



**Ministry of Education and Science of Ukraine  
Ivan Boberskyi Lviv State University of Physical Culture  
Department of Theory and Methodology of Physical Education**



**Co-funded by the  
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## **INSTRUCTIONS FOR GAMES AND RELAY RACES**

### **DOMAIN III OF THE METHOD**

#### **“MOVEMENT – COORDINATION – LEARNING”**

#### **APPLYING SPECIAL PHYSICAL EXERCISES TO STIMULATE DIFFERENT PARTS OF THE CENTRAL NERVOUS SYSTEM**

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of Physical Culture, within the  
framework of the Erasmus+ project  
“Innovative and Interdisciplinary  
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## I. “Coloured Corners”

**Objective:** to develop attention, thinking, memory, reaction speed, and overall speed.

**Equipment:** gymnastic mats, cone-flag markers, portable sound system.

**Activity procedure.** At the corners of the sports ground, 1–2 gymnastic mats are placed (the number of mats in a specific corner depends on the number of children), which serve as a “hut” that the children must run to.

Next to each “hut”, cones of a specific colour should be placed, which will not be repeated (for example, yellow, red, orange, lime). Thus, each “hut” becomes a corner of a particular colour (see Fig. 1).

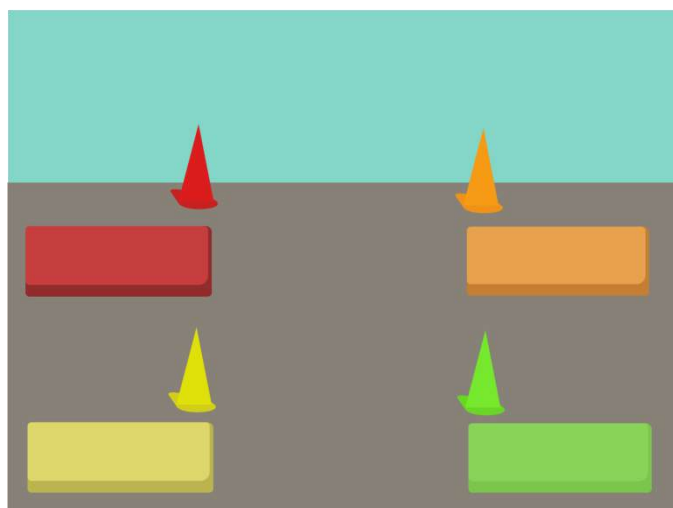


Fig. 1. Site preparation for the exercise performance  
Exercise performance

### Game variation №1

**Starting position.** Children, together with the teacher/trainer, are arranged in a central circle facing each other and holding hands. Subsequently, to diversify/complicate the exercise, children can start the exercise from a squatting position.

Having ensured that all the children are ready to perform the exercise, the teacher/trainer clearly and distinctly (but without shouting) announces the colour. After that, the children must run as quickly as possible to the corresponding “colour corner” and then jump into the “hut”. The exercise is repeated with the colours announced in turn by the teacher/trainer\*.

\* Please note that the sequence of colours should not be cyclical (clockwise or counterclockwise); instead, use a random alternation of colours for a surprise effect.

### Game variation №2

Next to each “hut”, place several cones representing a specific digit (for example, 1, 2, 3, 4) (see Fig. 2). Thus, each “hut” becomes a “corner-digit”. This exercise method will help children with strong mathematical skills respond more quickly to relevant command tasks. Additionally, it will aid children in developing specific arithmetic patterns in their memory, such as the equivalence of numbers (for example,  $3+1=1+3$  or  $2+1=1+2$ ).

*Starting position.* The same as in game variation №1.

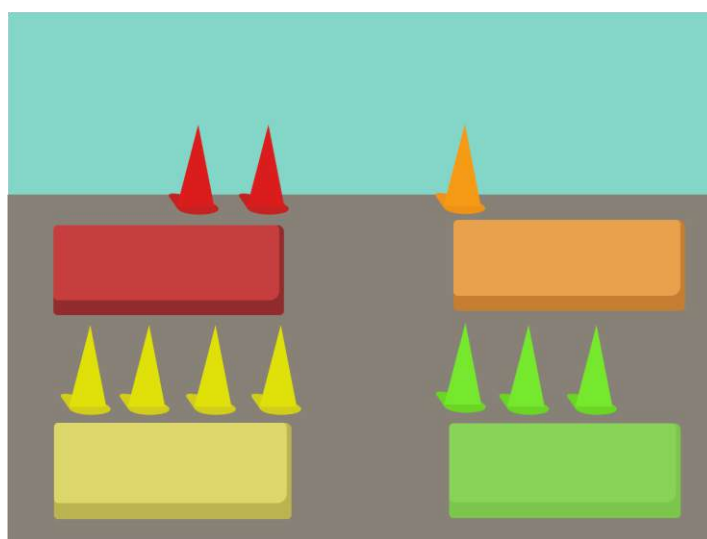


Fig. 2. Preparing the site for the exercise (Game variation №2)

After the children take their starting positions, the teacher/trainer announces an arithmetic operation whose result will help the children find the key to the required “hut.” Then, the children must run as quickly as possible to the corresponding “corner-number” and jump into the “hut.” For example:  $7-4=3$  – the children run to the “hut” with three cones.

### Alternative method of exercise organisation

When working with preschool children, it is especially important to use a variety of methods and tools that can boost children's interest in the activity.

To perform this exercise, we recommend using an audio setup with a portable sound system (see Fig. 3) that can be controlled from your smartphone via Bluetooth. Alternatively, a fixed audio system in the gym could be used.



Fig. 3. Examples of portable acoustic systems

To do this, you will need to pre-record special audio tracks with the commands used during the exercise, along with fun children's songs to play during breaks between attempts. Meanwhile, the role of the teacher or trainer should be played by a bright toy that appears to participate in the process and guide it. Children will respond positively and emotionally to this version of the exercise.

**Loading.** The exercise load can be adjusted by modifying the following components:

- number of repetitions;
- the number of “corners-huts”;
- the distance children have to run to the “corners-huts”
- performing additional exercises\*.

\* until the appropriate signal, students can perform jumps in place, jump over the cones clockwise, or do various types of walking while holding hands.

**Instructional guidelines.** Before the teacher or trainer announces a colour or an arithmetic operation, they must ensure that the children have adequately learned the location of the corresponding-coloured corners or “number corners.” To do this, it is essential to clearly and distinctly repeat each colour or number, pointing to the related corner with a hand. Then, it is helpful to demonstrate the start of the exercise once or twice, explaining the method and direction of movement to the respective corner after the appropriate command (for example, after the command “green!”, the teacher or trainer begins running towards the “green corner”).

- To increase emotional engagement during the exercise and support attention development, it is recommended to use false commands announced in a familiar voice for children. For example, you might say a command: “blue!” Even if such a colour isn't present, children will start moving in one direction. The same approach can be applied with arithmetic commands, leading to a number that doesn't match any of the corners.
- To make game variation №2 more challenging for children over 8 years old, you can incorporate actions involving multiplying and dividing single-digit numbers (for example:  $6:2=3$ ) or adding and subtracting complex two-digit numbers (for example:  $16-14=2$ ), with the results providing the digits you need.
- An alternative to using colours and numbers could be favourite fairy-tale characters or cartoon heroes like Batman, Spiderman, etc., or preferred animals such as kittens, puppies, or ponies. In such cases, it is recommended to use drawings or toys to help visualize directions of movement.
- Remember to encourage the children who reach the hut last and to recognize the children who complete the task the fastest.



## II. “Freeze&Go”

Objective: to enhance attention, reaction time, explosive strength, and speed

Equipment: gymnastics mats, hoops, portable speaker system.

Activity procedure. A significant advantage of this activity is how easy it is to organise children to participate, thanks to the worldwide popularity of the series “Squid Game.” Usually, children are already familiar with the main rule of this game through various videos: “Run when you hear the sound, freeze when it’s silent.” This game is very popular among kids and doesn’t require lengthy explanations or visual demonstrations.

At one end of the playground, gymnastic mats are arranged to serve as a visual marker (finish line) and to help prevent injuries. On the opposite end, a “start line” is marked. While ground markings can act as a reference, it is better to organise this with gymnastic hoops lined up in a straight row. The boundaries of the hoops provide a clear reference for children, helping to reduce chaotic movements and unnecessary shifting (see Fig. 4).

Place the acoustic device on the side of the playground when controlling sound with a smartphone, or hold it in your hands if you're operating it directly from the device. When the device is stationary, consider the potential paths of children's movement.

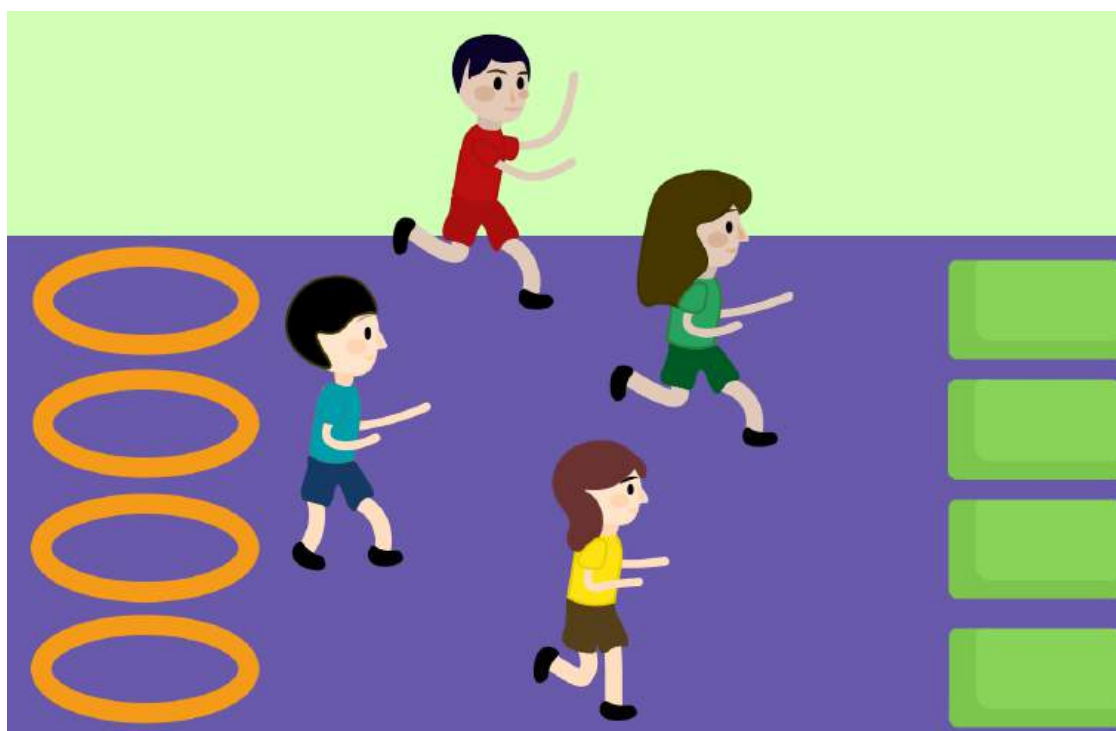


Fig. 4. Preparing the site for the "Freeze&Go" exercise



## Exercise performance

### Game variation №1

*Starting position.* Children are lined up on the starting line inside gymnastic hoops. The teacher/trainer stands in the middle of the sideline, staying out of the children's way.

After ensuring all the children are ready to perform the exercise, the teacher or trainer plays a song. The melody serves as a cue for the children to start moving toward the gymnastic mats. The children should run until the music stops. When the music ends, all children must “freeze in place.” The main goal is to reach the hut (the gymnastic mats) as quickly as possible.

If a child keeps moving after the sound signal has stopped, they receive a “punishment” by being moved to a position behind the other children.

**\* When choosing musical accompaniment, first make sure the melody or song is familiar to the children and encourages the development of a positive emotional background. Examples of tracks that can be used for this activity include: The Kniffness – “Red light, Green Light”; Pinkfong – “Baby Shark”.**

### Game variation №2

The organisation of the exercise remains the same as in Game variation №1. The only change is the signal to start and stop movement. Instead of an auditory cue, a light signal is now used. The most practical option is fixed artificial lighting in the sports hall.

**\* If artificial stationary lighting in the hall requires time to warm up the lamps for the whole operation, such lighting should not be used; instead, portable lighting devices should be provided.**

*Starting position.* The same as in game variation №1.

After confirming that all children are ready for the activity, the teacher/trainer turns the lights on or off. The change in lighting signals the children to start moving toward the gymnastics mats. When the lights change, all children must “freeze in place.” The main goal is to reach the hut (the gymnastics mats) as quickly as possible.

Remember that the signal to start moving can either be the presence or absence of light. You can try this: 1) “day” means we're moving, “night” means we're sleeping; 2) “dark” indicates the mice are running, while “light” means the mice have frozen and hidden.

Compared to game variation №1, the children will react to the light signal more quickly, and the exercise will be performed more accurately.

*Loading.* You can adjust the exercise load by changing the following components:

- number of repetitions;
- the distance children must run from start to finish;
- number of stops/accelerations;



- use of alternative movement methods (such as jumping, moving backward, etc.);
- performing extra exercises before the start.
- \* until the appropriate signal, students inside the hoops can perform walking, running, squats, jumps, and other exercises in place.

### Instructional guidelines

- To enhance emotional engagement in the activity and support attention development, it is advised to use false commands spoken in a voice familiar to children. For example, commands like “start!” or “forward!” can be issued. Although the cue for movement should be a song or a light, some children will still begin to move. False commands can also be communicated through whistle or clapping.
- It's unfair to judge how effective children's stops are too harshly, since not everyone can react immediately. The main point is that the child stops, rather than continues moving.
- Avoid making frequent stops, as this can cause chaos. Remember that children's excitement processes far exceed inhibitory ones.
- Focus on the children who reach the finish line through impressive jumps; this will motivate them to improvise.
- Remember, the primary goal is to make running exercises fun and engaging for children.

### III. “Catch the rhythm”

*Objectives:* to develop attention, rhythm, explosive power, and agility.

*Equipment:* gymnastic hoops, portable acoustic system, gymnastic mats.

*Activity procedure.* Using gymnastic hoops, a specific movement path for children is created, such as a straight line, zigzag, semicircle, or other shapes. At the end of the hoop course, gymnastic mats are placed where children perform the final jump in any chosen form. A sound device is used to establish a clear rhythm, which acts as a guide for the proper pace of the jumps (Fig. 5).

#### Exercise performance

*Starting position.* The children line up in a single file in front of the gymnastic hoops.

After confirming that all children are ready, the teacher or trainer activates the metronome at a specific tempo. The first child in line begins by alternating jumps on two feet from hoop to hoop until reaching the end of the track. Each jump must match the metronome's beat to keep everyone in sync. The second child starts after the first has jumped into the third hoop. Depending on the length of the track, three or more children may participate at the same time. During the activity, there will be one hoop's distance between children, which helps prevent disruptions if someone loses their rhythm.

Having completed the entire distance, the student walks back along the sideline to the end of the line, waiting to do the exercise again.

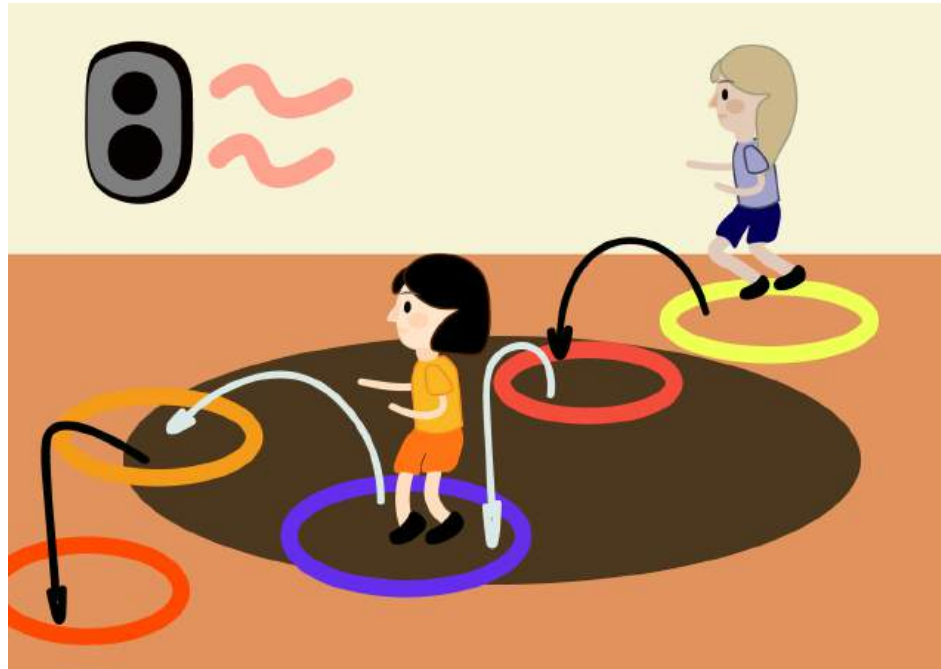


Fig. 5. Preparing the site for the “Catch the Rhythm” exercise

**Loading.** The exercise load can be adjusted by modifying the following components:

- number of repetitions/durations of exercise performance;
- the distance that children must cover (number of hoops);
- path of movement;
- the tempo of the exercise (rhythm speed);

Complication of jump types (one-legged, with the back forward).

- The simplest way to find a soundtrack with the right tempo is to search on YouTube using a query like: “metronome 50/55/60 bpm\*”.
- It is advisable to begin the exercise at a slow pace (50–55 bpm), then gradually increase the tempo in subsequent attempts. Once the children thoroughly understand the exercise, the tempo can be increased to 100 bpm or higher.
- To better organise the children, a signal for each child to start the exercise can be a gentle pat on the shoulder. This helps you control the distance between the children or stop the exercise if adjustments to the equipment are needed.
- After a certain number of lessons, once the children have fully grasped the exercise, the sound accompaniment can be a popular song among children instead of a metronome. Using musical accompaniment will help boost emotional engagement during the exercise.

\* bpm – the number of beats per minute



#### IV. “Choose a side”

*Objectives:* to develop attention, memory, thinking, explosive power and agility.

*Equipment:* coloured rope/skipping rope, cones.

*Activity procedure:* using coloured rope or cord, the sides are formed, each representing a specific colour (such as yellow, red, and green). A cone with chips of different colours serves as a visual reference point (see Fig. 6). The children’s task is to jump over or stay on the side announced by the teacher/trainer.

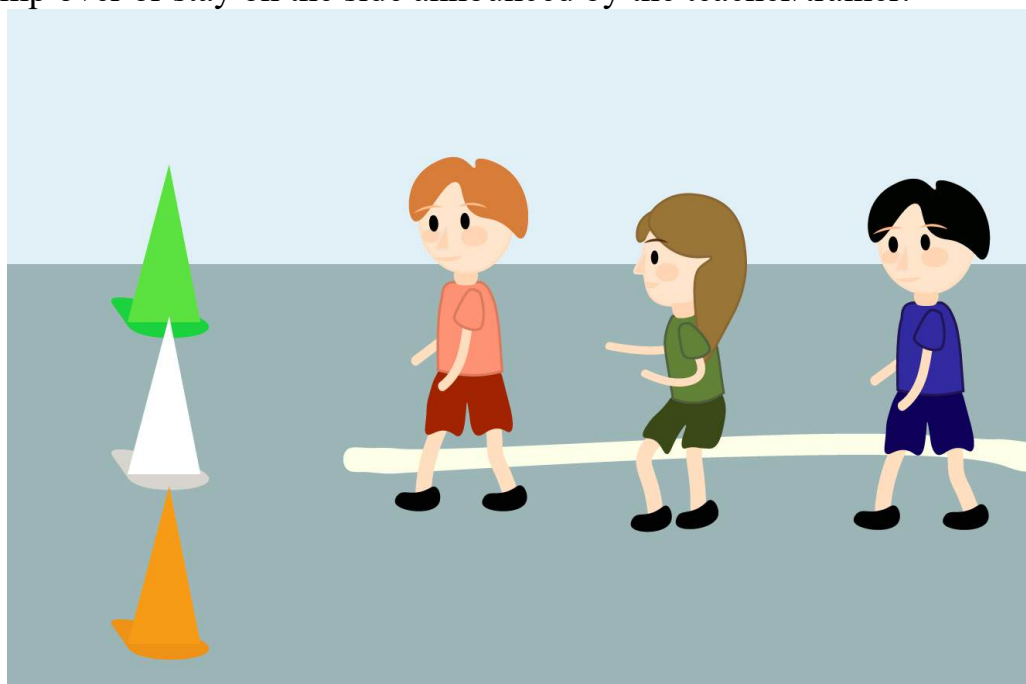


Fig. 6. Preparing the site for the “Choose a side” exercise

#### Exercise performance

*Starting position.* The children line up in a single column on one of the 'coloured' sides.

The teacher/coach alternately announces a specific colour with a certain rhythm. The children must respond to the commands by jumping to the appropriate side. Colours are called out randomly; if the same command is repeated two or three times in a row (for example: “Green!”, “Green!”), the children must stay in place. If a child responds incorrectly and chooses the “wrong side”, they are eliminated from the game. Please note that one of the colours (in this case, red) involves positioning the rope between the legs in a “legs apart” stance.

*Loading.* The exercise load can be adjusted by changing the following components:

- number of repetitions;
- speed at which commands are issued;

using gymnastic hoops instead of a coloured rope/skipping rope (children will have to jump over the gymnastic hoops, covering a greater distance).



### Instructional guidelines

- Make sure children understand the game rules clearly. To achieve this, run a trial round where children are not eliminated for making mistakes.
- To “catch” the children, consistently and rhythmically call out the colours in a specific repeating sequence, then repeat one of the colours twice in a row so that the children are forced to stay in place – some participants, accustomed to a certain rhythm, will mistakenly change sides (example: “Yellow!” – “Green!”, “Yellow!” – “Green!”, “Yellow!” – “Green!”, “Green!”).
- Use English colour names to help expand your vocabulary in English.
- An equivalent to the “colourful” sides could be “animal sides” (like tiger, grasshopper, puppy, etc.) or “superhero sides” (such as tiger, Spider-Man, Batman, etc.). In this case, the English version can also be used.