

Supporting Mathematical Development in Young Children

Example of how the videos might be used in a college course

At home:

Divide the class into 4 groups. Assign each group a video related to a specific strand. For strands with multiple videos, divide them up so they each view one. Have them complete corresponding video worksheets to bring to the next class meeting. Also have them read the introductory section of the appropriate Strand from the *Supporting All Children Using the CT ELDS: Guide to Domains and Strands* from the section on Mathematics

In class:

When students arrive, group them according to the Strand they were assigned. Provide each group a copy of the "Strategies" and "Supporting All Children" pages for that Strand from the *Supporting All Children Using the CT ELDS: Guide to Domains and Strands*.

- Students' beliefs about their own competence as math learners often influence their attitudes and confidence as they learn to support young children. **It may be useful to have a discussion with participants about their own math experiences in school and how they feel about teaching in this area.**
- **A strong foundational understanding of math concepts is crucial for children's ongoing learning. Research shows that early mathematical development is most predictive of later learning in ALL areas.**
Explore this finding with participants. Have them discuss in their small groups why they think mathematics is related to later learning and why this is important to consider. Share ideas as a class and help them realize the types of thinking involved in mathematics and the importance of logical reasoning and problem solving in all aspects of life.
- Allow students to refer to their completed worksheets and share their notes within their small groups. Have them make a list of major points learned and identify strategies related to their assigned strand.
- Show the introductory video for Strand A, then talk with the whole group about the big ideas and identify why the concepts from this strand are important. Have the group assigned to Strand A report out on the learning progressions. You might choose to use a few video clips (search for mathematics within the *Video Library* which can be found on the resource list) to further clarify points. Continue on in this manner for remaining strands.
- Stress that while the videos each focus on a specific learning progression, it is only because they are intended to help adults think about these concepts. Children's development is holistic. **Engage students in a group discussion about the big ideas in mathematics and brainstorm ways this domain might be integrated into curriculum in meaningful ways.**

Assignment:

Have students choose a "topic of study" and identify multiple strategies that could be used to integrate mathematics learning from at least 2 strands. Students might list materials, environmental considerations, opportunities for learning across the daily schedule (including routines and outdoor play), and teaching behaviors.

NAEYC Professional Preparation Standards:

1 Promoting Child Development and Learning
a, c

4 Using Developmentally Effective Approaches
b, c, d

5 Using Content Knowledge to Build Meaningful Curriculum
a, b, c

6 Becoming a Professional
c, d

