



Australian Fire Danger Rating System lesson – Stage 3

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Overview

The 2 x lesson plans support students to identify and apply the new fire danger ratings. Students will apply their understanding of the fire danger ratings to recommend appropriate actions to improve bush fire safety within their community. Students will design a resource to inform their community about the new fire danger ratings.

Suggested duration	2 x 1 hour lessons
Teaching focus areas	Geography: Factors that shape places PDHPE: Healthy, Safe and Active Lifestyles
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Teacher notes

1. To help ensure that students can understand the key messages for each fire danger rating, Lesson 1 uses a slightly modified version of the standard Australian Fire Danger Rating System (AFDRS) community messaging (see Fire Danger Ratings Puzzle (page 14) or Poster (page 12)). The standard community messaging is available at www.rfs.nsw.gov.au/plan-and-prepare/fire-danger-ratings.
2. Over recent years, research and practice in Australian schools has found that students often misinterpret the AFDRS. Students commonly interpret fire danger ratings as indicators of the likelihood that a bush fire will occur. However, the ratings indicate how dangerous a fire will be, **if** a fire starts. These lessons and the supporting materials have been designed to ensure that students can correctly interpret the fire danger ratings. It is important to check student understanding throughout the lessons and correct misinterpretations as they arise.
3. The duration of Lesson 2 may be extended for students to complete the suggested deliverable of an AFDRS communication resource.
4. The Fire Danger Ratings Puzzle (page 14) provides additional opportunities for students to demonstrate their understanding of the recommended actions for each fire danger rating.



Outcomes and content points

Outcome	Content points
Geography: GE3-3: compares and contrasts influences on the management of places and environments	Bushfire hazard <ul style="list-style-type: none">• examination of how people can prevent and minimise the effects of a bushfire
PDHPE PD3-2: investigates information, community resources and strategies to demonstrate resilience and seek help for themselves and others	Healthy, Safe and Active Lifestyles <ul style="list-style-type: none">• recommend appropriate actions to improve health, safety, wellbeing or physical activity issues within the school or wider community. For example, suggest and practise action plans for emergency situations to ensure the safety of themselves and others



Lessons

Learning intention

Students are learning to identify and apply fire danger ratings.

Success criteria

Students can:

- locate and identify the fire danger rating appropriate to the local area.
- identify the actions appropriate for their context on a particular warning rating.
- suggest actions, and methods of communicating warnings, for emergency situations to ensure the safety of themselves and others.

Resources

Lesson 1

- Enlarged version: [Resource 1: Fire Danger Ratings \(page 10\)](#)
- Group copies: [Resource 2: Weather Conditions \(page 11\)](#)
- Enlarged version: [Resource 3: Fire Danger Ratings Poster \(child-friendly version\) \(page 12\)](#) (Note: Students can also be provided with their own individual copy as appropriate)
- Individual copies: [Resource 4: Fire Danger Ratings Community Action Puzzle \(page 14\)](#) (Note: This is an optional activity)

Lesson 2

- [Resource 3: Fire Danger Ratings Poster \(child-friendly version\) \(page 12\)](#)
- Student-selected materials to create the suggested deliverable: an AFDRS communication resource. For example:
 - digital technology
 - cardboard, paint, markers



Lesson 1:

Australian Fire Danger Rating System

Teaching and Learning sequence

Step 1

Brainstorm students' prior knowledge of the relationship between weather and bush fire. Ask: What kind of weather leads to dangerous bush fires?

Watch video [BTN Bushfire Recap](#)

Discuss the influence of weather on the level of bush fire danger, noting the influence of temperature and rainfall on the dryness of fuel.

Watch video [Understanding Fire Weather \(0:00-1:37\)](#)

Discuss the influence of humidity on fuel dryness and the influence of wind speed on bush fire spread.

Step 2

Display [Resource 1: Fire Danger Ratings \(page 10\)](#) and discuss the Australian Fire Danger Rating System (AFDRS).

Provide background information about the development of the AFDRS:

- Fire danger ratings are based on predicted weather conditions such as temperature, humidity, rainfall and wind
- The ratings are calculated using the weather data
- Each fire danger rating tells us how dangerous a fire will be, if a fire starts.

Distribute [Resource 2: Weather Conditions \(page 11\)](#).

In small groups, students discuss the weather indicators. Students highlight the most dangerous weather conditions for bush fire and use a different colour to highlight the least dangerous weather conditions.

Students share their ideas with the class.

Provide feedback with reference to [Resource 1: Fire Danger Ratings \(page 10\)](#) and the matching weather conditions. Focus student attention on the white bar in the bottom left hand corner of the



rating scale. Note that this indicates 'No Rating' and explain that this is used when there is minimal risk, like when it is cold and raining.

Step 3

Display [Resource 1: Fire Danger Ratings \(page 10\)](#) and review the four levels of fire danger ratings (Moderate, Very High, Extreme, Catastrophic), noting the 'Key Message' for each level.

Discuss the importance of the key messages as memorable action-based activities that can be associated with each fire danger rating.

As a method to recall the four levels of fire danger ratings and the corresponding key messages, use body percussion to match the beat of the syllables/words with the key message the word/word groups. For example:

- (mod/er/ate) with (plan/and/prepare)
- (high - 3 beats) with (be/readyto/act)
- (e/x/treme) with (take/action/now), (to protect/life_and/property)
- (cat/as/trophic) with (for/your/survival), (leave/bush fire_risk/areas) Note: rhythm adjustments need to be made for words such as 'high', 'bush fire risk'

Step 4

Display [Resource 3: Fire Danger Ratings Poster \(child-friendly version\) \(page12\)](#) and discuss the fire behaviour for each fire danger rating, focusing on the change in the modality of the vocabulary. For example, controlled, dangerous, extremely dangerous, lives lost.

Step 5

Discuss the supporting messages for each of the four fire danger ratings, noting the recommended actions. Highlight the verbs and discuss the level of activity.

Step 6

- Display the [NSW Rural Fire Service - Fire Danger Ratings](#) webpage.
- Use the map to identify the Fire Area for your local community.
- Confirm your Fire Area by clicking on the relevant section of the map and checking the list of Councils Affected.
- Review the fire danger rating for the local community for the current day and the following day.



- Refer to [Resource 3: Fire Danger Ratings Poster \(child-friendly version\) \(page 12\)](#) and discuss the appropriate level of activity.

Step 7

Rehearse the body percussion activity to share the key messaging with another class or lead as a school activity.

Step 8 (Optional)

Distribute [Resource 4: Fire Danger Ratings Community Action Puzzle \(page 14\)](#). Students cut up their set of cards and shuffle them. Next, they swap their set of cards with another student. Each student then organises the recommended actions on each card under the relevant fire danger rating. Students can then glue their cards onto the template and decorate it using the appropriate colours from the fire danger ratings (Moderate - Green; Very High - Yellow; Extreme - Orange; Catastrophic - Red).

Lesson 2: Let's talk about fire danger ratings

Teaching and Learning sequence

Step 1:

Discuss the importance of being safe as an aspect of study in PDHPE.

Ask:

- What does 'being safe' mean to you?
- Who is involved when you think about 'being safe'?
- When is 'being safe' important?
- Where are places that provide you with safety?
- Why is safety important?
- If safety is important, what can you do to improve the safety of yourself and others?



Focus on bush fire safety and display [Resource 3: Fire Danger Ratings Poster \(child-friendly version\)](#) (page 12). For each of the four fire danger ratings, review the key message, fire behaviour, and supporting messages.

Step 2

Focus on the key messages.

Share and discuss key messages from successful community campaigns. For example, 'Get down low and go, go, go' - fire and smoke; 'Stop, drop and roll' - fire and clothing; 'Do the right thing' - littering; 'Slip, slop, slap' - sun protection.

Present the problem of improving the community understanding of the fire danger rating messaging for the upcoming bush fire season.

Step 3

Outline the student task: to design a resource to support a communication campaign for the new Australian Fire Danger Rating System.

Ask:

- Who is the audience for the resource? Consider the local community, school community, holiday community (e.g. tourists)
- What is the style of your resource? Consider print, digital, video, audio, graphic, interactive
- What actions would you recommend in your resource for communities to take? For example, suggest and practise action plans for emergency situations
- Where will you display/deliver the resource? Consider school assembly, shopping centre display, school website.

Step 4

Students work in groups or pairs to develop a resource for the AFDRS communication campaign.

Step 5

Provide time for students to develop their resource to support the campaign.

Step 6

Students present their resources to their identified audiences.



Stage 3 Assessment:

- observations of students' presentations during Step 6
- review of work samples from student task: to design a resource to support a communication campaign for the new Australian Fire Danger Rating System.

Students will demonstrate achievement towards the following:

GE3-3: compares and contrasts influences on the management of places and environments

- examination of how people can prevent and minimise the effects of a bush fire

PD3-2: investigates information, community resources and strategies to demonstrate resilience and seek help for themselves and others

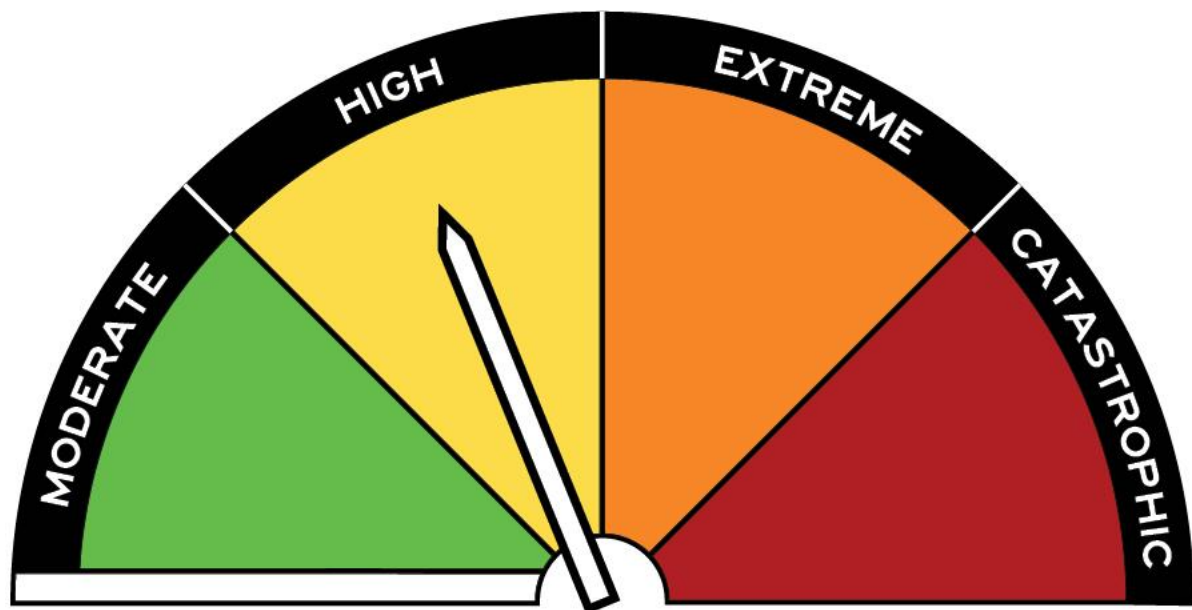
- recommend appropriate actions to improve health, safety, wellbeing or physical activity issues within the school or wider community, for example: – suggest and practise action plans for emergency situations to ensure the safety of themselves and others



Resources

Resource 1: Fire Danger Ratings

The Australian Fire Danger Ratings are:



MODERATE

Plan and prepare

HIGH

Be ready to act

EXTREME

Take action now to
protect life and property

CATASTROPHIC

For your survival, leave
bushfire risk areas



Resource 2: Weather Conditions

Temperature	Humidity	Rainfall	Wind Speed
41°C	25%	It hasn't rained for two weeks	75 km/h
5°C	75%	It rained yesterday	25 km/h
20°C	50%	It is raining now	50 km/h
12°C	100%	It hasn't rained for two months	5 km/h
32°C	2%	It hasn't rained for six weeks	100 km/h

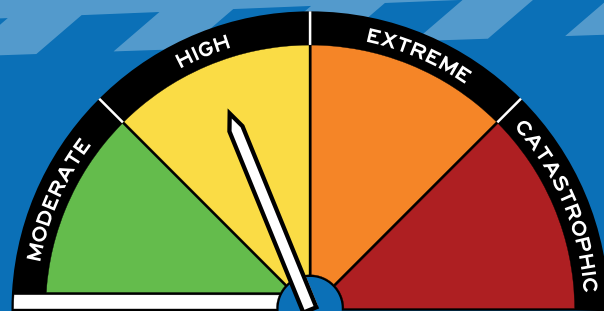


Resource 3:

Fire Danger Ratings Poster (child-friendly version)

The poster on the following page explains the Australian Fire Danger System. For each fire danger rating, it describes how dangerous a fire would be if a fire started, and the action community members should take to minimise their risk.

It is designed to be printed at A3 size for display.



FIRE DANGER RATINGS

The Australian Fire Danger Rating System helps us to understand how dangerous a fire would be if one were to start.

There are four fire danger ratings – Moderate, High, Extreme and Catastrophic. Each level has an action that tells you what to do to keep safe.

When there is little risk, like when it is raining, 'No rating' is used.

The Australian Fire Danger Rating System is used across the country, so whether you're at home or traveling, you'll notice it in every State and Territory.



MODERATE

PLAN AND PREPARE.



If a fire starts, it can probably be controlled.



Most fires can be controlled before they become dangerous.



Make a bush fire plan with your family and prepare your property for bush fire.



Stay up to date and be ready to act if there is a fire.



HIGH

BE READY TO ACT.



If a fire starts, it could be dangerous.



There is a heightened risk.



If a fire starts, your life and property may be at risk.



Be alert for fires in your area and decide what you will do if a fire starts.



The safest option is to avoid bush fire risk areas.



EXTREME

TAKE ACTION NOW TO PROTECT YOUR LIFE AND PROPERTY.



If a fire starts, it will spread quickly and be extremely dangerous.



These are dangerous conditions for a bush fire.



Check your bush fire plan and make sure your property is fire ready.



If a fire starts, immediately put your bush fire plan into action.



Avoid travelling to bush fire risk areas.



CATASTROPHIC

FOR YOUR SURVIVAL, LEAVE BUSH FIRE RISK AREAS.



If a fire starts, it will spread extremely quickly and lives could be lost.



These are the most dangerous conditions for a bush fire.



If a fire starts, you may not have time to leave, and help may not be available.



For your survival, do not be in bush fire risk areas.



Stay safe by going to a safer location early in the morning or the night before.





Resource 4:

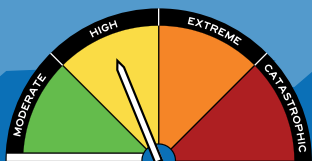
Fire Danger Ratings Community Action Puzzle

The puzzle activity on the following pages provides an opportunity for students to demonstrate their knowledge of the four fire danger ratings and the actions community members should take to minimise their risk.

Provide each student with a copies of Activity Sheet 1 and Activity Sheet 2.

Instructions for students:

1. Carefully cut out the cards on Activity Sheet 1.
2. Shuffle your set of cards and swap them with another student.
3. Stick your cards in the right spot on Activity sheet 2.
4. Decorate your work using the correct colour for each fire danger rating.



FIRE DANGER RATINGS

ACTION PUZZLE

**CAREFULLY
CUT OUT
THE CARDS
TO USE ON
ACTIVITY
SHEET 2**



MODERATE	HIGH	EXTREME	CATASTROPHIC
If a fire starts, it can probably be controlled.	If a fire starts, it could be dangerous.	If a fire starts, it will spread quickly and be extremely dangerous.	If a fire starts, it will spread extremely quickly and lives could be lost.
PLAN AND PREPARE.	BE READY TO ACT.	TAKE ACTION NOW TO PROTECT YOUR LIFE AND PROPERTY.	FOR YOUR SURVIVAL, LEAVE BUSH FIRE RISK AREAS.
Most fires can be controlled before they become dangerous.	There is a heightened risk.	These are dangerous conditions for a bush fire.	These are the most dangerous conditions for a bush fire.
Make a bush fire plan with your family and prepare your property for bush fire.	If a fire starts, your life and property may be at risk.	Check your bush fire plan and make sure your property is fire ready.	If a fire starts, you may not have time to leave, and help may not be available.
Stay up to date and be ready to act if there is a fire.	Be alert for fires in your area and decide what you will do if a fire starts.	If a fire starts, immediately put your bush fire plan into action.	For your survival, do not be in bush fire risk areas.
	The safest option is to avoid bush fire risk areas.	Avoid travelling to bush fire risk areas.	Stay safe by going to a safer location early in the morning or the night before.

FIRE DANGER RATINGS



MODERATE



HIGH



EXTREME



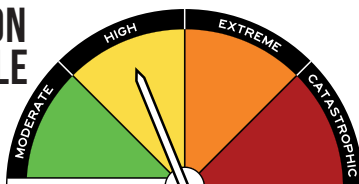
CATASTROPHIC

**FIRE
BEHAVIOUR**

**WHAT
ACTIONS DO
YOU NEED
TO TAKE TO
STAY SAFE?**

**STICK YOUR
CARDS IN
THE RIGHT
SPOTS!**

**ACTION
PUZZLE**





References

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Further reading

Australian Fire Danger Rating System; AFAC - the Australian and New Zealand National Council for fire and emergency services

NSW Fire Danger Ratings; NSW Rural Fire Service

Disaster Resilience Education for Young People Handbook; Australian Institute for Disaster Resilience

Project Firestorm was developed by NSW Rural Fire Service with NSW Department of Education.