



Sensory Integration

with JollyHeap Blocks

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Why JollyHeap Blocks?

A versatile tool

Thanks to their modular design, JollyHeap blocks make it easy to adapt both the type and difficulty of exercises to a child's individual needs. You can quickly build structures that are tailored to a child's age, height, or functional challenges.

Therapy without a therapist

Playing with JollyHeap blocks is, in itself, an excellent therapeutic activity that supports both fine and gross motor skills, improves focus, and promotes emotional regulation.

Fun and easy

The number of structures, setups, and games you can create with JollyHeap blocks is virtually limitless.

This makes therapy more engaging and accessible — both for the child and the therapist.

Group therapy

JollyHeap blocks are ideal for group activities. Children can exercise together, compete, cooperate, and even relax as a group.



Children respond to JollyHeap blocks with great enthusiasm. Even intense training feels like fun to them. I most often use the blocks in therapy for children with intellectual disabilities because they're soft to the touch, pleasant to handle, and completely non-intimidating. I use them as therapy mats, physiotherapy tables, obstacle courses, balance paths, coordination ladders, slides and ramps, weights, adjustable steppers, and even as a bolster. The very act of building with JollyHeap blocks stimulates sensory integration, coordination, focus, and attention.

Rafał Królak, Physiotherapist

JollyHeap Blocks in SI Therapy



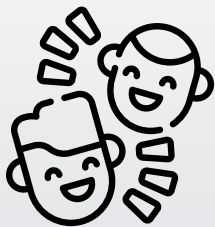
Sensory stimulation

The textured fabric provides a variety of tactile stimuli, helping to develop the sense of touch and increase tolerance to different surfaces and textures.



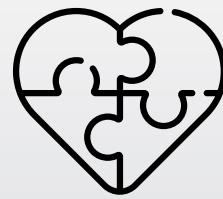
Safety and comfort

The softness of the foam makes the blocks safe and comfortable to use – an essential aspect when working with children who have varying levels of sensory sensitivity.



Motivation through play

Creative building and dynamic play keep children engaged and motivated to participate in therapy, which supports their progress and long-term development.



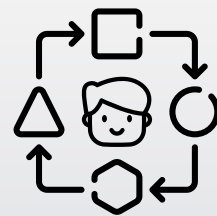
Variety of activities

JollyHeap blocks encourage rolling, crawling, and climbing – activities that stimulate proprioception, improve balance, and involve full-body engagement.



Calming and self-regulation

Thanks to their softness and insulating properties, the blocks offer children a space to calm down and rest, supporting self-regulation and the ability to cope in overwhelming environments.



One tool, endless possibilities

Build whatever you need in the moment — ladders, steppers, bolsters, mats, or obstacle courses. Each setup presents unique challenges for coordination, proprioception, and balance.





Free Manipulation

EXERCISE NO. 1

Let's start with the basics — free play with the blocks. It may seem simple at first glance, but nothing could be further from the truth.

While building structures, children must align the blocks precisely, which requires **controlled hand movements based on visual input**.

This seemingly simple activity helps synchronize movement with visual perception — a key skill in the development of fine motor coordination.



Hand-Eye Coordination



The blocks connect in an alternating pattern, so the child constantly analyzes and coordinates hand-eye information.



Easy? Not for the youngest children — especially those with motor or cognitive difficulties. Mastering this skill can take significant time and effort.



Children move the blocks in different ways: individually, in pairs, or even in whole “sheets,” often using a variety of gripping techniques.

Free Manipulation

Exercise no. 1

Simply carrying, assembling and disassembling the blocks supports a wide range of manual skills, including various types of grips: cylindrical, pincer and monkey grip.



Hand Motor Skill Development & Grip Refinement



The pincer grip (also known as tweezers grip) is often used when pulling out a single block from a pile. This action requires both strength and strategy, as the surrounding blocks exert mutual magnetic force.



The size of each block is specifically designed to fit a child’s hand — to activate as wide a range of grips and hand movements as possible during play.

Building with Feet

EXERCISE NO. 2

Thanks to their size and softness, JollyHeap blocks are perfect for foot-based activities.

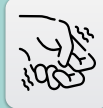
This exercise requires balance, which engages muscles responsible for stability and postural control — including the glutes, hips, and lower back.



It develops the precision of foot and toe movements, which is crucial for fine motor skills. It also strengthens the foot muscles involved in precise, coordinated motion.



Stabilizing the torso while using the feet activates the abdominal and back muscles, supporting proper posture and strengthening the core.



For Muscle Tone Challenges

Children with hypotonia can benefit from strengthening the muscles in their feet and legs, while children with hypertonia may experience gentle stretching and improved control of lower limb movements.



Support for Motor Coordination Difficulties

This activity is especially helpful for children with coordination challenges, such as dyspraxia, as it promotes movement precision and bilateral coordination of the lower limbs.



Strengthening Core Muscles

Stabilizing the torso while using the feet activates the abdominal and back muscles, supporting proper posture and strengthening the core.



1. Build a ladder three blocks wide, leaving two empty spaces for every three blocks placed. The child's task is to step only on the empty spaces, maintaining straight alignment of the legs and torso.



2. To increase difficulty, throw a block to the child after each successfully completed step.

Balance Ladder

EXERCISE NO. 3

A fundamental exercise that strengthens the sense of balance, reaction skills, and lower limb coordination. In cases of sensory integration challenges, this activity supports the child's ability to process proprioceptive input.



Hand-Eye Coordination

By combining walking along the ladder with catching and throwing, children develop more advanced motor coordination and movement planning skills.



3. The child's task is to catch the block and throw it back. Then they move to the next step and repeat the throw.



The setup is simple — create a mat four blocks wide. The child grips the gaps with their hands and pulls themselves forward, using the rest of the body for support.



To increase the difficulty, you can: Add child-appropriate obstacles, or prevent the child from using their legs for support.

Climber's Crawl

EXERCISE NO. 4

This exercise combines elements of climbing and crawling. Thanks to the gaps between the blocks, the child can hook their fingers into the structure and pull themselves forward using upper body strength, supported by torso movement.



Postural Issues & Spine Support

This activity strengthens back and abdominal muscles, which are key for maintaining correct posture. When performed regularly, it can help correct postural defects and improve spinal stability.



Upper Body Muscle Development

The exercise effectively engages:

- Arm and forearm muscles
- Back muscles, especially the latissimus dorsi, which stabilizes the body during movement
- Core muscles, including the rectus abdominis and obliques, responsible for trunk stability and movement control

Placing Magnetic Bubbles

EXERCISE NO. 5

This activity supports both physical and cognitive development, enhancing fine motor skills, coordination, spatial thinking, concentration, and problem-solving abilities.



Grip Strength

Pulling the block out requires applying the right grip strength, strengthening the hand and finger muscles, especially in children with a weakened grip.



Precision of Hand and Finger Movements

Removing the blocks without destabilizing the structure demands precise movements of the hands and fingers, enhancing manual dexterity and full-body coordination.



Control of Force and Movement

The magnetic resistance requires the child to gauge and apply just the right amount of force, helping to develop motor control and movement accuracy.



The child's task is to carefully remove every second block from the center row of a mat — leaving each block attached only at the base, without disrupting the overall structure.



To make the task more challenging, the child can be asked not to hold the mat with their legs during the exercise.

Pressing Magnetic Bubbles

EXERCISE NO. 6

An effective activity for improving balance and precision of lower limb movements, while refining responses to tactile and proprioceptive stimuli.



Body Awareness in Space

The exercise activates the feet as key proprioceptive organs, improving body awareness, balance, and movement accuracy.



Development of Dynamic Balance

Maintaining balance while pressing the block down engages dynamic balance, which is essential in everyday tasks such as walking and running.



Sensory Stimulation

Pressing against magnetic resistance with the foot stimulates the nervous system, enhancing pressure control and sensory responsiveness, particularly in children with sensory processing difficulties.



This is a reversed version of Exercise 5, where the task is to press the blocks back into the mat using the feet.



To add progression, you can increase the height of the mat, enhancing the challenge and allowing the activity to be adapted to the child's height and level of difficulty.



Build a mat and a roller wide enough to ensure safety. Place them facing each other. The child lies across the roller with their torso, feet touching the floor.



Using their feet, the child pushes forward and gently lands on the mat with the front of their body, using their arms for support. Then, reversing the movement, they push back with their arms to return to the starting position.

Rocking Motion – Back and Forth

EXERCISE NO. 7

This exercise stimulates the vestibular system, supports proprioception and motor coordination, and helps develop protective responses.

It is a valuable component of therapy for children with sensory integration disorders and motor planning difficulties.



Improving Motor Planning

Planning the movement sequence—from pushing off with the legs, maintaining control on the roller, to bracing on the mat—enhances the child's ability to execute complex motor tasks.



Development of Self-Regulation

The child must control the force used to push off and precisely regulate their movements while on the roller, supporting self-regulation and body control in dynamic situations.



Protective Responses

JollyHeap blocks reduce fear of falling, making it easier to learn safe protective reactions in a controlled, comfortable environment.

Rocking Motion – Side to Side

EXERCISE NO. 8

A complementary exercise to Exercise 7 (Back-and-Forth Rocking). It stimulates and develops similar sensory and motor skills while introducing new directions and movement patterns. This version is also an excellent activity for strengthening the abdominal, back, and leg muscles, essential for body stabilization and controlled movement.



Building Confidence and Body Awareness

The child learns to control movements in challenging positions, reducing fear of imbalance and increasing confidence in their body.



Development of Dynamic Balance

This exercise strengthens dynamic balance, especially the ability to shift body weight from side to side in a controlled way.



Protective Responses

JollyHeap blocks reduce the fear of falling, allowing children to practice protective responses in a safe and supportive environment.



In a seated position, the child places both feet on either side of the roller. They push themselves to one side while supporting themselves with their hands, until their knee gently touches the floor.



After completing the movement to one side, the child reverses direction and rocks to the opposite side. For children with very poor balance, you can place soft mats on both sides for additional safety.

Target Throw with Feet

EXERCISE NO. 9

This activity stands out by integrating both upper and lower body movement while stimulating multiple senses simultaneously. It is a versatile tool that supports motor development, coordination, proprioception, and cognitive skills—while providing space for fun and creativity.



Build a basket or target structure using the blocks.
The child's task is to grasp a block with their feet while standing.



Next, the child must jump and simultaneously throw the block into the designated target area.
To increase difficulty, you can raise the target height or reduce its size.



Vestibular System Stimulation

Jumping and aiming into a basket support the development of balance and spatial coordination.



Practicing Movement Sequences

This activity enhances the child's ability to plan and execute movement sequences. It's a great exercise for children with dyspraxia, for whom multi-step coordination tasks can be especially challenging.



Strengthening Lower Limb Control

The exercise improves precision and body awareness, helping the child learn to control force and direction of leg movements.

Samurai Training

EXERCISE NO. 10

This activity supports not only motor skills and sensory integration, but also enhances muscular endurance and coordination, motor planning, and helps the child develop self-regulation. By combining physical, sensory, and emotional components, this exercise becomes a versatile and beneficial tool in many aspects of therapy.



Build a column with dimensions of 3x3 blocks, adjusting the height to the child's needs. Remove one or two blocks from the middle row, so that they stay connected to the column only by their bottom magnets.

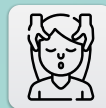


The child's task is to strike the blocks into place using a gym stick or similar tool. To increase difficulty, remove more blocks from the column for the child to push in.



Rhythm and Movement Fluidity

The repetitive nature of striking motions helps the child develop a sense of rhythm and fluidity, which is especially helpful for those with difficulties in dynamic movement control.



Energy and Tension Release

Striking with a stick offers an opportunity to release excess energy and tension, making it especially beneficial for children with hyperactivity or heightened arousal.

Pulling from the Well

EXERCISE NO. 11

This activity comprehensively supports motor development, improves strength control, perseverance, and focus, while engaging the proprioceptive and tactile senses. It creates ideal conditions for developing fine motor precision and practicing hand-eye coordination.



Build a 3x3 column with a height reaching the child's waist. Remove several blocks from the middle of the column to create a "well," deep enough for the child to reach the block at the bottom



The task is to pull a block from the bottom of the well. Due to the magnetic resistance, this task requires effort and precision. To make the activity more challenging, adjust the height and depth of the well.



Fine Motor Skills

The exercise involves precise finger and hand movements, which are crucial for fine motor development. Pulling out a block that resists due to magnetism strengthens muscles and improves force control.



Tactile Input and Spatial Awareness

Reaching and manipulating the hand inside a confined space provides rich tactile input and enhances spatial awareness. This is especially helpful for tasks that require careful manipulation of objects in limited or hidden environments.

Create, experiment, discover **with JollyHeap!**

The exercises we present here are just a small sample of what can be created with JollyHeap blocks. Their versatility inspires activities tailored to the needs and abilities of every child.

The blocks can support motor development, sensory integration, concentration, and many other areas—the only limit is imagination.

We encourage therapists, teachers, and parents to experiment and design their own exercises, helping children discover the world through play.

