Notebook Checklist

1. Course Information
   (a) Notebook Checklist (can serve as your Table of Contents)
   (b) Syllabus

2. Notes
   (a) Your own notes
   (b) Daily class summaries from the course website

3. Problems
   (a) List of problems from the website
   (b) Quadratic Patterns of Change
   (c) Symmetry Transformations

4. Homework assignments and solutions, exam preparation handouts, exams, solutions to Exam #2.

5. Mathematics

6. Problem Solving and Standards
   (a) Polya’s Four Phases of Problem Solving
   (b) Kentucky’s Program of Studies, with example from Mathematics - Eighth Grade
   (c) NCTM National Mathematics Standards, including Problem Solving, Reasoning and Proof, Communication, Connections, and Representation
   (d) Review of Problem Solutions

7. Websites and Software
   (a) The National Library of Virtual Manipulatives
   (b) Excel — Getting Started
   (c) GeoGebra

8. Manipulatives
9. Learning Styles and Differentiated Instruction

(a) Index of Learning Styles

10. Connections

(a) Mathematical Magic — The Twenty-Seven Card Trick and the Eight Card Trick
(b) Music — Tuning a Piano
(c) Origami: The Art of Science and Mathematics
(d) Art — “Wallpaper” patterns for analysis