Task sheet: Expert group 3 – Weather Part 1

1 Look at the data in the table below. Using data from the table as evidence, make a claim about the elements of weather that contribute to increased fire danger.

Melbourne maximum temperatures in the lead up to 7 February 2009 fires

Temp (°C)	36.4	43.4	44.3	45.1	30.5	33.8	28.5	30.2	30.2	29.2	33.1	46.4
Date	27 Jan	28 Jan	29 Jan	30 Jan	31 Jan	1 Feb	2 Feb	3 Feb	4 Feb	5 Feb	6 Feb	7 Feb

2 Read the following two articles, then complete the table below. Information about the 2009 Bunyip fire has been provided as an example.

a '"Black Friday" in Victoria, January 1939', Bureau of Meteorology www.bom.gov.au/lam/climate/levelthree/c20thc/fire4.htm

b 'Ash Wednesday, February 1983', Bureau of Meteorology www.bom.gov.au/lam/climate/levelthree/c20thc/fire5.htm

Victorian fire	**Maximum temperature**	**Relative humidity**	**Wind**	**Rainfall**
Bunyip fire, 7 February 2009	44.6 °C	Very low (8%)	The winds before the wind change were from the north-north-east, with a maximum speed of 46 kilometres an hour. The winds recorded after the wind change were from the west-south-west, with a maximum speed of 57 kilometres an hour.	Nil

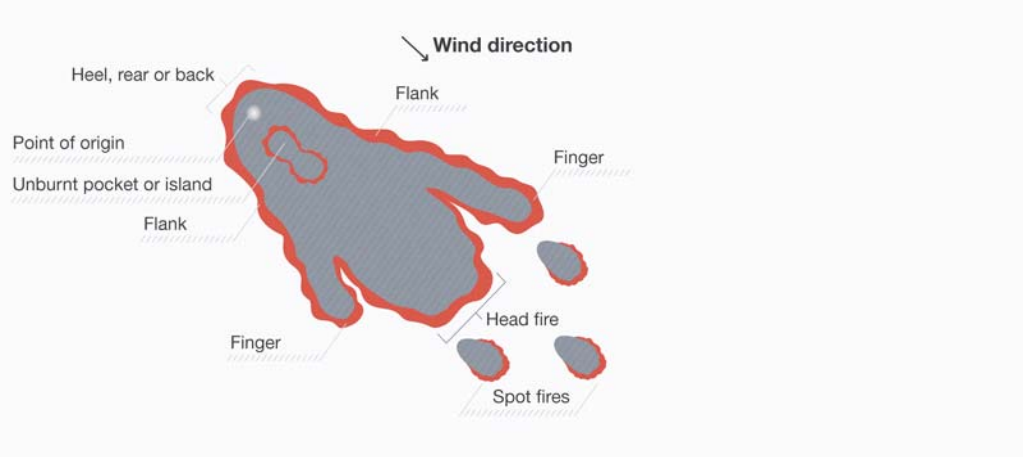
Victorian fire	Maximum temperature	Relative humidity	Wind	Rainfall
Black Friday, January 1939				
Ash Wednesday, February 1983				

3 What are the elements of weather that contribute to increased fire danger?

4 Explain why the particular conditions you chose contribute to increased fire danger.

Task sheet: Expert group 3 – Weather Part 2

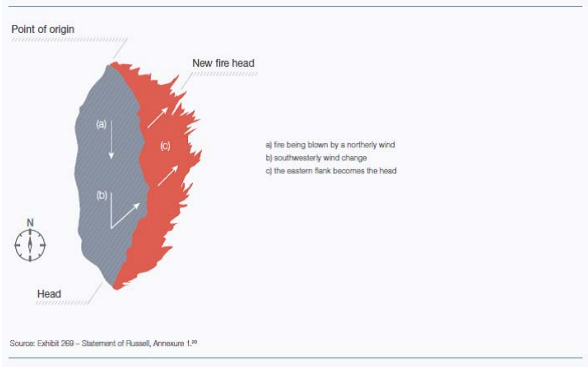
1 Using the diagram below, explain how spot fires start ahead of the head of the fire.



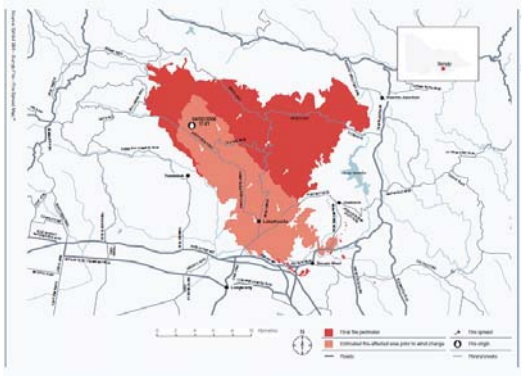
Source: *VBRC,* Volume 1, Appendix D

2 A wind change may often seem to bring relief to firefighters, particularly if the wind swings from a hot northerly wind to a cooler southerly wind. What effect might a wind change have on a fire front?

3 Look at the two images below. Why do wind changes pose a danger in firefighting?



VBRC, Volume 1, Chapter 1



VBRC, Fig 4.1, Volume 1, Chapter 4, page 53

4 Explain the reasons why it is difficult to predict the direction and speed of a fire.

5 How might residents of an area close to a bushfire be affected if the wind changed direction?