Notes

I. Overview
   a. NCTM expectations for logic and classifying include being able to:
      i. Sort, classify, and order objects by size, number, and other properties
      ii. Sort and classify objects according to their attributes
      iii. Organize data about the objects
   b. Focal Points for prekindergarten and kindergarten number and operations connect with sorting
      i. By kindergarten, children should be able to use sorting and grouping to solve logical problems
   c. In mathematics and science, an understanding of constructing logical grouping and classifying is essential
      i. NCTM standards identify the importance of connecting counting to grouping
         1. Constructing logical groups provides children with valuable logical thinking experiences
         2. As children construct logical groups, they organize materials by classifying them according to some common criteria
         3. Youngest children may group by criteria that are not apparent to adults but make sense to them
            a. As children develop, they gradually begin constructing groups for which the criteria are apparent to adults
      ii. Logical thinking and classification skills are fundamental concepts that apply across the curriculum
   d. To add is to put together or join groups
      i. Before doing any formal addition and subtraction, the child needs to learn about groups and how they can be joined and separated
         1. Children must practice sorting (separating) and grouping (joining)
         2. This type of activity is called classification
      ii. Young children spend much of their playtime in classification activities
         1. As children work busily at these sorting tasks, they simultaneously learn words that label their activity
            a. This happens when another person tells them the names and makes comments
         2. The child learns that things may be grouped together using a number of kinds of common features:
            a. Color
            b. Shape
            c. Size
            d. Material
            e. Pattern
            f. Texture
            g. Function
            h. Association
3. Which criteria children select or exactly how they group is not as important as the process of logical thinking that they exercise as they sort and group.

II. Assessment
   a. The adult should note and record the child’s play activities
   b. Refer to Appendix A for recommended formal assessment tasks

III. Naturalistic Activities
   a. Sorting and grouping are some of the most basic and natural activities for the young child
      i. The adult provides the free time, the materials, and the space—the child does the rest

IV. Informal Activities
   a. Adults can let children know that sorting and grouping activities are of value in informal ways by showing that they approve of what the children are doing
      i. Can be done with a look, smile, nod, or comment
   b. Adults can also build children’s classification vocabulary in informal ways
      i. Can label the child’s product and ask questions about what the child has done
      ii. As the children’s vocabularies increase, they will be able to label and describe how and why they are sorting and grouping
         1. Words also give them shortcuts for labeling sets

V. Structured Activities
   a. Sorting and grouping lend themselves to many activities with many materials
      i. Real objects are used first, then pictures and objects, then cutouts, and then pictures
      ii. One-to-one correspondence skills go hand-in-hand with sorting and grouping

VI. Ideas for Children with Special Needs
   a. Copley, Jones, and Dighe suggest methods of meeting the needs of English Language Learners, advanced learners, and children with disabilities
      i. With ELL students, language should be kept simple and rhymes and chants should be repeated
      ii. Classification activities provide many opportunities for building English vocabulary
      iii. Important to include culturally relevant materials and to use the children’s primary language if possible
      iv. Advanced learners may become bored unless they are offered more challenging experiences
      v. Some prekindergartners may be ready to use number symbols, create charts and graphs, or use more advanced computer programs
      vi. Children with disabilities can benefit from accommodations that meet their needs and provide support to their strengths while working with their problem areas
1. Children with disabilities:
   a. May need more multisensory experiences
   b. May need concepts broken down into smaller parts
   c. May benefit from special technology and other accommodations

VII. Evaluation
   a. As children play, note whether each one sorts and groups as part of his play activities
   i. Should be an increase as they grow and have more experiences with sets and classification activities
      1. Should use more feature names when they speak during work and play
      2. Should use color, shape, size, material, pattern, texture, function, association words, and class names