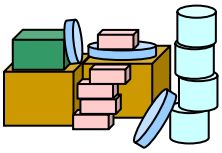
raft®
RESOURCE AREA FOR TEACHING

STEAM
SCIENCE TECHNOLOGY ENGINEERING ARTS MATHEMATICS

LEARNING ACTIVITY

Building Center

Create a Construction Zone in Your Home!



Open-ended building with foam pieces, blocks, and boxes helps young learners explore elements of design, construction, and the scientific process!

Materials Needed
- Foam pieces of various sizes and shapes
- Boxes
- Cardboard tubes
- Cardboard sheets
- Straws
- Blocks
- Plastic bins
- Wood scraps
- Fabric scraps
- Scissors (optional)
- Glue (optional)
- Tape (optional)

Grade Range
Pre-K

Topics/Skills
Construction and Design; Scientific Process; Motor Development

Learning Standards
NGSS: Engineering Design

Duration
20 – 45 minutes

Prep Time
5 – 10 minutes

Activity Challenge

Create a Building Center for students to build and explore.

Preparation

1. Review the Materials Needed list and collect materials.
2. Select a workspace for the Building Center. It should have a smooth surface, such as a table, countertop or floor.

To Do

1. Students explore the Building Center materials.
2. Encourage open-ended construction and play.
3. Age-appropriate explorations could include: Build the Tallest Tower, Create a Castle, Balance on a Single Block.

Observations

- Explore the properties of the various materials – shape, texture, rigidity, weight, bendability, and more.
- How can the materials be used to construct a variety of different things?

The Content behind the Activity

Young children need opportunities to explore and experiment as part of their learning. Building structures as part of a math and science curriculum in open-ended ways and using found materials helps students internalize concepts and practice skills. Children get to decide how to use the materials as they explore concepts of balance, height, width, strength and stability. Building Center used in this way also gives children the opportunity to use their imaginations and integrate new ideas into their play. Children develop physical, cognitive, and social skills as they work individually or in small groups. Skills and knowledge developed through this activity include but are not limited to:

- Coordination and awareness of spatial relationships
- Cause and effect
- One-to-one correspondence, number, size, length and form
- Problem-solving, counting and classification
- Forming hypotheses and making predictions
- Bridging and forces within a system
- Self-confidence and independence
- Cooperative play and work.