



CURRICULUM FOR Early S.T.E.M.

Developing Spatial Intelligence - Levels 4-6

Building with **brain blox** *let's build!* cards

Skills & Concepts they will LEARN:

- Visualization of three-dimensional objects
- Ability to perceive 3D from a 2D image
- Manipulation of spatial information
- Development of spatial intelligence
- Fine motor skills (Dexterity)
- Hand-eye coordination
- Linear thinking
- Early Math & Reading concepts

What they will NEED:

- 75 Brain Blox Building Planks
- Brain Blox *let's build!* cards, Levels 4-6
(find at www.mybrainblox.com/pages/free-resources)

What they will DO:

Beginning with Level 4, invite the child to choose a *let's build!* card, look at the picture and re-create what they see!

Re-creating what they see on a 2-D card in the 3-D world is a wonderful practice for developing spatial intelligence. To enhance their practice further, follow the next section:



What YOU can do:

- Invite your child to close their eyes and visualize what they just created. Ask them to answer the following questions just by using the “picture” they have captured in their mind’s eye (*no peeking!*):
 1. Can you count how many planks were used in this build?
 2. Can you tell me where your build is positioned in relation to where you are sitting? Is it straight in front of you or slightly to your right or left? Is it closest to your foot, knee or something else?
 3. Can you point to where the build is without opening your eyes? How about the card?
 4. Can you show me the size of your build with your hands?
 5. Describe some features of your build. Are there curves, corners, or pointy edges?

It is important to tell them that getting the “correct” answer isn’t the main point, rather it is simply the practice of spatial thinking that is so important.

- Invite your child to choose any small object from the classroom. This can be a toy, marker, etc. Then ask them to build a flat surface with their planks just big enough for their object to sit on. Encourage them to make it as close to the size dimensions of their chosen object as they can. Then ask them if their object would still fit if they rotated the object, or would they also need to rotate their plank surface?
- Ask the child to recount the steps they took to complete their build! The child may answer as simply as, “I just built it” but encourage them to recount each step they took from the beginning. You can give them a little help along the way if they are having a hard time. (*For example: Step 1: I chose a card, Step 2: I read the title, Step 3: I thought it looked easy/challenging, Step 4: I grabbed a plank, Step 5: I started on the left side and kept building to the right, Step 6: Once I finished, I looked back at the card to see if I got it right!*)

At the end, offer the child a big high-five or handshake to congratulate them on their amazing spatial intelligence! 😊

*** Please visit <https://mybrainblox.com/blogs/news/spatial-thinking-empowering-children-to-succeed-in-stem> for more information on spatial intelligence.