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Basic Info about KEVA® Planks

1. **Building Position:** It's best to build from a squatting position. This allows children to easily get several views of their building. It also keeps children from accidentally knocking over their building with their knees when they get up from kneeling or sitting on the floor.
2. It's best to build on the floor rather than on a table, which can be easily bumped. You can create an even surface on a carpeted or textured floor by laying KEVA® down to create a platform to build on.
3. KEVA® has three dimensions: the flat side, the end and the edge. A 3D diagram of a grey rectangular KEVA plank. The top surface is labeled "Flat Side", the long side is labeled "Edge", and the short side is labeled "End".
4. Children can build with just a few blocks or with many. 50-100 pieces per child are a good gauge for group building.
5. KEVA® and other block building promote cooperation, exploration, problem solving and many simple and advance science and math skills.
6. The following activities are suitable for students K-4 and the difficulty can be varied depending on the children and the size of the group. Begin with simple challenges and increase difficulty as needed monitoring for engagement and frustration.

Polygon Play

Children can use planks to construct different shapes with varying numbers of sides. These shapes are referred to generally as POLYGONS. Regular polygons have equal length sides and equal interior angles.

Each child can work alone or in a team. To construct all the polygons and keep them in tact they will need 75 blocks or they may start with 12 to 20 and reuse the blocks each time. Ask children to construct the following by laying planks flat or on their sides.

FIGURE	NO. OF SIDES
Triangle.....	3
Square.....	4
Pentagon	5
Hexagon	6
Heptagon.....	7
Octagon	8
Nonagon.....	9
Decagon.....	10
Undecagon	11
Dodecagon	12

Extensions of the Activity:

- Write the name to label each shape and # sides
- What signs do we see on roads and highways that use these shapes (Yield triangle; Stop sign octagon)
- What other objects do these shapes remind you of?
- How might you combine these polygons into other buildings?
- What happens to the shape as the # of sides increase? The shape gets larger and the interior angles also get larger.
- Have a relay race where each one person from each team picks a card and races to the end of the room and constructs the polygon on the card.

Block Head! Race

- ➔ Several Teams of 3 or 4 Builders
- ➔ Ample blocks



This is a simple racing game that's lots of fun. It can be altered in a number of ways to increase the fun and difficulty.

Provide each team player with 25 blocks and a base of 4 blocks. Each team could have a bell or a word they will shout when they use all their blocks. Like **Block Head!**

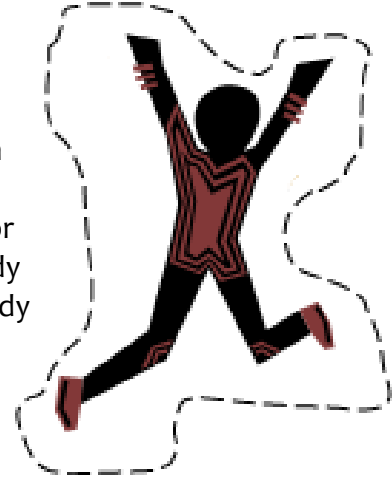
- The team sits in a circle on the floor with a base of 4 flat blocks equidistant from each person.
- When the referee says go, each team member adds a block one at a time moving in a clockwise direction.
- The team members go around the circle adding blocks one at a time as fast as they can without knocking down the structure.
- The game ends when one team uses all their blocks. The team yells '**Block Head!**' when they finish.
- If a structure falls the team can start again until one team yells '**Block Head!**'

Variations:

- Add two blocks at a time
- Introduce a dice and each player rolls the dice adding the number of blocks = to the number on the dice
- Set a timer and the team who builds the highest when the timer rings is the winner

Circle - Me

This is a fun and simple game. In pairs or teams of three, have one person lie on the floor in any position. Each team needs an ample supply of blocks. The emcee has a timer and says 'GO'. The team member/s that are not on the floor need to place planks end to end to circle all around the body of their team member. The team who circles the whole body first wins.



Variations:

- Ask the person on the floor how his team members would use fewer blocks?
 - Scrunch into a ball
 - Keep your arms in instead of out
 - Bend your knees, etc.
- How could you position yourself to use more blocks?
 - Extend your arms and legs
- Have each team guess how many blocks it will take to go around someone; have them write the guess on a piece of paper and fold it up or have the person in the center guess. The team whose guess is closest wins.
- The person on the floor shapes their body like a letter and team members do the same.

Adding, Subtracting & Other Math Operations

KEVA® planks are terrific for practicing and teaching counting and other math operations.

1. Place a large pile of blocks on the floor or table and have kids sit around it.
2. The leader reads aloud the following card – starting slowly and increasing the speed.
3. Everyone begins with one block:

Add 5; Add 3; Take away 2; Add 4; Add 3; Take away 1; Add 5; Add 3.

What do you have?? $1 + 5 + 3 - 2 + 4 + 3 - 1 + 5 + 3 = 21$

4. Everyone begins with one block: Add 2; Add 4:
Give one to the player on your right: Add 5; Add 3; Take away 2:
Give two to the player on your left: Add 2; Add 2; Add 5 = 22
5. With older students (3rd to 4th grade), make the game more challenging by including multiplying and dividing. Everyone begins with one block:

Add 3; Add 1; double what you have; Add 2; Take away or subtract 6; Add 2;

Add 4; Add 6; Add 2; Divide in $\frac{1}{2}$ How many do you have???

$1 + 3 + 1 = 5 \quad \times 2 = 10 \quad = 2 = 12 \quad - 6 = 6 + 2 = 8 + 4 = 12 + 6 = 18 + 2 = 20 / 2 = 10$

Each player should have 10. Did anyone get it right??

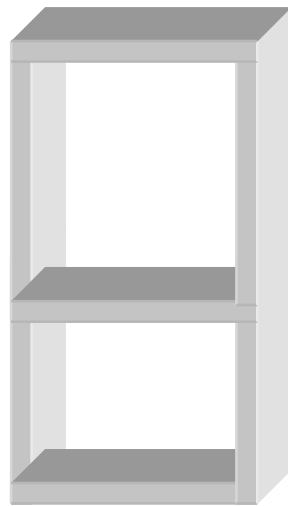
It's easy to make more and increase the length or complexity as kids improve

Partner Build

This is a game that builds cooperation. One person is the builder and one is the foreman. The foreman gives the directions using a picture card as the pattern and the builder constructs.

Each foreman gets a picture of a structure built from KEVA® and gives verbal directions to the builder. Start from the bottom and provide the number, direction and position of the planks. You might make cards by taking photos of things that kids have built. When the directions are done, compare the structure to the photo.

For example:



Endless Possibilities

KEVA® planks can be used in hundreds of ways. Try some of these:

- Free build – Try anything you like
- Build structures to resemble your town
- Recall a famous building and recreate it - a pyramid, the Empire State building, the Astrodome.
- Recreate a famous scene or event in history: The Alamo, the Great Wall of China
- Use planks to spell out words, names or the alphabet
- Create a map of a city or a floor plan of your house or school
- Build cooperatively – an arch, a bridge or other architectural feat

For more information about BLOCK Fest™, visit www.twigafoundation.org