Task Sheet: Weather Investigation Report

- You are to collect or photocopy the whole Weather Page from either the Herald Sun or The Age newspapers for six days in a row, from Monday to Saturday. Do NOT include Sunday as minimum temperatures are usually not published.
- In each case, the whole page must be shown including the date at the top of the page.
- You will also need a map of the world to locate your cities.
- These pages must be included in the Appendices section of your report.
- Your teacher will tell you the names of three world cities that you will compare with Melbourne.

Time management
You will have six periods of class time in which to complete this task. Use a Gantt Chart to allocate home and class time to each of the sections and steps involved in the assessment task.

Hand in the completed Gantt Chart with your completed Report along with responses to each of these questions:
- Did your Gantt Chart include all of the steps involved in the assessment task? Explain.
- Were you realistic in your allocation of time to each of those steps? Explain.
- Did you complete all aspects of the task within the timeframe?
- What changes would you make if you were to undertake this task again? Why?

The Report
Complete the following activities and submit to your teacher.

Maximum and Minimum Temperatures
1. Draw up a table to show both Maximum and Minimum temperatures for each city including Melbourne, for each day.
2. Prepare a separate line graph for each city. Put maximum and minimum temperatures on the same graph.

All graphs must include:
- a heading
- labelled axes
- a clearly marked scale
- the use of two different colours to represent maximum and minimum temperatures.

3. Answer the following questions about the four cities you have graphed:
- Which city had the highest maximum temperature for the week?
- Which city had the highest minimum temperature for the week?
- Which city had the lowest maximum temperature for the week?
- Which city had the lowest minimum temperature for the week?

4. Prepare a Daily Maximum Temperature Graph with all four cities on the same line graph. Use three different colours. You may need to adjust your scale.
5. Prepare a Daily Minimum Temperature Graph with all four cities on the same line graph. Use different colours. You may need to adjust your scale.
Average Temperatures
6. Calculate the average maximum temperature for each city for the week. Show all calculations.
7. Calculate the average minimum temperature for each city for the week. Show all calculations.
8. Collect a copy of a world map and mark in the location of your four cities. You will need to consult an atlas.
9. Draw up a table to show the Average maximum and minimum temperatures for the three cities as shown below.

Example:

<table>
<thead>
<tr>
<th>Name of city</th>
<th>Average Max. Temperature</th>
<th>Average Min. Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melbourne</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>Moscow</td>
<td>12</td>
<td>-3</td>
</tr>
</tbody>
</table>

Continue…

10. Use a Thinking Tool such as a KWHL to help you work out the answer to this question. Submit your completed Thinking Tool with your answer.

Attempt to explain the differences in temperature from city to city. You will need to consider the following in your answer:

- Location on the world map
- Hemisphere
- Season

Range in Temperature
11. For each of your four cities, subtract the minimum temperature from the maximum temperature for Wednesday only. This is called the Range. Put these figures into a table. Show all calculations.

12. Draw a bar graph of the range in temperature.

13. Which city had the greatest range? Which had the smallest?

The following factors may affect the range of temperatures in a city:

- Latitude
- Season
- Coastal/Inland
- Altitude

14. Choose one of your cities. Refer again to your world map and graphs, and decide which of the above factors is most important in explaining its range of temperatures. Explain your answer. Use a Thinking Tool to help you if necessary.

15. Use your graphs to predict a reasonable maximum and minimum temperature for Sunday for each of your cities. Explain your predictions.