Directions: Using a textbook or the Internet, find a section that describes the life cycle of “Middle- Latitude Cyclones”. Complete the following tasks using that section and then sketch a cross- section for the air masses associated with these developments.

1. What is a middle- latitude cyclone?

2. In the following boxes, DESCRIBE (2-3 sentences) the development and formation of these cyclones.

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| **Stage** | **Description** |
| The formation of a front sets the stage for a mid- latitude cyclone. |  |
| Over time, the front takes on a wave shape. |  |
| Changes in air flow and pressure result in a counterclockwise flow of air. |  |
| The cold front closes in on the warm front to produce an occluded front. |  |
| As the cold front lifts, an occluded front forms. |  |
| Eventually, the cyclone weakens. |  |

4. How long do cyclones live/exist?

5. What enables the cyclone to continue living/existing?

6. Go to <http://www.wunderground.com/weather-radar/united-states/animated> and

a.) observe the motion of the Doppler radar for the United States. Do you see any locations where a Mid-Latitude Cyclone could be existing? If so, describe where it/they are located and their size and shape. If there is no evidence of a cyclonic storm, describe the weather occurring for the various regions of the United States.

7. Go to <http://www.weather.com/maps/currentusweather> and

a.) Do the suspected cyclone regions from question 6a. actually exist? Justify your answer by describing the current stage of life for the cyclone. Also, explain how you know the cyclone is in that stage. (Think about what evidence this map provides in terms of cyclonic development.) On the other hand, if there is no cyclone taking place, then describe the evidence that supports that answer.