Engineering Activity
Build It: Towers!

SETUP

• The goal of this activity is for children to use problem-solving skills to design tower structures out of a variety of materials.

• Set up a clear area on the floor with the building materials to one side. Small parts and toys can be grouped together in a box or other container.

DO IT TOGETHER

• Let your child explore the building materials by handling and talking about them. “Look at all these different materials! How will you start your structure? What goes next?”

• If your child is very young, you could suggest that he build a tower for the toy people to live in, then you can work on the structure together. Be sure to let him pick out the pieces and try them out before you suggest something different.

• As your child tries out different designs and ways of stacking the materials, you can support his learning by asking, “Can you make a tower as tall as you are? What would happen if you removed some of the pieces? Can you make a tower with a tunnel that this toy car could drive through?”

• Your child may want to include the toys into his play rather than focus only on building towers. This is a great opportunity to encourage imaginative play during an engineering design challenge. “How big will the barn door opening need to be for the horse to fit through? How many yogurt containers will you need for the walls?”

• If the tower tumbles down unexpectedly, ask, “What do you think happened? Is there something different you’d like to try? What do you think will happen if you move this big piece down lower?” Be sure to jump in with a helping hand if your child seems too frustrated to keep going or would like some support.

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DO MORE OF IT!

- **Build-It Buildup.** Put aside a box to start a collection of building materials. Save a variety of recycled containers of different sizes and shapes, such as empty shoe or cereal boxes or plastic jars.

- **Build It Up–Knock It Down.** Children love to build towers and knock them down. Find a safe place to let your child build all kinds of structures and knock them down. Try using lightweight materials such as Styrofoam packing material, cardboard boxes, empty cylindrical oatmeal containers, and big plastic jugs. You can also add beans or marbles to the plastic containers, seal them well, and enjoy the extra sound effects when the structure tumbles down.

BOOKS

- *Block Building for Children: Making Buildings of the World with the Ultimate Construction Toy* by Lester Walker
- *Block City* by Robert Louis Stevenson
- *Changes, Changes* by Pat Hutchins

OTHER RESOURCES

- Visit your local library.
- Visit your local museum, nature center, zoo, or aquarium.
- Check out Brain Building Zones for local events in Massachusetts at http://brainbuildinginprogress.org/event-calendar.

MATERIALS

- Assorted stackable building materials: blocks, empty yogurt containers with lids tightly taped on, plastic storage containers with lids, plastic or wooden spools, paper towel tubes, or toilet paper tubes
- Assorted small toy props such as cars, animals, or people
- Open floor space

**Learning Guideline:**
PreK-LS1-4: Use their five senses in their exploration and play to gather information.

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