

## Summer Learning Activities

### Engaging Your Child In Fun Ways

#### STEM

#### ***Ooohhh, The Things I Can Create***

**This strategy:**

- Devises opportunities for creative thought.
- Provides scenarios for kids to work with science, technology, engineering, and math.
- Builds critical thinking skills through imaginative thought.

**The challenge is to create something based on a set of guidelines.**

**Possible Guidelines:**

- Time limit: is the challenge going to last 10 minutes or 3 days?
- Will materials be given or will your child need to find his/her own? (See below for ideas.)
- May technology be used for research? If so, how much time is allowed (limited to unlimited)?
- Does looks count? Beauty is in the eye of the beholder.
- What about taste? Is this something being created for consumption?
- Is this an individual challenge or may teams be formed?
- How about use of other experts? May I ask my engineering dad a question? Can my older sister give advice?

**Possible Challenges:**

1. Design an object that can move across the kitchen floor but does not have wheels.
2. Make a flying object that is held in the air for a given amount of time without supports.
3. Create a new dessert.
4. Devise a way to move marbles into a cup even though you are 10' away.
5. Develop a new way to paint the fence without using traditional paint brushes and rollers.
6. Invent a way to capture rain water for a house without gutters.
7. Build a underwater watercraft that moves across the backyard pool.
8. Set up a solar building to store your summer plants during winter.
9. Create your own challenges.

**Places to Consider for Materials (be sure your child knows the boundaries)**

- Garage - What tools may be used? Are there chemicals to stay away from? Can the paint be used? What about scrap wood?
- Kitchen - May the mixer be used? How about pots, pans, utensils? Is there any food that is off limits? Does your child need help using the oven and stove?
- Backyard - Can garden tools be used? Is it okay to cut flowers and other plants? How much dirt is too much dirt?
- Park - We need to be sure our public and private parks are not harmed in any way.
- Nature walk - again, like our parks, we should not harm the environment in any permanent way.
- Play room - may toys be taken apart and used in new ways? What are the limits for markers, glue, and other materials that may become a permanent "piece of art".

- Technology - if the challenge is to make something to be used with technology, what sites may be used? How about pictures? May it begin with something already in existence and be changed into something new?

**Ways to support the learner**

- Start small - make a spaghetti tower - instead of having your child find the materials, give him/her some spaghetti and marshmallows. The challenge: build the tallest freestanding tower in 15 minutes. OR make it a team challenge - build a bridge. Whoever's bridge holds the most pennies without falling or touching the table/floor, wins.
- Each idea above may be simplified:
  1. Design a cart.
  2. Make a flying object.
  3. Follow a recipe.
  4. Devise a way to move marbles into a cup without your hands.
  5. Develop a way to paint a picture with our paintbrushes.
  6. Invent a way to capture rain water to water plants.
  7. Build a water toy for the backyard pool.
  8. Find a way to protect plants from the cold of winter.
  9. Create your own challenges.

**Resources**

1. <https://www.steampoweredfamily.com/summer-stem-activities/>

(We are not affiliated in any way with the resource. Please use at your own discretion.)