme: What is fire

Aim of the lesson: Learners understanding what is fire

CAPS Alignment: Refer to FA Topics guide

Skills: Thinking critically and team work.

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF.	2mins	A Frame Flip chart Koki pens
<u>Ice breaker</u> 2.1: Do an ice breaker of your choice with the learners. This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speak the language of the learners and relate to your audience.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson	2mins	

3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)		
<u>4.Main Lesson</u> 4.1Ask the learners have you seen a fire? 4.2: Where was the fire? 4.3: What was the colour of the fire? Middle Phase (Revealing of new content) 4.4:To make fire we need to have 3 things: -Something that can burn(papers) -Something that will make heat(matches) -Air(Ask the learners to hold your breath) 4.5: What can we use fire for? -Cooking(by stove) -Warming ourselves -Lighting -Heating	5 min	
<u>5: Demonstration/Activity</u> Resources; - Candles - Sand 3 Empty bottles with cap. They should be of 3 different sizes big, medium and small Methods Place sand in a jar ,cut the candle in half, place it in each jar, light it then put the lid on Check how long it will take for each lit candle in each different sized bottle to die Ask learners what they are seeing happening Explain that if we take out the air as we did by putting a cap in the bottle with a burning candle, the fire dies.	20 minutes	Candles, sand, 3 empty bottles of different sizes, big, small and medium Matches/lighter
<u>6.Conclusion and Assessment</u>	5mins	

Ask learners to explain what happened when we close the bottle? And why? So there are 3 things that make up a fire which are air, heat and something burning like paper. If you take out any of the 3 then there is no fire. Thank all the learners and educators and thereafter dismiss the class.		
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LESSON 2: FIRE DANGER INDEX

Fire Awareness Category: Fire and Environment

Lesson topic/theme: Understanding Fire Weather

Aim of the lesson: Learners to understand the different type of weather so as to be careful on what to do and not do regarding fires

CAPS Alignment: Refer to FA Topics guide

Skills: Analytical, Thinking

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF.	2mins	A Frame Flip chart Markers Coloured cards Picture of a Robot FDI A frame page

<u>Ice breaker</u> 2.1: Do an ice breaker of your choice with the learners. This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speak the language of the learners and relate to your audience.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)	2mins	
<u>4.Main Lesson</u> Explain to learners that FDI refers to the rating of the fire weather on a given time. This is measured so that people can be guided in activities which cannot or can be done depending on the weather. Optional: Show pictures with different types of weather Referencing of picture should be tied to the lesson plan eg picture 1 going with lesson 2 FDI in A Frame Chart Explain to learners that fire danger index can be likened to the robot which they already know. So now they are going to look at the colours that make up a robot and what they stand for or mean, This is also similar to the colours that make up fire danger Index. Ask the learners about colour the robots have. Ask them about the meaning of the colours in the robot. After they answered you give a further explanation to them about the meaning of the robot colours. Remember to have a picture of a robot with you to assist in terms of visual aid if not draw the robot in a flip chat paper.	10 mins	

 Try to link the colours of the robot with colours of FDI because both colours has the same meaning, the only different is that we have more colours in FDI chat. Explain the colours of FDI and remember to simplify the colours as much as you can. Blue = simple mean it's a raining day. You can burn because the fire won't say Green = having clouds but fuel can burn Yellow = temperature is up and have wind Orange = hot and it's windy Red = very hot and too much wind After you have explained to them in a simple way then ask them about the current weather using the information above.		
<u>5: Demonstration/Activity</u> Put 5 different colours that FDI has in different angles of the classroom. Then you will call the weather situation they will run to the colour.. Blue = A raining day. You can burn because the fire won't spread. Green = having clouds but fuel can burn Yellow = temperature is up and have wind Orange = hot and it's windy Red = very hot and too much wind Make sure that you control the activity as you can.	20 minutes	
<u>6.Conclusion and Assessment</u> Recap on the importance of matching the colour of the FDI with the weather	5mins	

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LESSON 3: FIRE CAUSES

Fire Awareness Category: Personal Safety

Lesson topic/theme: Fire Causes

Aim of the lesson: Learners to gain understanding of what causes fire

CAPS Alignment: Refer to FA Topics guide

Skills: Critical thinking, group work, team work

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF.	2mins	A Frame Flip chart paper Koki pens
<u>Ice breaker</u> 2.1: Do an ice breaker of your choice with the learners. This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speak the language of the learners. And relate to your audience.	2mins	
<u>3.Expectations and rules</u>	2mins	

3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)		
<u>4.Main Lesson</u> Ask the learners if they have ever seen a fire and what started that fire. Inform the learners that in order to understand the causes of fires, you will lead them into a group activity where they will discuss the causes of the fire and paste on them on a given Flip Chart brought by the Facilitator. They will do this as a group. After the group activity, the facilitator will then give a summary of all causes both identified by the learners as well as the additions by Facilitator from the lesson as below; ACTIVITY –Refer to below Activity Here are some of the causes of Fire; Leaving fires of Imbawula – fire drums burning while no one is there to check the fires Leaving stoves on and no one in the cooking room Leaving candles burning and there is no adult to check it Broken electrical wires on appliances can start a fire Heaters/electric blankets left unattended If adults throw away burning Cigarettes on the grass Fire places that are lit next to things that can burn like newspaper, books Gas leaks followed by a spark Children playing with matches near things that can burn Burning oil on a stovetop can start a fire Burning garbage on a hot windy and dry weather can make fires to start Throwing litter everywhere can cause fires if it's a hot windy day Keep the area around a fire place clear of anything that can start a fire Don't leave any heater or open flame burning while you leave the room. Keep flames or ashes away from foam mattresses, couches, curtains and carpets.	5 min	

In case of fire call 112 Number for help		
<u>5: Demonstration/Activity- Things that start up the fire</u> Resources; Flip chart paper with things that start and those that do not start a fire as below Red coloured paper cut into small cubed papers x20 Green coloured paper cut into small cubed papers x 20 Prestick Instructions; 1. Draw and write on the flip chart the things that can start fires. Refer to the table chart below 2. Also put up on the same flip chart the things that do not start fires. These are water bucket, teddy bear, orange etc. as in the below chart. 3. Mix the things that start fire with those that cannot start fire 4. Divide the learners into two groups or depending on how big the group is. 5. Give group A about 20 small cut red coloured papers and 20 green coloured papers for group B. Give them Prestick to use to paste. 6. Ask the learners to come one by one from each group and or paste on the things that can start fires 7. The facilitator calls out group A and then Group B alternately until all their cards are finished. There should be a time keeper. Each group is given only 30seconds to go paste and if the time lapses they should stop. The facilitator should stop them. 8. Finally the Facilitator counts the groups response and score them. 9. The facilitator can also correct where possible the wrong answers by the groups 10. Wrap-up by further explaining the things that start fire. As in the above lesson body. 11. Tell learners to stay away from those things FLIP CHART PAPER WITH THINGS THAT START FIRES MIXED WITH THINGS THAT DO NOT START FIRES	15 minutes	Koki pens Flip chart Red coloured papers Green coloured papers Prestick

Heap of Litter boiling water rocks papers child playing near open fire dry grass milk water bucket wood Teddy bear matches orange fire drum Electrical heater cow cow dung parrafin Cigarrete buds firelighter open fires Fresh tree electric blankets cellphone Gas bottle electric stove with a pot on top Burning garbage dry leaves on top of roof hot ashes Lightining firebreak wind Fire drum left unattended cellphone charging under a pillow heaters next to papers		
<u>6.Conclusion and Assessment</u> Ask learners to name the things that can be done to prevent fires. Wrap up the lesson and thank everyone.	5mins	

LESSON 4: SAFETY IN AND AROUND THE HOUSE

Fire Awareness Category: Personal Safety

Lesson topic/theme: Do's and Don'ts

Aim of the lesson: Participants to gain an understanding of the Do's and Don'ts when it comes to fire safety in and around the house

CAPS Alignment: Refer to FA Topics guide

Skills: Perceptual skills (using the senses to acquire information about the surroundings, environment or situation)

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF.	2mins	A Frame Flip chart Picture building cards
Ice breaker 2.1: Do an ice breaker of your choice with the learners. This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speak the language of the learners and relate to your audience.	2mins	
3.Expectations and rules 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time) 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)	2mins	
4.Main Lesson Introduction (link with prior knowledge) What the learners already know Use discussion questions to allow the learners to tune in/connect with the topic. Some examples are: • Have any of you ever been burnt? • Do you know what causes fires? Once the learners have shared their stories and given their responses: • Tell the learners that you are going to play a game • Tell the learners that you will teach them what they can do to help prevent fires and what they shouldn't do.	5 min	A frame chart: Do's and don'ts, Hot things to stay away from, Be fire safe outdoors. Picture cards

Middle phase (Revealing new content)

To support you with relevant information, refer to the following A frame chart pages:

- Do's and don'ts,
- Hot things to stay away from,
- Be fire safe outdoors.

Some age appropriate examples are:

Don't play with matches

Don't leave fires unattended after warming yourselves and your parents

Don't play with electric wires

Don't light the candle if there are no adults around

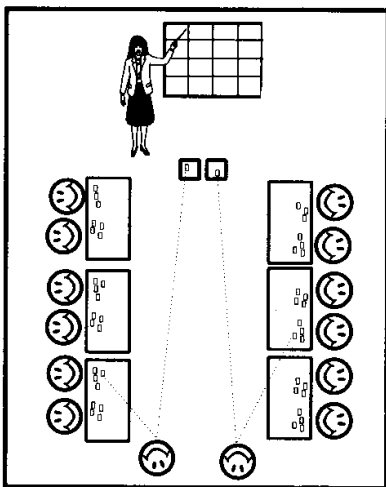
Don't touch hot stoves

Don't play with hot ashes

5: Demonstration/Activity

Fire Do's and don'ts picture game

1. Divide the learners into teams of no more than 8 and elect a 'runner' for each team
2. Arrange teams in a similar way to that shown in the picture, if you are playing the game outside, the learners should sit on the lawn (no tables required)



3. Shuffle and share out one set of small cards to each team.
4. The two runners do not receive cards and they should stand

15 minutes

4 learner sets (8 pictures per set) of the Fire Do's and don'ts picture game, per class of 30 learners. Add another set for each additional 8 learners

1 facilitator set of the Fire Do's and don'ts picture game This set has a question at the back of each card

There should

at the back. - Place two chairs back to back at the front of the playing area. You can also place a container or cap on the lawn - The facilitator should read out the question at the back of the card. You can make the question easier or more difficult based on your group or you can make up your own question which suits the card. - The person holding the card that answers the question or statement asked then raise out the card for his or her runner to collect and take to the front. The runner then places it on the chair in the front. The first correct card placed on the chair wins the point. (Note: An incorrect card must be returned to the team and the correct one recovered). - The card from which the question/statement was read must now be stuck on the wall (or on a flip chart stand or other alternative surface) with temporary press-stick. - The questioning continues until all 8 cards are on the wall Points can then be totalled up and the winning team announced. - Once all the cards are on the wall, you will find 4 Dos and 4 don't fire safety 'ideas'. Use them to think about ideas relating to Fire safety. Depending on the age of the group, you can either ask them about what they already know of in terms of what to do and what not to do to prevent fires and then give extra information which they do not know of yet, if the children are really young, use the cards to explain what each of them mean. You can also include additional do's and don'ts which aren't displayed on the cards. Additional ideas to add at the end of the game for older (intermediate phase) learners or if you see that the learners can understand it: Ask each of the small groups to present back what do's and don'ts can be found on their cards (this is also an informal assessment). Ask each of the small groups to present back ideas which they can implement at home to ensure that they are not affected by an unforeseen fire.		be a card for each learner
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<u>6.Conclusion and Assessment</u> Ask learners what they have learnt. What is it that they must NOT do, to protect themselves from fire? Or Point to each of the cards and ask a learner to explain to you what is represented on the card. Ask the group if they have any further questions. Thank all the learners for their participation and dismiss them. Thank the educators for their time	5mins	

LESSON 5: IMPACT OF FIRES

Fire Awareness Category: Protecting Property

Lesson topic/theme: Impact of fire

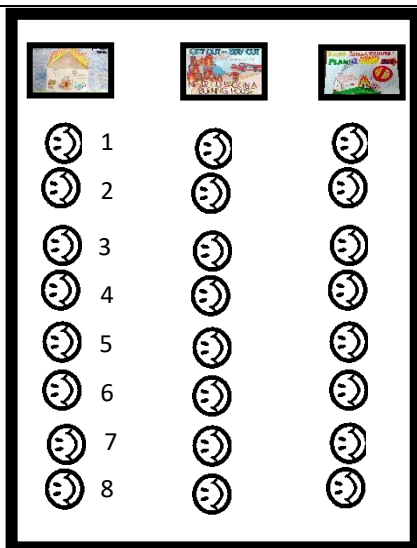
Aim of the lesson: Participants to gain an understanding of the negative and positive effects of fire

CAPS Alignment: Refer to FA Topics guide

Skills: Differentiating between positive and negative, learning numbers, drawing

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF.	2mins	A Frame Flip chart Posters/Flip chart paper, markers/crayons
<u>Ice breaker</u> 2.1: Do an ice breaker of your choice with the learners. This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speak the language of the learners and relate to your audience.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak	2mins	

one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)		
4. Main Lesson Introduction (link with prior knowledge) What learners already know Use discussion questions to allow the learners to tune in/connect with the topic. Some examples are: • What in your house would you least like to lose? • What do you use fire for in your home? Middle phase (Revealing new content) IMPACTS OF FIRES-POSITIVE Fire warms us when it is cold Fire is used to cook by our parents, so that we can have food Fire gives us warm water to bath in Fire is good for new grass and plants to grow up, because it removes all the dead or excess plants IMPACTS OF FIRES-NEGATIVE Fire burns our birth certificates and our parent's Identity documents Fire destroys the grazing land and our cattle won't have food Fire destroys our homes and we won't have anywhere to stay Fire can destroy your books or toys	5 min	
5: Demonstration/Activity 1. Arrange learners into a few (approximately 3) neat lines, like the picture below. Give a number to each of the learners, starting each row with one.	20 minutes	A blank poster/flip chart paper and a few markers/crayons for each group



2. Place a blank poster/sheet of flip chart paper in front of each row.
3. The learners must draw their experiences of/with fire or a picture of where they have seen fires, this can be positive or negative. (e.g. cooking on a fire or a house on fire).
4. The drawing must be made as a group.
5. The facilitator must shout out a number (e.g. number 5) and the learner in each row with that number must run to the front to draw on the poster. The learners must be given a short amount of time before the next random number (not in order from 1-8) is shouted. The next learner must run to the front continue with the drawing where the previous learner had stopped.
6. The energy and laughter can be heightened by shouting the next number before the previous number has even started.
7. Once each of the learners had one or more chances to draw on the group poster, each group has to present back what they have drawn and share their experiences (which they tried to draw on the poster) with the class.
8. The facilitator should then continue by drawing a few more examples on one of the posters and explain to the learners what the benefits (positive/negative) of each example is.
An example would be that he/she draws a stick man warming up in front of a fire or a book which is on fire.

<u>6.Conclusion and Assessment</u> Ask learners to name the what fire is good for and how it is bad Ask the group if they have any further questions. Thank all the learners for their participation and dismiss them. Thank the educators for their time	5mins	

LESSON 6: FIRE ESCAPE PLAN

Fire Awareness Category: Personal Safety

Lesson topic/theme: Knowing to escape a burning building safely

Aim of the lesson: Learners to gain understanding of an escape plan and how to leave safely a burning building

CAPS Alignment: Refer to FA Topics guide

Skills: Drawing, creativity, team work

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF.	2mins	A Frame Flip chart
<u>Ice breaker</u> 2.1: Do an ice breaker of your choice with the learners. This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speak the language of the learners and relate to your audience.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time	2mins	

3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)		
<u>4.Main Lesson</u> Ask learners if they know what to do or have a plan on what to do if their house or school is on fire Ask learners if it is important to have an Escape plan and if they have to practise it Inform learners that they need to know the two ways in their house or school class which they will use to go out in case of a fire. Tell learners that they need to have a plan which shows their house with two doors or windows to get out through They should know of a safe meeting place outside the house or class which they should all meet after leaving a burning building Once outside no one should re-enter the burning building, its dangerous Tell learners that when outside they should know the emergency numbers to call for help The number is 112. The fire department will come to help them after	5 min	
<u>5: Demonstration/Activity</u> Put learners into groups preferably 4 groups Give each group a flip chart paper and kokis Ask each group to draw the picture of their school or house showing the doors and windows that they will be able to go out through in case of a fire. Ask learners to add a safety place which they will gather at outside when they leave the burning building Crawl low under smoke Inform learners that in case of fire they must avoid breathing in smoke as it damages their lungs and can cause death Tell learners that in order to avoid smoke when leaving a burning building they should crawl while holding each other out of the building to a safe place outside Once outside they are not allowed to go back inside to fetch their toys or books. Ask the learners to do the crawl low as may times until they get it right.	20 minutes	

<u>6.Conclusion and Assessment</u> Recap the importance of knowing how to escape a burning building and having a plan of your house and school and to know how to escape. Talk about escape plan and crawl low under smoke.	5mins	

LESSON 7: WHAT TO DO WHEN CAUGHT IN A FIRE

Fire Awareness Category: Personal Safety

Lesson topic/theme: How to Survive A Fire: Stop Drop n’ Roll Technique

Aim of the lesson: To equip learners on how to stay safe in case they catch a light during a fire.

CAPS Alignment: Refer to FA Topics guide

Skills: Stop Drop n’ Roll Technique

STEPS	TIME ALLOCATION	
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF.	2 mins	A Frame Flip Chart page: In case of fire p2
<u>Ice breaker</u> 2.1: Do an ice breaker of your choice with the learners. This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speak the language of the learners and relate with the audience.	2 mins	

<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)	2mins	
<u>4.Main Lesson</u> Introduction (link with prior knowledge)What the learners already know Use discussion questions to allow the learners to tune in/connect with the topic. Some examples are: • What do you know about fire- the colour and what fire is used for? (this can be written on the board/flip chart as the learners share what they know) • Do you ever want to be in a house on fire? • What will you do if you find yourself on fire? Once the learners have shared their stories and given their responses: • Tell the learners that you are going to show them what they can do if they are on fire. • Tell the learners that you will teach them how to do Stop, Drop 'n Roll Middle phase (Revealing new content) Explain to the learners that Stop drop 'n Roll is a way of surviving a personal fire Explain the following stages: • Tell the learners that if they are on fire they need to STOP immediately. Explain that STOP means not any movement • Next step, the learners need to DROP. Explain that drop means falling to the ground in preparation for the next stage. • Next step, tell learners that they need to ROLL. Explain that the learners have to roll either back and forth or backwards. Explain that the reason for this is to remove oxygen from the affected area, so that there is no fire. Tell the	15 mins	

learners to cover their heads with their hands as they roll. Explain to the learners that the 4 elements of fire are Oxygen, fuel, heat and the process when all these three are mixing (chemical reaction), so when they roll, they put out the oxygen and as a result the fire stops		
<u>5: Demonstration/Activity</u> Tell the learners that you want them to demonstrate what you have taught them 1. Divide the learners into groups of three 2. Ask the learners to choose one person to act the STOP, and another DROP and another Roll (Or you can ask the learners to all do the three stages at one go but under your guidance) 3. Tie a red piece of cloth on the learner's shoulders as a symbol of fire. They will immediately realise that they are on fire, Ask all the learners to STOP (make sure that they are not fidgeting). 4. Then instruct the learners to DROP, ensure that they all fall to the ground lying on their back in preparation for rolling The learners should cover their face as they roll. 5. Tell the learners to begin rolling to their left or right and follow one after the other (You can also instruct the learners to ROLL back and forth) 6. Repeat the 3 stages again and again until the learners are doing it right	15 mins	Red pieces of cloth Scissors Visual Aids of STOP, DROP, N ROLL as below
<u>6.Conclusion and Assessment</u> 6.1: Ask the learners what they understand as to STOP, DROP and ROLL 6.2: Ask for a volunteer who can demonstrate it again 6.4: Thank the learners for their participation and ask them if they want you to come back and teach them again.	5 mins	

LESSON 8: COOL THE BURN

Fire Awareness Category: Personal Safety

Lesson topic/theme: How to cool a burn

Aim of the lesson: To equip learners how to treat a burn before getting professional help

CAPS Alignment: Refer to FA Topics guide

Skills: First Aid Skill

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF.	2mins	A Frame Flip chart
<u>Ice breaker</u> 2.1: Do an ice breaker of your choice with the learners. This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speak the language of the learners and relate to your audience.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)	2mins	
<u>4.Main Lesson</u>	5 min	

Introduction (Link it with prior knowledge) Use discussion questions to allow the learners to tune in or to connect with the topic Examples Have you ever been burnt before?(This can be written on the board/flip chart as learners share their experiences) What did you do? Who were you with when it happened? Was it painful? Once the learners have shared their stories and given their responses: Tell the learners that you are now going to tell them/show them what they can do to cool a burn Middle Phase (Revealing new Content) Explain to the learners that you are going to show them how to cool a burn Explain the following stages: • Cool the area with running water for at least 3 to 5 minutes to prevent further damage to the area. • The skin will continue to burn if cool water is not applied. • Cover with a clean, dry cloth. • Never use butter, ointment or grease because that will cause more damage. • Cover the burn with a clean cloth or dressing and keep it clean. • Call emergency services from a cell phone on toll-free number, 112		
<u>5: Demonstration/Activity</u> Facilitator and Learner Activity Tell the learners that you want them to demonstrate what you have taught them	20 minutes	

1. Divide the learners into groups of three or four (depending on the size of the group)
2. Ask the learners to choose one person that will be burnt and the one that will be cooling a burn.
3. Use red colour to show the burn either on the hand or on the arm
4. Have a tap of running water or you can , use a container with a cool water
5. Have a clean dry cloth, that will be used to cover the burn after you have cooled it with running water

Cool a burn with cool water.



6.Conclusion and Assessment

Ask the learners what they understood

Thank the learners for participation and dismiss the class.

5mins

LESSON 9: FIRE PREVENTION

Fire Awareness Category: Personal Safety

Lesson topic/theme: Preventing Fires

Aim of the lesson: To equip learners with information on how they can stop fires

CAPS Alignment: Refer to FA Topics guide

Skills: Thinking, team work, creativity

STEPS	TIME ALLOCATI ON	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF	2mins	A Frame flip chart Flip chart paper Kokis
<u>Ice breaker</u> 2.1: Ask the learners to do an ice breaker of their choice 2.2: Ensure that you speak the language of the learners and try to lower yourself to their level and relate to your audience.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something,	2mins	

speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)		
Main Lesson Ask learners what they can do to stop fires? Depending on their answers explain the following; Fire prevention: 1. Do you know you can stop fires from happening? 2. Let me show you how 3. Avoid playing with matches 4. If you see a matches lying around tell your parent 5. Avoid playing next to a cooking area 6. Stay away from the fire drums 7. Avoid throwing litter all over on a dry, hot and windy day 8. Know the emergency numbers in the event of a fire and medical emergency. Dial 112 9. Avoid playing electrical cables that are broken 10. Avoid playing near the burning garbage in windy conditions, 11. keep a shovel, water, nearby to keep fires in check. 12. Remove all things that can start a fire from yard when burning. 13. Avoid going to bed leaving candles burning all night	15mins	
Demonstration/Activity Resources; Blank Flip chart paper Prestick Small cut papers with things that can prevent fires and those that cannot stop fires –(mixed)Total of 20 Instructions Group learners into 4 groups and give them cards which have	15mins	

Prevention of fires things and the things that cannot stop fires You can give them randomly a total of 6 cards mixed Paste a flip chart paper on the wall written how to stop the fires Ask each group to paste the things which is written on the cards they have. They should paste only the things that can stop fires. Call each group one after the other. When done check which group did well Explain what they can do to stop fires are according to the cards you gave them. Cut out small cards written things that can prevent fires and things that cannot stop fires. Refer to the below diagram		
Avoid playing with matches .If you see a matches lying around tell your parent .Avoid playing next to a cooking area Leave stoves unattended .Stay away from the fire drums Avoid throwing litter all over on a dry, hot and windy day .Know the emergency numbers in the event of a fire and medical emergency. Dial 112 .Avoid playing electrical cables that are broken . Avoid playing near the burning garbage in windy conditions, .keep a shovel, water, nearby to keep fires in check. . Remove all things that can start a fire from yard when burning. .Avoid going to bed leaving candles burning all night Know fire weather Burn garbage on a hot windy day Play with broken plugs Dont play with damaged electrical sockets Burning grass in a rainy day		

Evaluation What is to be done in order to prevent unwanted fires?	5mins	
Conclusion Wrap up session and thank the learners and educators for their time.	2mins	

LESSON 10: FIRE BEHAVIOUR AND DYNAMICS

Fire Awareness Category: Fire Behaviour and Dynamics

Lesson topic/theme: Dynamics on the behaviour of a fire and ways to prevent a fire

Aim of the lesson Participants to gain an understanding of the dynamics of fire and how it behaves so as to better prevent unwanted fires.

CAPS Alignment: Refer or see above FA CAPS Topics guide

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF	2mins	

<u>Ice breaker</u> 2.1: Do an ice breaker of your choice This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speaks the language of the learners and relate to your audience.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)	2mins	
Main lesson Instruct learners that FIRE is made up of 4 ELEMENTS which are HEAT, OXYGENE, FUEL, and the process when these three are making up the fire. (Chemical Reaction.) <u>Main lesson</u> Today we are going to talk about these 4 Elements. 1.2 Heat –. Some of the common sources of heat are: matches; burning material and lightning 1.3 Fuel – is anything that can burn e.g. grass; trees; vegetation; dead leaves; branches; shrubs; wood; cloth(clothes; curtains) cardboard; paper; school books; pictures; certificates; plastic 1.4 Oxygen : Air 1.5 Fire can exist if all the 3 elements are present in the right amount. Remove one element and the fire is dies	15 mins	• 4 Tea candles or any

1.6 Factors influencing fire behaviour: fuel in which it is burning; the weather; and shape of land fuel type; fuel moisture, fuel temperature, shape of land, wind and stability of air 1.7 Weather conditions also influencing fire behaviour: Temperature; Humidity; Wind Speed and Direction 1.8 Fires spread quick when its going up the hill 1.9 All fires start small but when the weather is hot dry and windy a small fire can quickly become big and can damage property 1.10 It is very dangerous to start a fire in a hot ; windy and dry weather		short candles • 4 jars of different sizes (make sure that they are large enough to fit over the candles your using) • Matche s or lighter • Pen or pencil • Paper Stop watch
Evaluation What weather conditions causes fire behaviour What makes up a fire What is oxygen in a fire What is fuel in a fire Can fire happen if the 3 elements are not present?	5mins	
Practical activity Doing the Candle Burning experiment below and Filling out the table at the end of the experiment. <u>Candle Burning Experiment</u> Fire is a chemical reaction that needs 3 elements oxygen, fuel, and heat in order to occur. A fire can defined as a chemical reaction that creates a light and heat using oxygen and fuel. This experiment will determine how long can a candle burn with limit oxygen. In order to prove that oxygen is needed for a fire.	10mins	

<u>What you need</u> • 4 Tea candles or any short candles • 4 jars of different sizes (make sure that they are large enough to fit over the candles your using) • Matches or lighter • Pen or pencil • Paper • Stop watch <u>Steps</u> 1. Explain to the learners the importance of oxygen in order to have a fire Ask them what they think will happen if there is limited oxygen available to the candle Ask the learners to estimate the time it will take each candle to go out once covered with a jar. 2. Place the 4 candles in a straight line and light them 3. Cover each of the candle with a different sized jars. Make sure the jars are from smallest to biggest. 4. Time how long the candle lasts before it goes out in each of the individual jars and record the information in a table. <table><tr><td>Estimated</td><td>Actual Time</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> 5. Compare the estimated time to the actual time recorded 6. Explain that the more air that is inside the jar the longer the candle will burn illustrating the importance of oxygen in a fire. Conclusion Thank all the learners and educators for their time and close the session		Estimated	Actual Time									
Estimated	Actual Time											

LESSON 11: FIRE AND SOIL EROSION

Fire Awareness Category: Fire and Environment

Lesson topic/theme: Fire and Soil Erosion link

Aim of the lesson Participants to gain an understanding of the relationship between fires and soil erosion

CAPS Alignment: Refer or see above FA CAPS Topics guide

Skills Learnt: Team work, creativity

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF	2mins	
<u>Ice breaker</u> 2.1: Do an ice breaker of your choice This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speaks the language of the learners. And relate to your audience well.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something,	2mins	

speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)		
<u>Main lesson</u> Explain to Learners what is meant by Erosion. Erosion is the washing away of the top layer of soil by wind, water and rain. The link between Fire and Erosion What role does fire have in causing erosion? Explain to learners that when we have veld fires they cause the soil to be loose and so when it rains or its windy the top soil which is loose will be easily washed away. Veld fires removes land cover ie the top soil , so when it rains or its windy the top layers of soil is washed away resulting in erosion. Veld fires changes the water cycle,ie the way the water flows Soil erosion leads to lot of soil into rivers and dams. This reduces the amount of water in those dams and rivers. When rains come floods will happen because the rivers are now full of sand and vey low. When its burning the fire will heat up the soil causing the temperatures of the soil to go up. This destroys the nutrients in the soil, and the flow of air and water through and over soil, which then lead to loss of production on the forests Fire can cause changes in the soil structures it becomes too loose Fire causes plants not to hold onto the soil	15 mins	

In the end the soil is easily washed away and we have too much soil erosion. Its important that we don't have unnecessary fires as they can lead to erosion.		
Evaluation What is soil erosion Does fire causes soil erosion and how? What are the results of fires on the soil?	5mins	
Practical Activity Complete the experiment which shows how wind, water and rain can cause erosion. STEPS; Wind erosion; Make a pile of sand in the middle of a pan Place small stones on the surface of the new hill Try blowing on the sand and small stones and record what happens Some of the soil is blown away, why? Explain that when there is wind erosion, wind blows away the top soil That is Soil erosion Water Erosion: Make a sand mountain by piling sand up on one side of your pan Hold the ruler in the mountain so that the sand covers up to 10cm mark Make a rain cup by taking one of your cups and poking hole into the bottom of the cup with your pen or pencil Hold your rain cup over your mountain and fill the cup with water	15mins	3 Small cups Ruler 3 Straws Water Sand Large pan or bowl

Pour the water from the second cup into your rain cup- the water will now rain in your mountain After the rain has stopped, measure the height of the remaining sand and record Explain where some of the sand went and why? Height of sand_____ Why? The sand has been washed away by water ie Erosion Conclusion Explain to the learners that as a result of vegetation removal through wild fire or any fire this causes erosion. Thank all learners and educators for their time and dismiss		
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LESSON 12: FIRE AND CLIMATE CHANGE

Fire Awareness Category: Fire and Climate change

Lesson topic/theme: Fire and Climate change

Aim of the lesson Learners to gain an understanding of Climate change and link with fires

CAPS Alignment: Refer or see above FA CAPS Topics guide

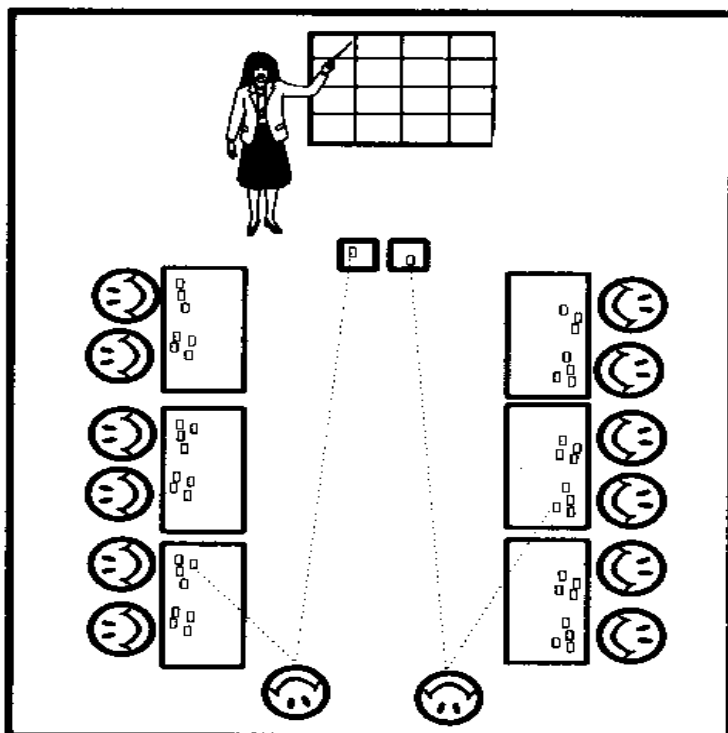
Skills Learnt: Team work, creativity, and thinking

STEPS	TIME ALLOCATI ON	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF	2mins	Climate change cards
<u>Ice breaker</u> 2.1: Do an ice breaker of your choice This can be in the form of a song, dance, game, etc. 2.2: Ensure that you or someone in your team speaks the language of the learners and relate to your audience well.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)	2mins	
<u>Main lesson</u> Explain to learners that Climate change is ; Climate change is any long-term change in the expected patterns of average weather of a region (or the whole Earth) over a significant period of time. Human Causes of Climate change	15mins	

1. Burning fossil fuels, can result in climate change 2. Deforestation: Cutting down of trees which are used to trap carbon dioxide levels in the atmosphere, can lead to climate change 3. Farming activities over a long period of time can release greenhouse(bad) gasses into the air which can lead to change in climate 4. Starting wildfires which releases large amounts of carbon dioxide into the atmosphere 5. Pollution from vehicles releases carbon monoxide 6. Pollution from Aeroplanes 7. Pollution from factories Impacts of climate change - Causes rising of temperatures affecting the atmosphere - Changes weather patterns like rainfall, evaporation, snow, stream flow -It affect water supply and quality. -Warmer water temperatures increase water pollution. -Increased diseases -Loss of biodiversity What can be done -Plant trees -Use bicycles instead of cars that causes pollution -Save electricity -Use solar energy -Recycle waste And what is its relationship with fires? Climate change happens when yearly temperatures go high or		
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increases When the temperatures are high it makes it easy for forest fires to start quickly. Climate change leads to long fire seasons Climate change cause hot, windy and dry weather conditions which can make fires to spread quickly. So if human beings throw litter all around in hot ,dry and windy weather, fires will start and quickly spread Climate change causes severe (too much) storms and lightning All the above makes it possible for forest fires to start and spread quickly Effects of fires on climate change: Large wildfires can release much carbon dioxide(bad air) into the atmosphere in just a few weeks As forest fires burn trees and other plants, they release the carbon(air) stored in the vegetation into the atmosphere Fire can be very bad, destroying homes, wildlife and timber, and polluting the air with gases which can cause breathing problems in people's health. Fires change the shape of the land by causing erosion As forests burn, they release pollution in the form of smoke, soot, and ash. But the fires also generate other harmful pollution. "Fires can affect air quality and causes breathing problems in humans Its very important to avoid unnecessary burning as it can cause climate change		
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Activity	5mins	
		
Puzzling Climate Change The Puzzling Climate Change: Start-up pictures and text is an educational resource developed to begin exploring some of the concepts and questions around climate change. It can be used as a picture-building activity and can provide starter points for deliberation and debate around climate change. It can also be used as a prompt to enable young people or interested adults to express what they know, think and feel about climate change. It can also be used to introduce other climate change materials. Your instructor will have a pack consisting of the following: • Two sets of sixteen small picture cards. These cards are identical to the pictures found in this chapter. • Sixteen A5 sized picture cards with “Questions”, “Educator’s Notes” and “Topics to debate” on the back of each card. The “Educator’s Notes” are designed to assist teachers to add more detail and to raise questions that lead to discussions. <u>The Climate change picture building game</u>		



- Split the class/group into teams and elect a 'runner' for each team.
- Arrange teams in a similar way to that shown in the picture.
- Shuffle and share out one set of small cards to each team.

The two runners do not receive cards and stand at the back .

- Place two chairs back to back at the front of the playing area.
- Arrange the larger A5 sized picture cards in order from Card A1 to Card D4, with A1 on top.
- Each large card has question/statement options – chose the first card, Card A1, and select one of the two questions /statements according to the level of knowledge of the group (or make up your own question!)
- The person holding the card that answers the question or statement asked then holds out the card for his or her runner to collect and take to the front. The runner then places it on the chair in the front. The first correct card placed on the chair wins the point. (Note: An incorrect card must be returned to the team and the correct one recovered).
- The A5 sized colour card from which the question/statement was read is now stuck on the wall with temporary press-stick.

The questioning continues until all 16 cards are on the wall and the picture is complete (see front page of this guide). Points can then be totalled up and the winning team announced. <u>Problem Solving and Deliberating</u> To deliberate is to think carefully about, to consider, to discuss in a focused way, to weigh up and to debate. Once all the start-up cards are on the wall, you will find sixteen climate change 'ideas'. Use them to think about ideas relating to climate change. You are encourage to articulate what you already know and to find out more. <u>Action Taking</u> Ideally, some form of action taking should follow picture building or problem-solving discussions and deliberations. What can individual learners do practically to reduce their carbon footprints? Each learner has to outline a personal plan to help reduce their carbon footprint. The plan could involve being careful about what they buy, including goods with less packaging; planting trees; considering various ways of using less energy e.g. putting a blanket over the geyser so that it loses less heat. References: WESSA. Puzzling Climate Change. Howick, Sharenet Evaluation What is climate change How is climate change affected by fires What are the results of fires on climate?		
Conclusion Thank the learners and educators for their time and dismiss	5mins	

LESSON 13: FIRE AND TOPOGRAPHY

Fire Awareness Category: Fire and Environment

Lesson topic/theme: Fire and Land shape or topography

Aim of the lesson : Participants to gain an understanding of the different types of land shapes and how it affects fires

CAPS Alignment: Refer or see above FA CAPS Topics guide

Skills Learnt: Team work, creativity

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and what they do at WoF	2mins	Sand Green plants Dried leaves Toy houses for the slopes Picture of sun Cardboard Markers Indicators of South and North facing slopes Flipchart Paper Markers
<u>Ice breaker</u> 2.1: Ask the learners to do an ice breaker of their choice	2mins	

2.2: Ensure that you speak the language of the learners and relate to your audience well.		
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)	2mins	
Main Body Show some pictures of different types of land shapes Ask learners what do they think or whats the shape of the land on the pictures shown? Ask learners to take two leaves and put vaseline on both of them. Place one of the leaves outside in a sunny place and the other one in a cool room. After 3 mins check what will happen and ask learners to explain. The observatio is that the leaf in the sun melted fast because of sun whhile the one inside the room didnt because it didnt receive the sunlight. Vegetation on North facing Depending on their responses explain that; Topography is the different shapes and sizes of the land. It can be flat surface, or combination of flat and mountaneous It can also move from being a flat to hilly and down to a valley NOW LINK TOPOGRAPGHY TO FIRE	15mins	

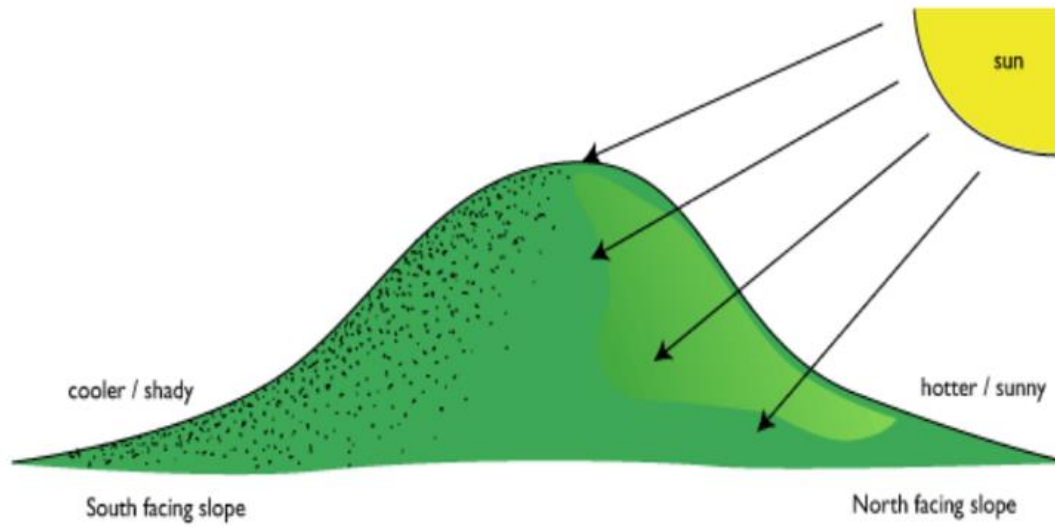
The start and spread of fires is affected by the shape of the land but how? The trees or grass on the land facing the North(where the sun comes out) gets more sun and so these plants or trees get dry quicker and when there is a fire it spread quickly Th trees or grass on the land facing the South receives sunlight late and so the trees are very wet and when there is a fire it doesnt spread quick as they cant burn Uphill land makes it faster for fires to move up because of the wind Low or down hill landshapes makes the fire to move slowly Fires spread quickly on the uphill rather than downhill House built on the valleys are not that safe from fires So know the shape of the land Fires also burn in different ways on diffrent land shapes. Factors that affect a veld fire: The fuel in which it is burning. Fuels type (grass, brush, timber, slash etc.) And in condition (dry to wet) The Weather: The high wind, high temperature can cause fire to spread quickly while wet weather does not spread fires. Thats why its important to know the daily fire weather (FDI) during the fire season.		
<u>Activity</u> Building a model of a North and South Facing Slope Involve the learners in the building of the Topography model. Intermediate Phase learners can be divided into smaller groups so that they can all build their own models		

within their groups, with you as facilitator assisting them. You will need the following: Sand Dry plants Toy houses Dry and Green plants Cardboard boards Marker Instructions : 1 Build a shape of a mountain using sand 2. Indicate the North and the South facing slope using the cardboard and a marker 3. Place dry plants on the North facing slope. 4. Place the toy houses on top of the North facing slope 5.Place plants on the Southern Slope 6.Place toy houses on the Southern Slope		
<u>EVALUATION</u> What is Topography? What are the factors that affect the land shapes Name and explain the different slopes which affect fire and how they affect the fires Will you build your house on an uphill or downhill land?		
Conclusion Wrap up the meaning of Topography and what factors help in the spread of fires. Thank all learners and dismiss.	5mins	

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LESSON 14: FIRE AND BIODIVERSITY

Fire Awareness Category Topic: Fire and Environment

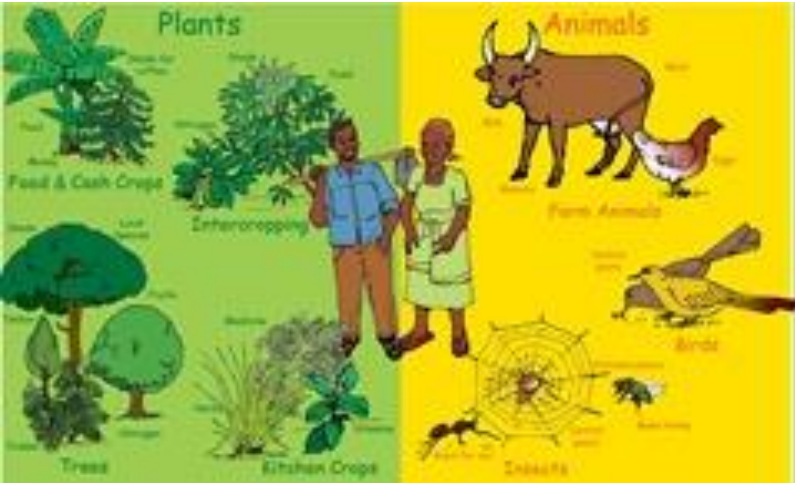
Lesson plan Topic: Fire and Biodiversity

Lesson plan Theme Participants to gain an understanding of the different vegetation and how fires play a role

CAPS Alignment: Refer or see above FA CAPS Topics guide

Skills Learnt: team work, thinking

STEPS	TIME ALLOCATION	RESOURCES
		A Frame chart p1 6x A4 set of Questions 1x A4 set of Answers Pens/pencils
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF	2mins	Visuals
<u>Ice breaker</u> 2.1: Ask the learners to do an ice breaker of their choice 2.2: Ensure that you speak the language of the learners and relate to your audience well.	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this	2mins	

lesson 3.2: Let the rules come from the learners themselves eg(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)		
Main Lesson  : Explain that Biodiversity is different types of plants and animals living on earth or in an ecosystem In the lesson we will be focusing on the part of Biodiversity which is plant life or vegetation only. In South Africa we have different types of vegetation. Ask Learners to identify and name types of vegetation found in their area. Refer to the A Frame chart on Vegetation. Ask learners to identify from A Frame the common types of vegetation found in their area. Is it the grassland, the fynbos, savannah? Depending on their answers, add to the list as follows; Fynbos found in the Cape Forests found in high rainfall areas e.g., KZN	15mins	Flip chart papers

Succulent found in low winter rainfall areas like Western Cape Savannah found in Kruger National park Mpumalanga Grassland found in KZN in land and Eastern Cape. This has been converted to grazing land for cattle. <u>Introduce Fire to Biodiversity now</u> Inform Learners that fire has an important role in sustaining biodiversity. However if the fire happens too often or too less it can damage the ecosystem. HOW? What is fire prone vegetation? Vegetation that easily burns. What is commonly known as vegetation that doesn't burn eg Protea or Rock roses, Guava? Aloe Fires helps some vegetation to germinate e.g. the Acacia in KZN needs heat for it to germinate Fire helps grass and flowers to regenerate, allowing grazing land for our cattle Fire helps prevent woody shrubs from occupying or filling over the area Fires are important for the growth cycles of some vegetation eg for the Fynbos to regrow they are burnt after every 12-15years and the new fynbos grows again However if the fire happens too often or too less it can damage the ecosystem. It can end up destroying the animal and plants, causing too many ashes in the soil. The vegetation is a fuel for fire to start. If human beings burn plants and vegetation a lot it will lead to plain land and treeless plains		
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ACTIVITY Resources needed A4 paper with set of Questions A4 Paper set of Answers for facilitator STEP Learners are divided into groups of 8 depending on their total in class. A class of 30 you can divide into 8 Give each group an A4 paper set of Questions which they are supposed to fill in the Missing words or words After about 10mins call out the questions and let each group give out their answers with the facilitator marking right or wrong. Check how each group has scored. THE A4 SET OF QUESTIONS FOR LEARNERS 1.-----is different types of plants and animals in an ecosystem(living on earth) 2.Savannah is found in-----province of South Africa 3-----is a fire prone vegetation found in Western Cape in South Africa 4.-----means vegetation that can easily burn 5.If fires happen-----or----- it can damage the ecosystem 6.Fire helps some vegetation to ----- 7.Fires prevent ----- from filling over the area 8 Fire has an ----- role in sustaining biodiversity. WORDS TO CHOSSE FROM Germinate Burning Woody Shrubs .Important Biodiversity Animals Mpumalanga. Fynbos .Fire Prone Too often Less Ecosystem Earth ANSWER SHEET FOR FACILITATOR 1.Biodiversity 2.Mpumalanga 3.Fynbos 4.Fire Prone 5.Too often and Less 6.Germinate 7.Woody Shrubs 8.Important	15mins	
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Evaluation Ask learners what type of fire prone vegetation is in your community Ask learners to explain how vegetation needs fires to germinate	5mins	
Conclusion Thank all learners and educators for their time and dismiss	5mins	

LESSON 15: WETLANDS AND FIRE

Fire Awareness Category: Fire and Environment

Lesson topic/theme: The relationship between fire and Wetlands

Aim of the lesson: Participants to gain an understanding of the relation between fires and wetlands

CAPS Alignment: Refer to the Topics Guide

Skills Learnt: Team work, imagination, critical thinking

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF	2mins	
<u>Ice breaker</u> 2.1: Ask the learners to do an ice breaker of their choice 2.2: Ensure that you speak the language of the learners and relate to your audience.	2mins	

INTRODUCE FIRE TO WETLANDS NOW Wetlands need fire to be able to remain healthy and continue providing habitat for the animal and plants that live in it. Wetlands are burnt after every 2-3 years Wetlands need fires for growth of new plants Burning of wetlands Increases availability of nutrients in the wetland. Wetlands are burnt to improve the grazing value of livestock by removing old dead plant material Wetlands are burnt to reduce the risk of runaway fires Even though wetlands need fire to be burnt however the burning must not be too much as it can have damaging results which are as follows; If wetlands are overburnt the plants and animal life in it will be destroyed.. There will be lot of ashes on the area around the wetland This can change the structure of the soil The top soil will be exposed to heat and can later lead to erosion when it rains Loss of plant diversity(having different types of plants) What can be done to protect the wetlands? The people should clean their wetlands all the time People should remove alien plants or weeds from the wetland Always protect wetlands by not dumping garbage in the wetlands Wetlands should be burn only after a certain time when it is good to do so.		
ACTIVITY Resources A4 Tear Off sheets on Fire and Environment It's either you tick thumbs up or thumbs down to indicate true or false statement	10mins	A4 Intermediate tear off sheets with True/false

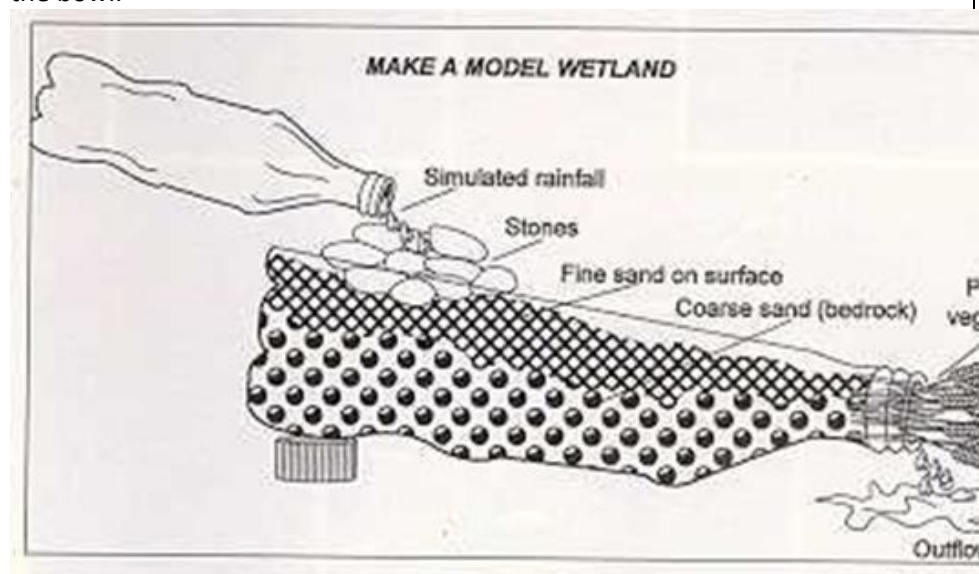
1. Always protect wetlands as they provide a habitat for birds, fish and plant life. TRUE/FALSE 2. Wetlands provide the country with clean water supply by purifying the surface water. TRUE/FALSE 3. Wetlands need to be burnt to reduce the risk of runaway fires. TRUE/FALSE 4. Wetlands are burnt to improve the grazing value of livestock by removing old dead plant material. TRUE/FALSE 5. Over burning of wetlands destroys the animal and plant life that feeds on the wetland. TRUE/FALSE 6. Always protect wetlands, by dumping garbage in the wetlands. TRUE/FALSE 7. Wetlands cause erosion and flooding. TRUE/FALSE ANSWERS 1.TRUE 2.TRUE 3.TRUE 4.TRUE 5.TRUE 6.FALSE 7.FALSE		
Practical Activity Building a wetland To help learners understand what is a wetland and its importance Building a model of a Wetland Involve the learners in the building of the wetland model. Intermediate can be divided into smaller groups so that they can all build their own models within their groups, with you as facilitator assisting them. You will need the following: • an empty 2 litre bottle cut in half along the length of the bottle • coarse sand, fine sand, a few small rocks, • a few grass clippings and the lid of the bottle. Step 1 : 1. Cut the 2 litre bottle in half along the length without damaging the neck of the bottle. 2. Plug the neck of the bottle with grass clippings.	20mins	

3. Fill bottom of the bottle with the coarse sand.
4. Put a layer of fine sand on top of the coarse sand.
5. Pack the stones in a little heap near to the fat end of the bottle.
6. Now put the fat end of the bottle on top of the lid of the bottle and rest the neck of the bottle in a little bowl in such a way that the bottle is at an angle going down towards the neck. The bottle has to be at an angle so that the water will run down from the fat end towards the neck of the bottle and into the bowl.
7. Now your wetland model is ready for operation.

Step 2:

Slowly pour water over the rocks in the "wetland". Watch through the see-through sides of the bottle to see what happens. See how the water level in the sand rises. This can be compared to groundwater in a real wetland.

Measure the time from when the water is poured over the rocks until it flows out of the bottle into the little bowl. Can you see that this takes much longer than it would have taken if the water just ran along the surface of the sand to the bowl.



Step 3:

Now mix water in a see-through container with dirt until the water is murky and muddy. Slowly pour the murky Water over the stones in the "wetland". Keep a little bit behind in the container. Wait until the water has moved through the soil and flowed into the little bowl underneath the neck of the bottle. Check the water filtering through is it clearer? Record your observations or what you are seeing

Evaluation

5mins

Why is it important to burn wetlands? When should burning of wetlands be done What are the effects of burning or fires on wetlands How should wetlands be protected		
Conclusion Thank all learners and Educators for their time and close the session	5mins	

LESSON 16: FIRE AND ALIEN INVASIVE PLANTS

Fire Awareness Category: Fire and Environment

Lesson topic/theme: The relationship between fire and Alien Invasive plants

Aim of the lesson: Participants to gain an understanding of the relationship of fire and Invasive plants

CAPS Alignment: Refer to Topics Guide

Skills learnt: Thinking, creativity, identification of things that look similar, team work

STEPS	TIME ALLOCATION	RESOURCES
Introduction and Welcome 1.1: Participants to introduce themselves to the learners by telling them where they come from and their names and also what they do at WoF	2mins	Pictures of Invasive plants A Frame

		chart p2 Videos on Invasive WOF episode?
<u>Ice breaker</u> 2.1: Ask the learners to do an ice breaker of their choice 2.2: Ensure that you speak the language of the learners and relate to the audience	2mins	
<u>3.Expectations and rules</u> 3.1: Ask learners what are the rules we can agree on during this lesson 3.2: Let the rules come from the learners themselves e.g.(Raise your hands before answering a question or say something, speak one at a time 3.3 From all the rules coming from the learners the Facilitator can now say these are the rules we have agreed upon (List the rules as they said them)	2mins	
Main Lesson Plan Explain to learners that an Invasive plant is a plant from other countries which were brought to South Africa as people moved from one country to another Show learners pictures of Invasive plants. These are gum tree, wattle, guava and many others Explain that Invasive plants takes up a lot of water e.g. the gum so they are not good Explain that Invasive plants make it difficult to control fire. The gum has a paraffin thing in it which case it to burn fast Introduce Fire to Invasive Explain to learners that Invasive plants easily burn or catch fires	15mins	

which can lead to unwanted wildfires and pollution. Ask learners to give examples of Invasive Plants which are; Fynbos, Guava, Triffid weeds, Gum, pine, wattle, prickly, Roses These are found across South Africa. Impacts of Invasive Plants • Increase floods damage • Compete with agricultural crops • Take over the place of Indigenous plants • Increase the spread of fires • Invasive takes up too much water • Create one type of plant When invasive plant like gum tree burns, fire runs faster because of the paraffinic substances it has inside.. These Alien plants makes it difficult to control the fires once they start These Alien plants affect the country's water supply They harm plant and animal life living in wetlands They harm our agricultural growth Alien weeds increase evaporation(the rate at which water is heated up by sun and goes into the air) The Alien plants increases wildfires around wetlands or land where they are growing Removing Alien plants makes it slow for wildfires to start. At the same time, Fires are needed to clear Alien plants and weeds from wetlands and other land		
Activity Resources Flip chart paper with laminated cards of all the names of a mixture of	10mins	

Alien plants and Indigenous The names include: Guava(alien), Protea flower, prickle, savannah, gum tree(alien), wattle tree(alien), succulent, fynbos(alien), triffid weeds(alien), baobab. Marula, Blackwood (alien), Acacia(alien), Bugweed(alien), Orange tree, savannah. You can also add some vegetation you know. Two ice cream containers or boxes labelled Indigenous and the other one Alien Scoring paper, Pen Prestick STEPS Divide the learners into two groups Paste the flip chart paper on the wall Put the two ice cream containers or small boxes at the other end for learners to drop in the cards The learners sit in a row for both group A and group B The facilitator calls out a name either Alien or Local and the learners one by one according to their seating arrangement will stand up and run to pick the name of plant called out by Facilitator. The first one to take the card from Flip chat will have to run and throw the card into the relevant box, that is either Alien or Local The group that gets the card first and put it in correct box will get 5 marks The process continues until all cards are finished except the GUM Tree. The facilitator must explain that the gum tree sucks a lot of water and it has resin or paraffin substance in it which causes it to burn so fast. Now the facilitator can ask the two groups to go get the gum tree from the chart and place it in the right box. In the end the facilitator counts all the scores for the two groups and		
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announce the winning group		
Evaluation & Conclusion Wrap up the topic what are alien plants and how they affect fires and the role they play in spreading fires	5mins	