MTH 351 Reading assignment

This is an INDIVIDUAL, not a group project. Don't hesitate to discuss all your questions with me in person before submitting your project. Do not send drafts for me to look at – make sure that whatever you send me is a final version of your project.

Instructions:
You will read several expository articles related to given topics and write a brief reflection on what you read. For each topic, there are some suggestions on what articles to read, but feel free to research the topics and read more than suggested. If you are reflecting on an article not listed below, make sure to include all necessary information to identify the article (authors, title, journal…). Please keep in mind that it is your reflection on reading, not a thorough review or the articles - your reflection does not have to be extensive. A page or two covering each topic is fine, but feel free add more if needed. An evidence that you have read the articles and understood their major ideas is a key assessment criterion.

Topic 1: Van Hiele model of learning geometry.
The Van Hiele theory has had a tremendous impact on how we look at the development of geometric thought. You will read two expository articles:

- The Van Hiele Model of the Development of Geometric Thought by Mary Crowley. Article in NCTM 1987 Yearbook: Learning and teaching geometry, K-12 : 1987 yearbook / Mary Montgomery Lindquist, 1987 yearbook editor.

The yearbook is available at Park Library, book collection, 4th floor. A scanned copy of this article will also be posted to the Bb.

- Rethinking proof – Van Hiele theory by Michael de Villiers. A scanned copy will be posted to the Bb.

Read the articles and respond to the following questions:

1. Describe briefly the main idea of the articles.
2. Were they worth reading? Briefly explain why or why not.
3. What ideas did you find interesting or important? Were there any particular ideas that you might be drawing on in your teaching? Any ideas directly transferable to a math classroom?

Topic 2: Proofs, hierarchies and dynamic geometry systems.

- Rethinking Proof – The Role and Function of Proof by Michael de Villiers. A scanned copy will be posted to the Bb.

Read the article and respond to the following questions:

1. In your own words, briefly describe the main idea of the article.
2. Was the article worth reading? Explain why or why not.
3. What specific ideas did you find interesting or important? Were there any particular ideas that you might be drawing on in your teaching? Any ideas directly transferable to a geometry classroom?

Review Topic 3: Geometry in the Common Core State Standards (CCSS).

- H.Wu: Teaching Geometry According to the Common Core State Standards. The publication is available on the Internet. (Please let me know if you have problems to find it.)

Pick a school grade (or several grades) and read the corresponding CCSS and comments about them.

1. Summarize what you read about the CCSS geometry expectation for your chosen grade(s).
2. Did it match your expectations about what geometry should be taught in your chosen grade(s)? Explain by giving specific examples.

3. What ideas did you find interesting or important? Were there any particular ideas that you might be drawing on in your teaching?

To be eligible for full credit, your review must meet the following formal requirements:

1. Word processing (Text: font size not exceeding 12, single or 1.5 line spacing). If you wish to add pictures, leave a space in the text to insert hand drawn pictures and submit a hard copy of your project. As an alternative, you may use GeoGebra for drawing pictures and either insert a screen shot or provide a link to your GeoGebra applet.
2. Complete sentences, clear statements, effectively formulated ideas.
3. If you are submitting an electronic copy of your paper, name your file in the format **YourLastName_RA** . For example, a student Samantha Smith would send a file named "Smith_RA" (RA stands for Reading Assignment). Acceptable formats are: doc, docx and pdf. In the subject of your message, clearly indicate that it is **Article Review Submission**.