MA341 Project #1

Choose a particular geometric concept (such as the area of a circle, but don't do this one!) and describe its development through the K–12 curriculum. Refer to the National Council of Teachers of Mathematics standards and the *Connected Mathematics* strands (a particular middle school curriculum that I have copies of). Their websites on posted on our course website.

In each of the following grade levels, describe what students would be expected to master and provide examples of one or two problems at that level, with correct solutions.

1. K–5
2. 6-8
3. 9-12

In addition, at the middle school level, find a problem from actual middle school curriculum (like Connected Mathematics) and describe three or four typical student responses showing different levels of mastery (novice, apprentice, proficient, distinguished). Construct a grading rubric appropriate to the problem and evaluate the three responses. Finally, give an example from real life where this geometric concept plays a role. These will be presented in class (15 minutes max, probably the last two classes in October).

You may work in groups of three or four. You must tell me by Wednesday, September 26, which concept you will choose and who the members of your group will be. I will provide some examples of concepts shortly, but in the meantime you should go to the NCTM and the Connected Mathematics websites for ideas.