

Lego™ Six Bricks Activities

Educator Handbook

Name

School / Organisation

District / Town

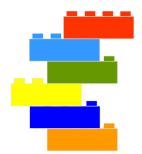


The **LEGO** Foundation

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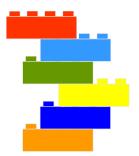


What is Six Bricks?

How do you use them? Why should you use them? When do you use them?

Six Bricks is a concept which playfully engages children in a variety of skills development. As with any skill, to develop it, one needs to explore it, to experience it, and to practise it.

Afforded these opportunities children can ...



... develop these Executive Functions ...

Attitude & motivation

Initiates activities
Enjoys solving problems
Tackles new tasks confidently
Persists in the face of difficulties
Finds own resources without adult help

Planning, focus and shift attention

Keep attention and resist distraction Monitor progress and seek help when needed Ask questions and suggest answers Plan own tasks, targets and goals Develop own ways of carrying out tasks Can speak about future planned activities

ProSocial

Speak about how they have done something or what they have learnt Can speak about own and others' behaviour and consequences Use previously taught strategies

Use previously heard language for own purposes Be aware of own strengths and weaknesses

Make reasoned choices and decisions

Reflecting on learning

Negotiates when and how to carry out tasks
Can resolve social problems with peers
Shares and takes turns independently
Engages in independent cooperative activities with peers
Is aware of feelings of others and helps and comforts



... build these Developmental Areas ...

Physical

Fine motor skills (hands and fingers)
Gross motor skills (whole body)
Use senses (sight, touch etc.)
Spatial skills / orientation
Balance / coordination

Intellectual

Attention skills
Reasoning / logic
Problem-solving / experimentation
Memory skills
Creativity
Imagination

Emotional

Empathy Motivation Self-awareness Express emotions Self-confidence, self-esteem

Social

Language (descriptions)

Perspective-taking

Collaboration

Share ideas / thinking

Story-telling

Roles & responsibilities

a simple, cost effective

and scalable solution

PROJECT EQUIPMENT & INFO - SIX BRICKS

WHAT IS SIX BRICKS?

Six colours – red, orange, yellow, green, dark blue, light blue 2x4s bright to add colour to the child's day different except for 2 shades of blue – light / dark enables learning of colours; colour matching; colour associations all children receive same 6 colours = no fighting; allows for mixing of the bricks / working in groups and pooling bricks together; easy to collect own six colours again



WHY DO ACTIVITIES WITH SIX BRICKS?

So easy to manage – children keep their 6 bricks on their own table / in chairbag (if no tables), or in a container which is always readily available.

No need to unpack heaps of DUPLO which may be disruptive – six bricks on desk is easy to access

Easy to control – at end of day each child needs to make sure that they have their six bricks on their desk, (or in the container) ready for the next day.

Six bricks allows children to work outside their field of vision which enables them to work / build in the abstract (encourage "out of the box" thinkers); develops peripheral vision – vital skill for reading fluency.



Six bricks can be used

individually
with a partner
in a small group
in a large group
with a variety of ages

as an assessment tool - Teacher observes children whist performing the activities & can then assess their abilities / knowledge

Six bricks activities can take 2 mins / 5 mins – short, sharp & engaging; 30 mins – allowing more time for children to explore by building ... all depending on the aim of the activity

WHEN TO USE SIX BRICK ACTIVITIES?

- at the end of a day to simply unwind and have a little bit of fun while you bond with your classmates
- first thing in the morning to sharpen your brain & get you ready for learning
- just after break to re-focus attention and settle down
- as a "brain-break" during the course of a school day stop whatever you are doing and re-energise the brain as you play!
- as "brain-gym" in any of the learning areas to develop working memory; inhibitory control & cognitive flexibility
- as motivation to pay attention & focus for a lesson that is to follow
- at any time during the day as a concrete tool for children to manipulate in order to develop critical learning skills
- at any time during the day as a concrete tool for children to grasp concepts and gain understanding of new learning
- when children have finished their set tasks, they could build for fun or reinforce & consolidate their learning
- at any time during the day child can use their bricks to help them work out a problem or demonstrate an idea

ADVANTAGES OF USING SIX BRICK ACTIVITIES?

Once Six Bricks activities become a daily habit, a whole lot of reinforcement of learning takes place in a fun and playful way, which children need!

Children grow and develop at different rates – it is so easy to adapt Six Bricks activities to any child's level, thereby making the activities suitably challenging for all.

Six Bricks activities caters for different learning styles by using many different ways to teach – it caters for the visual learner; the auditory learner; the tactile learner.



Six Bricks allows for a variety of responses from children at different stages of development.

Each child has their own unique "time-table" – ready to learn according to his / her own maturation process – Teacher must respect this readiness factor which may or may not coincide with the rest of the children in the class. Activities with Six Bricks gives the children the opportunity to grasp concepts through concrete manipulation. In this way, the 3 Rs readiness skills can be practised and developed.

Children create & invent their own ideas & rules for games for new Six Bricks activities, making them in charge of their own learning.

Activities with Six Bricks allows children to make mistakes without feeling ashamed or embarrassed – enables the PROCESS to become important, not the result. Children can make mistakes and learn from their mistakes – improve; try out; experiment without the fear of "being wrong". In this way they become confident and adventurous and other ideas spark.

Teachers & parents should not ignore undesirable behaviour because a child is "going through a stage". Instead, they should seek to guide and direct the child in ways that enhance their overall growth – Six Bricks activities give plenty of opportunity to practise self-control through fun & games & play.

Children develop core learning skills through play. Six Bricks is an attempt to bring back that element of playful learning to the classroom and more specifically to the child's desk – because of the large number of children in any one class, there is little to no space for play and learning with manipulatives. Six Bricks on each child's desk creates the possibility for each child to build knowledge with their hands whilst manipulating the 3D brick, without needing too much space.

Six Bricks activities cater for the "whole child"; they have been organized into six developmental areas, yet each is integrated; activities are especially designed to cover all learning areas and developmental skills and in so doing, also develops the executive function of the brain – certain activities especially focus on developing working memory; cognitive flexibility & inhibitory control = learning for LIFE – develops self-control for adulthood.

Working with Six Bricks allows the Teacher the opportunity to observe the children while they are engaged in an activity or game. The Teacher can look for evidence of their social, emotional, physical & intellectual growth. It helps the teacher to see each child as an individual – watching & working with Six Bricks exposes how different each child is.

Six Bricks is a great tool for parents to use with their children at home when assisting them with skills development or homework. Teachers can run parent workshops to show the parents how to run the activities.

Six Bricks activities work well for special needs children – growth & development do not proceed "normally" for all children.

- **1.** *Children with disabilities* require particular attention to their particular disability. Teachers can adapt Six Bricks activities to teach them one-on-one.
 - Children who are gifted also require attention.
 Their exceptional abilities must be challenged and stimulated can be scaled up to do this.

Teachers using Six Bricks activities change the way they teach – they realise that children can direct their own learning; the Teacher takes a step back from being the main focus and the child becomes important.

Six Bricks activities supports the curriculum.





Try this activity first thing in the morning, before the children start any other work. Make sure that each child has a set of Six Bricks, one of each colour.

Activity 1 - Good Morning High Five!

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language **Skills Development:** gross motor; laterality; crossing the midline; balance; auditory discrimination; being playful; concentration & focus; awareness of number; listening to & carrying out instructions;

- Each child separates their six bricks and lays them loose in front of them on their desk
- Ask children to pick up any two bricks, one in each hand.
- Tell them to place the one brick on the back of their left hand and then carefully place the other brick on the back of their right hand.
- Move your hands out to the side can you stretch your arms out without the bricks falling?
- Make your hands strong and stiff this will help you to balance the bricks.
- Keep your arms out to the sides and move around the classroom like an aeroplane make the sound of an aeroplane as you move.
- See if you can move down into a crouch; stand up; turn around, stop.
- Use your right hand to take the brick off your left hand, and hold it in your hand while still balancing the brick on the back of your right hand.
- Your left hand is now free move around the classroom and hi-five your friends!
- Build a cube with your six bricks and store it on your desk / in a tub on your desk.



Notes to Teacher:

- ✓ Ideally, each child keeps their bricks stored at the top of their desk.
- ✓ Or, collect the sets (built into cubes) and store them in a large tub, if you feel that it is not practical to keep on the child's desk all day.
- ✓ Keep the box of Six Bricks sets nearby so that it will be quick and easy to hand them out again when you want to do another activity.
- ✓ Do this activity daily, early in the morning before starting the day vary the instructions or movements. Examples

Some Movement Variations - start the activity in the same way as above ...

- Try lifting your left hand over your head; hold your right hand near your tummy; swop hands.
- Stretch both arms out in front; turn around.
- $\circ\quad$ Use your left hand to take the brick off the back of your right hand.
- Use your right hand to high five a friend, keeping the brick balanced on the left hand.
- o Hold the high five (hands stay joined); now skip forwards; skip backwards.
- o Kick your leg out to the side; balance on one leg!









Try this activity anytime during the day when you notice the children are tired or restless. Make sure that each child has a set of Six Bricks, one of each colour.

Activity 2 – Move Your Body!

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language **Skills Development:** listening to & carrying out instructions; gross motor; laterality; concentration & focus; bilateral integration; hand-eye co-ordination; body awareness; counting

- Each child separates their six bricks and lays them loose in front of them on their desk
- Ask the children to choose either one or two bricks (if two bricks, join them together, covering all the studs).
- Toss the bricks up in the air and catch them.
- Try and go a bit higher each time.
- See if you can do this 10 times.
- Toss the one / two joined bricks from one hand to the other.
- See if you can do this 10 times.
- Move the bricks around your body 10 times then stop and balance them on your nose.
- Build your six bricks into a cube and store them on your desk.





Notes to Teacher:

- ✓ You could do this activity every day, at any time of the day, when you see the children are feeling tired. Stop what you are doing and do a Six Brick movement exercise like this; it will only take a few minutes and then the children will be able to continue with their work, feeling refreshed!
- ✓ Vary the exercise each day, examples below:

Some Movement Variations - start the activity in the same way as above, then ...

- Toss the bricks up in the air, clap your hands, then catch the bricks again.
- Try clapping twice / three times before catching the bricks; see how many claps you can do.
- o Throw the bricks up, then clap behind your back and catch them again in the front.
- Walk around the room, balancing the bricks on your head, or holding them under your chin.
- o Think of different ways to move around the classroom whilst holding your bricks on different parts of your body.
- Work with a partner and throw the bricks to each other; throw high / low; throw left hand to partner's right hand / left hand to partner's left hand.
- Try throwing the bricks under your leg to your partner.
- See how many times you and your partner can toss the bricks to each other before they fall!
- Try out some other ways to toss the bricks with your partner. Be brave and experiment!





Try this activity just before your Language lesson, to get the children warmed up; thinking and talking. Make sure that each child has a set of Six Bricks, one of each colour.

Activity 3 – Getting to Know the Bricks

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language **Skills Development:** fine & gross motor; tactile; expressing emotions; describing textures & shapes; matching; naming shapes; noticing spaces; colours; run & avoid bumping; awareness of body in space

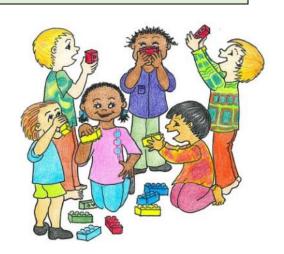
- Each child separates their six bricks and lays them loose in front of them on their desk.
- Ask them to close their eyes and shuffle their bricks around.
- Keep your eyes closed and select any one brick to hold in two hands.
- Feel it with your fingers describe what you feel (rough, smooth, bumpy, knobbly, sharp, 4 corners, plastic ...).
- Hold it up high in your right hand.
- Now open your eyes and see what colour you have can you name that colour?
- Can you add anything else to the description now that you can see the brick?
- What spaces and shapes can you see? (circle, cylinder, tube, hole, rectangle, square ...)
- Go and find something in the classroom that matches the colour you are holding.
- Hold your brick next to it is it exactly the same colour or is it lighter / darker ...?
- Run back to your place and see how quickly you can build your six bricks into a cube to store them on your desk.



Notes to Teacher:

- ✓ This quick activity will get the children up and moving and thinking; preparing them for the lesson ahead.
- ✓ It will help them to become more observant and aware of things around them.
- ✓ Do similar activities each day; here are some examples of variations:

- o Keep your eyes closed and pick up any one brick hold it up high.
- Open your eyes look around the room can you find a colour friend?
- o Run to your colour friend and stand together.
- o Join up with any other friends who have the same colour brick as you.
- O What colour does your group have?
- Match your colour to something in the classroom that is the same / similar
- Can your group think of something yummy to eat that is the same colour as the bricks you have?
- With what sound does that colour brick start?
- Name some other objects that start with the same sound.







Try this activity just before a Mathematics lesson, to get the children warmed up; thinking and comparing. Make sure that each child has a set of Six Bricks, one of each colour.

Activity 4 - My Favourite Colour

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language **Skills Development:** matching; comparing; estimating; counting; one-to-one correspondence; ordering; naming colours; making friends; run without bumping

- > Each child separates their six bricks and lays them loose in front of them on their desk
- Ask the children to hold up their favourite colour brick.
- Look around the room do you see anyone else that likes the same colour as you?
- Run to stand with your colour friends.
- Which group has the most number of bricks?
- How many bricks do you think you have?
- Count them and connect them into a tower as you count them.
- Put all the towers next to each other and compare which colour is the tallest / shortest / most / least?
- Arrange the towers from shortest to tallest.
- Collect your six bricks colours again and build a cube to store it on your desk until the next activity.





Notes to Teacher:

- ✓ This activity will stimulate the child's brain; develop cognitive skills and prepare them for thinking about numbers.
- ✓ It also gets them up and moving and physically engaged in their own learning.
- ✓ You could extend this activity by adding these questions, examples below:

> Some Activity extensions – some more questions to ask the children about their towers...

- o How many children like red / yellow / green / blue / orange ...?
- Which is the most / least popular colour?
- How many more children prefer, e.g. red to orange / green to yellow ... etc.
- Can you arrange the towers from tallest to shortest?
- Are there any towers which are exactly the same height (equal)?







Try this activity just before a Language lesson, to get the children thinking about sounds. Make sure that each child has a set of Six Bricks, one of each colour.

Activity 5: Colour Fun

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language **Skills Development:** auditory discrimination & memory; laterality; directions; initial sounds; listening to & following instructions; conceptual vocabulary; spatial awareness

- Each child separates their six bricks and lays them loose in front of them on their desk
- Hold up the colour that starts with "y" (sound).
- What is the name of that colour?
- Put that yellow brick down on the **right side** of your desk.
- Which colour starts with "o"?
- Put that orange brick down **next to** the red brick.
- Find the green brick and hold it in your **right** hand.
- With what sound does it start?
- Name some other objects that start with the same sound.
- Arrange your bricks into a cube to store on your desk until the next activity.





Notes to Teacher:

- ✓ These activities will help to develop the child's auditory discrimination & memory as they listen carefully to the different sounds and the Teacher's instructions.
- √ Vary the exercise each day, some examples below:

- Hold up the colour that starts with "r" (sound).
- O What is the name of that colour?
- Put that red brick down at the **top** of your desk.
- O Which colour starts with "b"?
- o Put the light blue brick on **top** of the yellow brick.
- Put the dark blue brick at the bottom of your desk.
- o Find the green brick and hold it in your **right** hand.
- With what sound does it start?
- O Name some other objects that start with the **same** sound.







Try some of these next activities at any time of the day, when you feel that the children are becoming tired of working in their books. Make sure that each child has a set of Six Bricks, one of each colour.

Activity 6 - Listen & Do

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language **Skills Development:** conceptual vocabulary; crossing the midline; prepositions; laterality; listening to, interpreting & carrying out instructions

- Each child separates their six bricks and lays them loose in front of them on their desk
- Teacher asks children to lay the bricks out in the same way as she / he has.



- **Cross** your forearms arms over each other; pick up the yellow brick and the red brick and swop their places.
- Use your **left** hand to move the green brick to the other side, **in front** of the dark blue brick.
- Use your right hand to pick up the dark blue brick; place it on top of the red brick.
- Place the green brick **underneath** the red brick connect the studs.
- Place the yellow brick between the red & green brick connect all the studs.
- Place the light blue brick at the **bottom**, **under** the green brick.
- Place the orange brick on the very top, above the dark blue brick.
- Your stack should look like this:



• See how quickly you can turn your stack into the cube for storage on your desk.



Notes to Teacher:

- ✓ These activities will help children to understand prepositions, where & how to use them, and develop their conceptual language of spatial words.
- ✓ Repeat these types of activities often, but vary them so that the children get the benefit of repetition, without boredom
 examples below:

- Use your left hand to pick up the red brick and place it at the top right hand corner of your desk (or A3 / A4 sheet of paper).
- Use your right hand to pick up the green brick and place it at the bottom left hand corner of your desk.
- Use any hand to pick up the yellow brick and place it at the top left hand corner of your desk.
- Move the dark blue brick to the corner that is empty.
- o Which two colour bricks are left? Join them together and balance them in the middle of your forehead for ten seconds!







Try some of these next activities just after break, when you want to focus the children's attention once again. Make sure that each child has a set of Six Bricks, one of each colour.

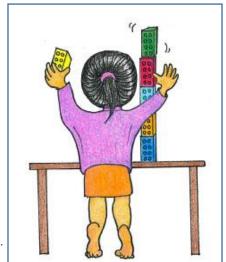
Activity 7 – Tricky Towers

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language **Skills Development:** fine motor; reasoning; problem solving; planning; focusing; concentration; expressing emotions; collaboration

- Ask the children to separate their bricks and lay them out in front of them.
- Quickly, see if you can balance your six bricks, short end to short end, in a tower.

Teacher asks the children:

- Was it difficult? How did you manage?
- What did you have to do to make them balance? How did you feel?
 (Were you afraid / frustrated / angry / irritated / anxious / happy / confident / excited?)
- Did your tower fall over often? What did you do when your tower fell over? (Did you give up or did you try again?)
- Did you have fun?
- What was the most number of bricks that you managed to balance?
- Stack your bricks and put them away either in your tub or at the top of your desk.





Notes to Teacher:

- ✓ By asking the children questions about their experiences of the activity, the Teacher can afford them the opportunity to express their emotions & feelings and very importantly, not to be afraid to fail!
- ✓ These types of activities give the Teacher the opportunity to give children the vocabulary they need to express their emotions.
- √ Vary the activity each time you try it, examples below:

- Use only your non-dominant hand. Keep your dominant hand behind your back.
- o Balance your bricks in a short end to short end tower, (like you did in the exercise above).
- Was it difficult? How did you manage? What did you have to do to make them balance? How did you feel? Did your tower fall over often? What did you do when your tower fell over? Did you have fun?
- This time, work with a partner both must agree on which colour to pick up and how to place it both must have one hand on the same brick and manoeuver the brick together and work together to try and build a 12 brick tower.
- How did you manage did you plan first? Did you work well together? Was it difficult to move your hand to place the bricks together? Did you have fun?





Try some of these next activities just after break, when you want to focus the children's attention once again. Make sure that each child has a set of Six Bricks, one of each colour.

Each child will also need a clothes peg for this activity.

Activity 8 – Topsy Towers

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language Skills Development: fine-motor; dominance; planning; problem solving; inhibitory control; expressing feelings; collaboration

- Ask the children to separate their bricks and lay them out in front of them.
- Turn all the bricks so that they are all facing studs down.
- Use a peg, in your dominant hand, to pick the bricks up and stack them in a short end to short end tower.
- Your non-dominant hand should be behind your back.
- Is this more difficult to do? How did you manage? How did you feel?
- Stack your bricks and put them away -(in your tub / at the top of your desk).



Notes to Teacher:

- ✓ Squeezing and releasing the peg in the dominant hand to grasp & place the brick, activates the arch muscle in the hand which is a great fine-motor exercise for the holding of a pencil.
- ✓ This is also a great exercise in perseverance and patience!
- ✓ When children do activities where they are not allowed to peep, they have to exercise inhibitory control they have to stop themselves from giving in to the impulse to peep. This helps them to develop the self-control they need in later life to achieve their goals.
- ✓ Do these types of exercises every day repetition is important to consolidate learning; vary the exercises so that there will always be something new to challenge the child examples below:



- Repeat the brick stacking exercise, this time tell the children that the first brick they place, must have the studs facing them.
- The next brick that they place on top must have the studs facing away from them; they keep alternating the bricks in this way.
- o Do this exercise with your eyes shut. No peeping!
- o How did you feel when your eyes were shut? Did you manage to balance the bricks?
- o Was it easier / more difficult? Can you explain?
- o Organise the children into groups of three for this next activity idea
- o You may do this activity with your eyes open and you may use both hands!
- o Build a tower, short end to short end; each person in the group takes a turn to add a brick.
- See how many bricks you can stack like this in the time that is given to you.
- O Did any group manage to stack all 18 bricks?
- o If you are up for a real challenge, work in groups of four and see if you can stack 24 bricks!





Enjoy these activities at any time of the day! Make sure that each child has a set of Six Bricks, one of each colour.

Activity 9 - Copy-Cat

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language **Skills Development:** visual discrimination & memory; copying; comparing; listening to Teacher's instructions; working with a partner

- Ask the children to separate their bricks and lay them out in front of them.
- Teacher takes any two / three of her bricks and joins them together, covering all the studs.
- Place them where the children can see them clearly.
- Copy my build match and compare.
- Did you get it the same as me?
- > Teacher repeats the exercise, changing colours / changing the way the bricks are connected etc.
- Each time the children see if they can copy the Teacher's model exactly.
- Build your six bricks into a cube and store them on your desk.





Notes to Teacher:

- ✓ This activity will increase the children's powers of observation, a very important skill required for recognizing the differences between numbers and letters that look alike.
- ✓ Vary and scale up the exercise each day, examples below:

> Some Variations

- Children work with a partner to build models for each other to copy.
- o Progress to using more than just two bricks.
- Are you able to copy a three / four / five / six brick model?
- Copy a linear pattern built with two / three / four / five / six bricks.







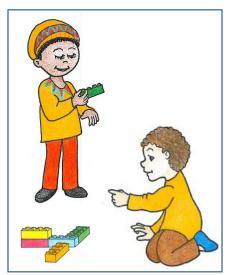
Enjoy these activities at any time of the day! Make sure that each child has a set of Six Bricks, one of each colour.

Activity 10 – Remember-It!

Developmental Areas: Physical / Motor; Perceptual; Socio-Emotional; Cognitive: Mathematics; Speech & Language **Skills Development:** visual discrimination & memory; working memory; listening to Teacher's instructions; paying attention; feeling anxious / confident; conceptual language

- > Children spread their Six Bricks out randomly in front of them.
- > Teacher holds up any one of her bricks, shows it to the children for a brief moment and then hides it.
- Hold up the brick I am hiding.
- Children find the brick from their pile and hold it up.
- > Teacher repeats this game a few times; start off slowly, showing the brick for a longer period of time.
- As the children get better at remembering, hold the brick up for a shorter length of time.
- Build your six bricks into a cube and store them on your desk.





Notes to Teacher:

- ✓ This activity will increase the children's powers of observation, a very important skill required for recognizing the differences between numbers and letters that look alike.
- √ Vary and scale up the exercise each day, examples below:

Some Variations

- > Children spread their bricks out in front of them.
- > Teacher holds up any two of her six bricks and asks the children to find the same two bricks.
- > Teacher joins her two bricks, in any way, and holds them up for the children to see for a second, before hiding them.
- > Teacher asks the children to remember:
- Which colour is on top / at the bottom?
- Can you build the same two bricks together the way I showed you?
- Teacher now selects any three bricks, joins them, in any way, and holds them up for the children to see for a second, before hiding them.
- Which colour is on top / at the bottom / in the middle?
- o Can you build those three bricks in the same way that I showed you?

