Unit 1

Week 2

Small Groups: Building Houses

Low Support

Math

SG1

Standards:

MP: Participates in whole group and small group math-focused activities.
G: Explores three-dimensional and two-dimensional shapes in the environment

MD: Matches and groups similar objects.

Guiding Math Ideas:

- Discovery and exploration of math materials
- Matching and Grouping
- 3-D Shapes

Math Concepts: [From Unit 1 Learning Progressions]

- Manipulating and building with 3-D Shapes
- Objects can represent other objects

Materials: This small group takes place in the block center

- Unit blocks (already present in the block center)
- Add containers of 3-D small multicolored blocks.
- Add Family Blocks
- Books about building: Jack the Builder, When I Build with Blocks, Changes, Changes
- Work mats or sit-upons for individual work spaces, as needed.
- Laminated chart of names of 3-D Shapes (in Teacher Materials Packet.
- Camera, Tablet or Phone Camera

Math Vocabulary: If children are curious, give the accurate names for these 3-d shapes (unit blocks) Refer to Chart as needed.

- Cube
- Sphere
- Prism as in blocks that are Rectangular and Triangular Prisms
- Cylinder

Preparation:

This activity takes place in the block center and could be repeated several times to give all children the opportunity to play in the block center, as some children choose the block center regularly and others do not.

As the start of Week 2, add the Family Blocks, Small 3-D Blocks, and books to the center, so that children can explore these materials prior to this Small Group.

Procedure:

We are playing in the block center today during our Math Time. Some of you may want to build houses or apartments or other buildings. You can work by yourself or with a friend.

Build alongside the children, describing the structure that you and the children are making.

Encourage children to extend their play, making note of any structures that resemble houses or apartments. They may also choose to build other structures. *I am building some stairs. I have a basement in my house... Where do you sleep?*

Use words that describe spatial concepts, such as relative position in space: Over, under, beside, on top of, etc. Uses words to describe the different types of blocks. [See strategies]

Children are still getting used to the clean-up routine. Remind children of the routine as they match the different shapes of blocks with the labels on the shelves.

When it is time to clean up, we will put the toys back in the place that <u>matches</u>. [Show baskets or spots on block shelves with picture/word labels].

Strategies that Facilitate Math Thinking:

- Building with blocks is a long-standing favorite activity that is intrinsically mathematical. Watch
 for the use of actions words that demonstrate spatial concepts of orientation. As children play,
 describe how they are using the blocks: I see that you are putting these blocks on top of the big
 ones, etc.
- It is common to use inaccurate words to describe 3-D objects. While playing with the blocks, use the words for 3-D shapes when possible. For example, a round 3-D object is not a "circle". It is as *sphere*. A little block is not a "square" but a "cube". Decide when and how you will introduce 3-D names into block play. Accurate terms are the foundation for later geometry learning.
- Representation is a key math process. In this activity, children are representing their ideas about structures as well as their understandings of size, shape, and orientation.
- Cleaning up blocks can be a daunting task. Labels on the shelves with drawings of the different types of blocks will help children as they work in this area. Facilitate both the clean-up process and the formation of matching, grouping and spatial skills.
 - I see this picture looks like the blocks that you used for your road. Let's stack them up and see if they will fit.
 - These long blocks are really heavy. Let's be sure to put them all the way back on the shelf.
 - All of these small cylinders can fit in the basket.

Documentation:

Take photos of children's structures to document children's growing skills over the year in block play as they demonstrate the different stages of block play from simple to complex.

Provocation:

Spatial Thinking as a Life Skill: Block play AND cleaning up blocks are excellent Geometry activities for reinforcing spatial abilities. Use the words that you hear children using in other contexts, such as locating objects in the classroom or in cubbies, on the playground, etc. to observe whether children have a general understanding of locating objects in space.