

EDUCATION BOOKS
OF THE "LITTLE CHAMPION" PROGRAM



EDUBALL GAMES AND SPORTS



A GUIDE FOR PRIMARY SCHOOL TEACHERS AND COOPERATING PHYSICAL EDUCATION TEACHERS
CARRYING OUT THE "LITTLE CHAMPION" PROGRAM



Ministerstwo
Sportu i Turystyki



**DOLNY
ŚLĄSK**





■ Eduballs awarded by the Minister of Science and Higher Education

On December 9, 2016, the Polish Minister of Science and Higher Education, Jarosław Gowin, handed out awards for achievements in science and technology, lifetime achievements and accomplishments in scientific and didactic guardianship.

The team award of the Minister of Science and Higher Education in didactic achievements including innovative methods in conducting classes and preparing teaching aids was presented to members of staff of the University School of Physical Education in Wrocław including:

- dr hab. Andrzej Rokita, prof. AWF
- dr Tadeusz Rzepa
- dr Ireneusz Cichy

The awarded team prepared a concept of using educational balls, eduballs, in pre-school and primary school education. They have popularized this innovative method, supporting the motor-intellectual development of students at their first stage of education, which is essential to the whole development of young people. Thanks to their actions, children in their first three grades of primary school can conscientiously practice certain key competencies, such as reading, writing and calculating during movement classes.

Andrzej Rokita, Tadeusz Rzepa and Ireneusz Cichy have been cooperating with the School Sports Association on the Poland-wide "Little Champion" Program since 2014. Dr hab. Andrzej Rokita, prof. AWF is the co-author of this program. The idea of using eduballs has been popularized in the region of Lower Silesia and the whole country (Kraków, Poznań, Konin) during trainings, in which several hundreds of primary school, kindergarten and physical education teachers took part.

MINISTRY OF SPORT AND TOURISM
MARSHAL OFFICE OF THE LOWER SILESIA REGION
SCHOOL SPORTS ASSOCIATION "DOLNY ŚLĄSK"

Andrzej Rokita, Ireneusz Cichy,
Sara Wawrzyniak, Marcin Korbecki



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Wrocław 2017

Poznań 27.03.2017

REVIEW OF THE BOOK „EDUBALL – GAMES AND SPORTS” BY A.ROKITA ET AL.

The book I was asked to review is a very well-prepared practical teaching guidebook for Early Teaching and Learning teachers. It contains over 60 educational activities described in a very precise way and enhanced with colorful pictures. All together, it is an impressive publication that may bring some ‘fresh air’ into early teaching and learning. Title of the book does not reveal the real education value of the activities provided in the book. The activities are based on the educational idea of eduball – a set of playing equipment with letters and mathematical figures printed on the balls, adjusted in size and weight to the age of pupils.

This idea has been tested for educational effectiveness in experimental research in many schools and environments, proving the enhancement of academic learning in pupils aged 6 to 10 years old in many teaching contexts – language, maths combined with sport skills like running, bouncing, throwing. It also proved to be effective in interdisciplinary approach, so characteristic for early teaching and learning phases – examples of activities for this kind of approach may be easily found in the book. With the introduction of this kind of movement education, so often neglected in the early education phase, physical activity finally has a chance to add to the overall development of pupils, enhancing also academic performance. Findings of the research studies led by prof. Rokita and his team from University School of Physical Education in Wroclaw indicate positive influence of this kind of education. In my opinion, this idea should be introduced to schools nation-wide on a general base, and I am convinced it would make learning more attractive, and at the same time more progressive in many aspects. Colorful equipment, nice fables of the plays and games presented in the book, combined with subtle application of grammar or mathematical rules into the movement context should inspire children to get more engaged, more attracted to sports and at the same time less stressed with learning basic academic skills – writing, adding, calculating, naming.

The book is prepared with sufficient level of English, and as such, maybe a good teaching resource for educational practice for teachers around the world. I believe the idea of eduballs may, and as a matter of fact should, gain international recognition soon. After all, it is not only a Polish educational invention, which deserves support and promotion world-wide, but it is an example of something that may help children to assimilate into a schooling system more gently, learning while playing.

I strongly recommend this book to all those who have children at their hearts and minds – teachers, parents, educationalists.

Prof. **Michal Bronikowski**
University School of Physical Education
Head of Department of Didactics of Physical Education



Andrzej Rokita

“EDUBALLS” – EDUCATIONAL BALLS¹

It has been believed for ages that students should learn through action, practice and experience. Socrates (470-390 BC) used questions and formulated problems to encourage his students to think analytically.

Within the last decade, the idea of active teaching has again gained immense popularity, which is reflected in reforms initiated by the Polish government, especially regarding the organization of the education process.

An extremely significant aspect of teaching is appealing to the intrinsic motivation of children throughout the whole teaching process. This motivation is driven by curiosity, inner passion and interest, the need to explore and experience something extraordinary. At the primary stage of education, with an integrated curriculum, teachers pay close attention to the intrinsic motivation of children as well.

The integrated education curriculum includes integrating teaching content as well as combining different forms of activities.

Considering children's interest in motor activities and the attractiveness of ball exercises, games and sports, “traditional” balls have been altered by placing letters, numbers and mathematical and e-mail symbols onto their surface. This is how educational balls - “eduballs” - were created. They can be used in mini games of team sports (basketball, football, volleyball, handball). A set includes balls in five colors (yellow, green, blue, red and orange) with black letters (uppercase and lowercase), numbers from 0 to 9, mathematical symbols representing the operations of addition (+), subtraction (-), multiplication (*) and division (:), the symbols of greater than (>), less than (<), parentheses ((,)), and the at sign (@) painted on their surface.

The numbers, letters, signs and colors on the educational balls enable their wide application in almost all disciplines, not only the ones included in the general education requirements.

While taking part in physical activities with educational balls, children get to know letters, spelling, colors, mathematical signs and punctuation marks and a lot of rules applied in language and mathematics teaching. They also practice motor abilities and improve their physical skills.

It also seems that the following aspects of education can be taught using movement and educational balls as motivational factors for children at school: reading syllables, words, sentences and texts, writing letters, combining letters into syllables, writing words,

sentences, counting (counting objects, order irrelevance principle, comparing the cardinality of sets), arithmetic operations (addition, subtraction, addition and subtraction algorithms, multiplication, algorithm for multiplication by a single-digit number, division), order of operations.

Children participating in movement classes with balls practice ball passes and grips, bouncing and throwing, returning and receiving as well as goal shooting and many other physical skills. Movement classes with the use of balls determine the development of children's motor abilities. The experience so far (almost 15 years) and analysis of the teaching outcomes with eduballs have shown that combining motor and intellectual activities at the primary stage of education is very effective.

As teachers have the possibility to develop their own curricula, they are free to use eduballs to teach and practice simple mathematical operations and cover certain areas of the curriculum in the native and second language education. They can also be used in the integrated curriculum at the primary stage of education, in psychopedagogy and for therapeutic purposes, and in physiotherapy exercises.

The implementation and use of eduballs in the integrated curriculum education not only enriches the teaching process, but also makes it more attractive. It is common to hear that a child's favorite day at school is when motor activities are planned. Eduballs make it possible to combine motor activities with passing on knowledge in several areas of educational curricula.

The extraordinary value of this kind of activities derives from the possibility to affect children's motor, emotional, intellectual and social spheres simultaneously. They improve the integrative relations in a group, raise students' self-esteem, offer them a possibility to take part in making mutual decisions and develop the ability of making decisions individually. The rule that each child is helpful and needed in a group, and that the group is essential to the child, is of utmost importance, especially in classes where there are disabled children, as it develops and strengthens empathy. Furthermore, using eduballs in movement classes enables the development of visual and auditory memory, perceptiveness, focus, directional orientation (right, left, angle), defining the location of objects (balls) in relation to each other (in front of, behind, next to) and auditory, visual and kinesthetic coordination, as well as logical thinking. The activities enable several repetitions of the same action, which is indispensable in achieving proficiency in solving

- ▶ simple tasks within a certain area. Such classes let each child improve their motor abilities while solving simple intellectual tasks. Less skillful but more intellectually developed children have an opportunity to shine as individuals who are helpful in solving intellectual tasks. These activities additionally motivate these children to perform more difficult motor activities, they teach how to cooperate and rely on each other.

The core curriculum should be respected while including educational content with eduballs in exercises, games and activities. If at the given stage of primary school education spelling is practiced, e.g. including the use of capital letters, the movement class should include exercises, games and activities which relate to orthographic rules. In a similar way, educational content with eduballs for a given grade should be regarded for mathematics, information technology, foreign language education and other areas.

Therefore, playful forms of motor activities with eduballs gain significant importance, as children acquire

knowledge and skills not only in the field of physical education. These activities can be also combined with improving the knowledge and skills in their native language, mathematics, foreign languages and other aspects of the integrated curriculum at the primary stage of education.

More information regarding eduballs and the results of education applying them in movement classes can be found at the homepage of the Department of Team Sports Games of the Wrocław University of Physical Education, where you are welcome to read more.

¹ the content derives from the publication by A. Rokita, T. Rzepa: *Piłki edukacyjne w kształceniu wczesnoszkolnym [Educational Balls in Primary School Education]*, Wrocław 2005 and the publication by A. Rokita: *Zajęcia ruchowe z piłkami edukacyjnymi eduball w kształceniu zintegrowanym a sprawność fizyczna oraz umiejętności czytania i pisanie uczniów [Movement Classes with Educational Balls Eduballs in an Integrated Curriculum and Physical Fitness and the Students' Ability to Read and Write]*, Wrocław 2008.

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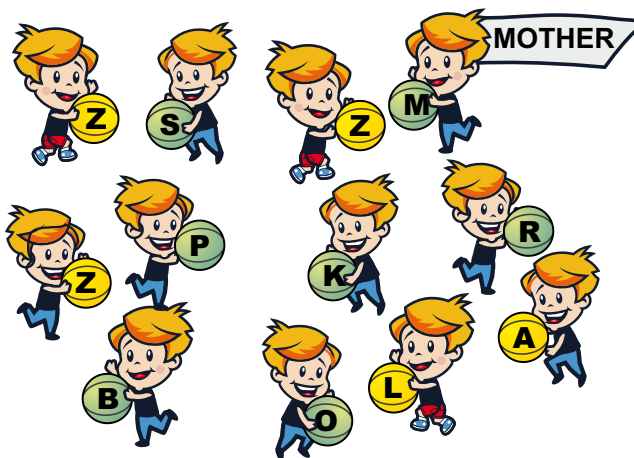
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NATIVE LANGUAGE EDUCATION

LETTER TAG WITH THE LETTER "M"

- Objective: to develop the skill of forming words beginning with the letter "m", improve certain motor abilities and physical skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has a yellow or green ball and moves freely around. Students who have a ball with the letter "m" are the chasers. Their task is to tag the rest of the students. A participant who has been tagged by the chaser can gain protection if they are able to say a word that begins with the letter "m", e.g. "mother". They only have 5 seconds to do so and cannot repeat what has already been said. When someone says an incorrect word, repeats it or takes too much time, they become the chaser.

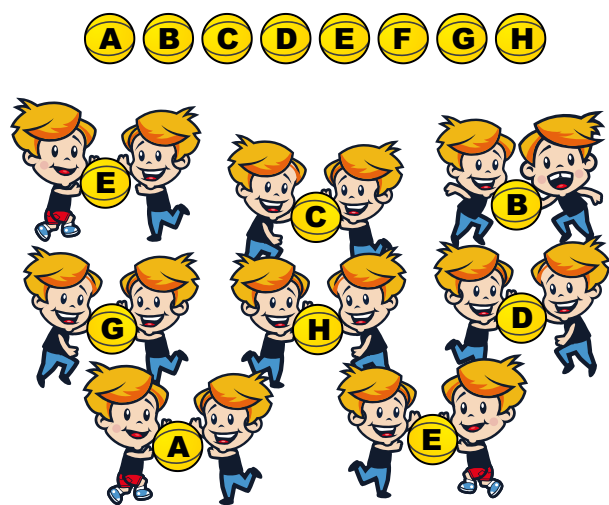


- Variation: The students can also gain protection by saying a word that only contains the letter "m", e.g. "game".

THE MOVING ABC

- Objective: to improve students' knowledge of the letter order in the alphabet, develop their perceptiveness and orientation in space and time, and improve certain motor skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air

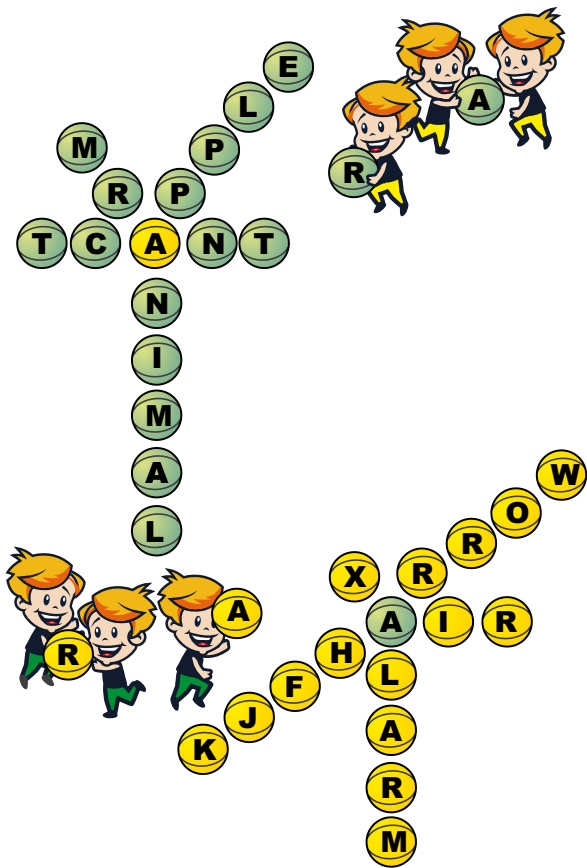
- Description: the students pair up and choose one yellow ball (with letters from A to G, depending on the number of participants). They move in pairs and pass the ball to each other. At the teacher's signal, they queue up at a line indicated by the teacher according to the order of the letters in the alphabet. After that, they exchange their balls.



- Organizational remarks: during the following rounds, the teacher changes the way the students should pass the ball to each other (e.g. rolling, bouncing, etc.)

A AS IN ABC

- Objective: to develop the skill of forming words beginning with the letter "a" and the ability to work in a team, and improve certain motor abilities and physical skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into two teams (yellow and green team). Each team gets a ball with the letter "a" which they place on a rubber ring at the starting line. The students' task is to come up with as many words as they can beginning with the letter "a". The yellow team uses the green balls and the green team uses the yellow balls. They have 4 minutes to complete the task. After this time, the teacher checks the correctness of the words.

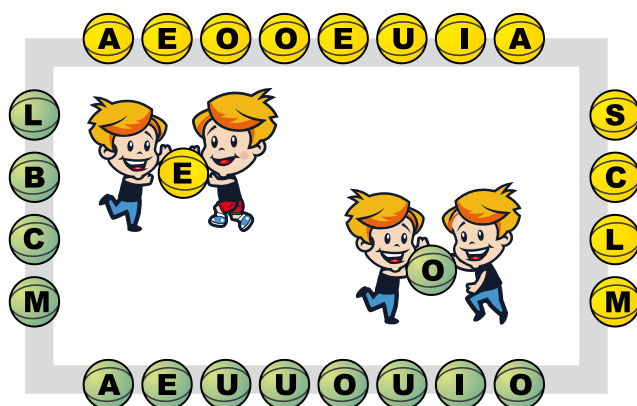


- Organizational remarks: the teacher can score 1 point for each word or one point for each letter in a word. The winning team is the team who have scored the most points.

THE CLEAN-UP

Objective: to practice the distinction between vowels and consonants, teach organizational and ordering activities, and improve certain motor skills.

- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: the students have green and yellow balls. The teacher indicates a line where students should line up depending on the letter they have on their ball, e.g. vowels should line up on the sidelines, consonants on the endlines

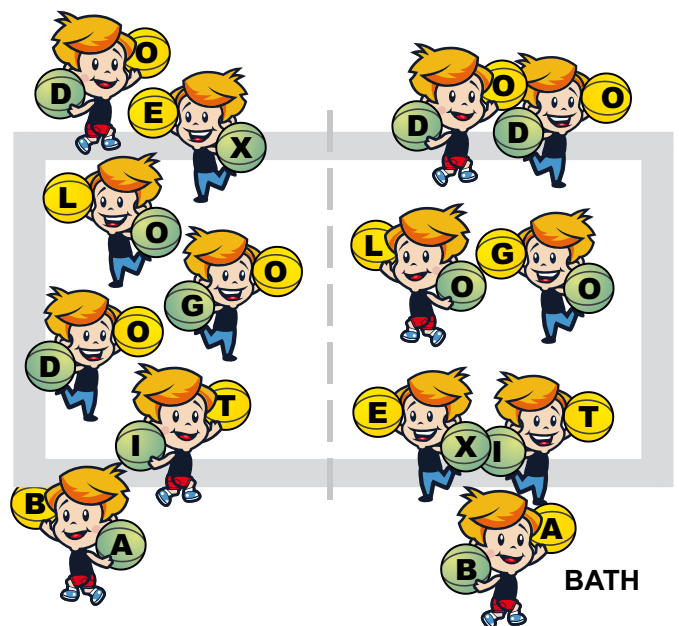


of the volleyball court. At the teacher's signal, the students move freely around and exchange their balls with any person they meet on their way on the court. At the signal "Clean-up", the students should get back to their lines as soon as possible. The teacher checks the correctness of the line-up and if vowels and consonants have been separated accordingly.

- Organizational remarks: The teacher changes the places and the manners in which the students should re-group, e.g. vowels line up and the consonants should sit cross-legged at the center circle.

LONELY SYLLABLES

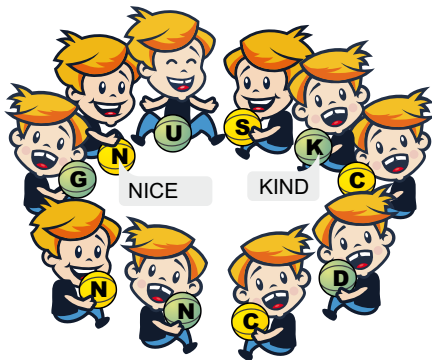
- Objective: to teach syllable and two-syllable word formation, and improve certain motor skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: Each student chooses two balls (one with a consonant, one with a vowel). The students hold the balls in the given order: first the consonant, then the vowel (e.g. BA). At the beginning of the game, the students read the syllables they have made. At the teacher's signal, they run across the pitch with the balls in their hands. At the second signal, they pair up to form two-syllable words and read them aloud. The students who have not found a pair have to say two words that begin with their syllables.



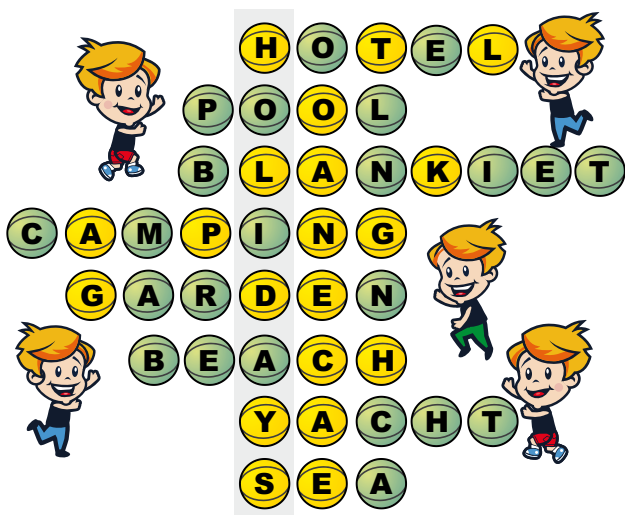
- Variation: depending on how advanced the group is, three- to four-syllable words can be created.

MY MUM IS...

- Objective: to improve the ability to form certain parts of speech (adjectives), enrich vocabulary, and improve certain motor skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: The students sit in a circle in the middle of the pitch. Each student has a yellow or green eduball. The teacher asks a question: "What is your mum like?" The students have to describe their mum using a word that begins with the letter they have on their ball. When a student says for example "My mum is nice", each student who agrees with the statement should perform a motor task as many times as is the number of the letters in the given word, so in this case four, e.g. four squats, four jumps, etc.



EDU-THEME

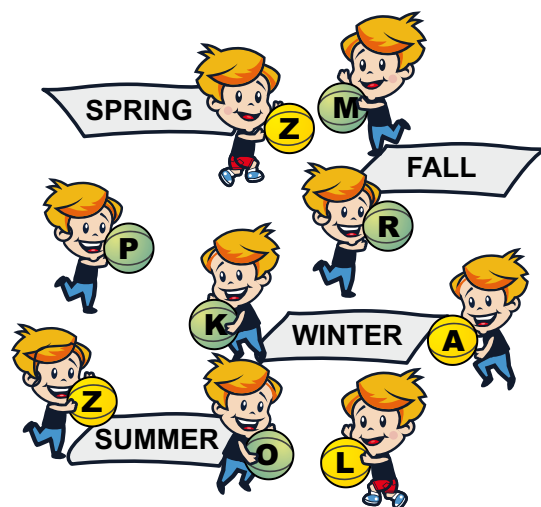


- Objective: to improve the ability to form words, expand vocabulary in a certain theme category (e.g. holidays), develop the ability to work in a team, improve certain motor abilities and physical skills.

- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: The students are divided into two teams. The first task for each team is to form the word "holidays" using the balls. Next, the students should form 8 words that they associate with holidays. Each word, however, should contain one letter from the theme H-O-L-I-D-A-Y-S. After they have formed a word, all students of the team should perform a motor task (e.g. A-skip, C-skip, etc.) as many times as is the number of the letters in the word they have formed. After they have completed the task, the students should read their words and tell the number of letters, speech sounds and syllables in each word.

WORD ASSOCIATION

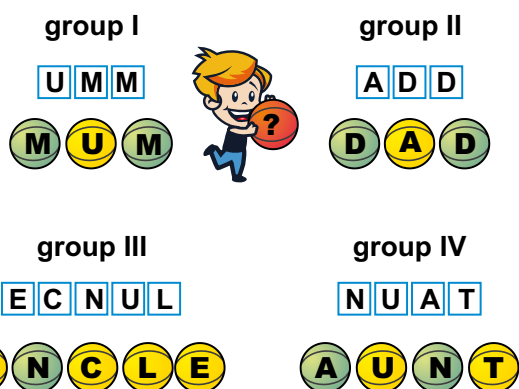
- Objective: to enrich vocabulary in a certain theme category (e.g. the four seasons), develop creativity and abstract thinking, and improve certain motor skills.
- Number of participants: any number
- Props: eduballs and category boards
- Area: gymnasium or open air
- Description: each student has a yellow or green ball. They move across the pitch in various directions. At the teacher's signal, the students run up to one of the boards with a season (SPRING, SUMMER, FALL, WINTER) where they write down a word they associate with the given season. The word has to start with the letter they have on their ball. After having written down the word, the students exchange balls and continue the game.



- Organizational remarks: at the end of the game, the students sit down in a circle with the teacher and read the collected words.

WHAT IS IT?

- Objective: to review vocabulary on a certain topic (e.g. family), practice the ability to work in a team, develop logical thinking, and improve certain motor abilities and physical skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into four teams. The balls are strewn across one half of the gymnasium. The students' task is to find the balls with letters indicated by the teacher as fast as they can. After they have found all the letters, the students build words out of them, placing them on rubber rings. An additional task for the students is to read the word, say the number of letters, speech sounds, syllables and perform a motor task as many times as is the number of the letters, speech sounds or syllables in the given word. Each team gets a list of letters with which they should form words according to the topic of the day - "family". For example, team I gets: m-u-m, g-r-a-n-d-p-a, team II: d-a-d, b-r-o-t-h-e-r, team III: u-n-c-l-e, c-h-i-l-d, team IV: s-i-s-t-e-r, a-u-n-t

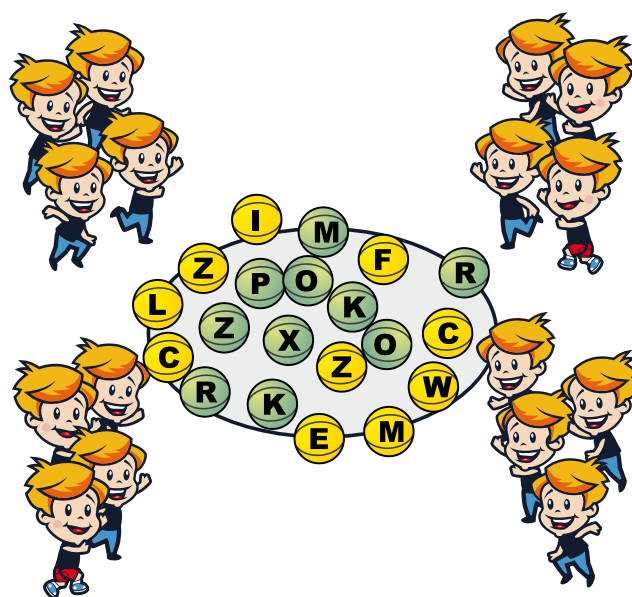


- Organizational remarks: if a letter is missing, each team can use one orange ball as a universal blank.

TREASURE ISLAND

- Objective: to practice logical thinking in word formation, enrich vocabulary, improve the ability to work in a team, and improve certain motor abilities and physical skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into four teams. Each team gathers in a base in the cor-

ners of the gymnasium. All eduballs are placed in the middle of the pitch on the treasure island. At the teacher's signal, a representative of each group runs to the treasure island and takes one ball to the base. After his return, the next person runs to the island until all the treasures have been collected. Each team must form as many words as possible using the collected balls. If a team lacks letters, they can exchange balls with another team for a special task provided by the team with the needed letter, e.g. singing a song, telling a rhyme, performing a motor task, etc. At the end of the game, the teams present their words.



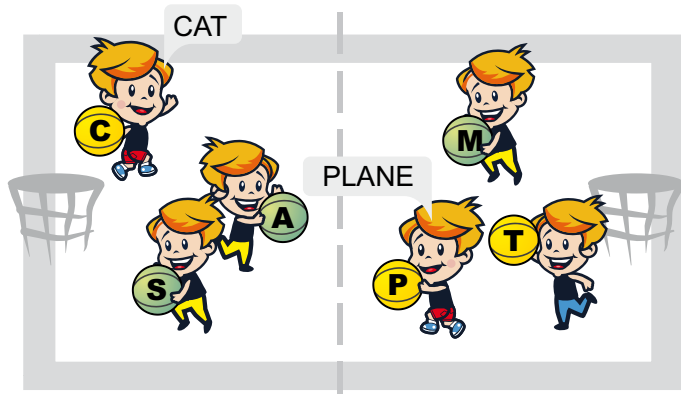
- Variation: the teacher changes the way of transporting the balls from the treasure island. The students must cooperate. They cannot move with the ball in their hands. They need to pass it to each other while transporting it to their base.

WORDS

author: Karolina Sikora

- Objective: to enrich vocabulary and practice basketball shots.
- Number of participants: 20
- Props: an eduball for each student
- Area: gymnasium or open air
- Description: each student has an eduball. The task starts with students moving about to music picked by the teacher. The students move to the rhythm of the music and play with their eduballs, e.g. rolling or bouncing them. At the teacher's signal (turning off the music), the students stop. The teacher chooses students who should say a word beginning with the letter they have on their ball (e.g. a child who has

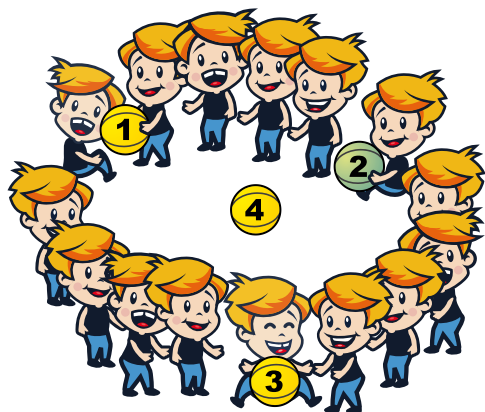
the letter “p” says “pet”, “pig”, or “place”, etc.). After that, they should shoot the ball as many times as is the number of the letters in the given word, e.g. when the student says “pet”, they can shoot 3 times. After the chosen students have performed their motor tasks, the game is continued.



- Organizational remarks: the teacher should choose vivid music for this game. The students should only have balls with letters on them. The students should only move around the basketball court.

REGISTERED MAIL

- Objective: to develop orientation in space and time and improve language skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students stand in a circle, every fifth student sits cross-legged and holds a red ball (post office). In the center of the circle, there is one student with a yellow ball (mail). At the signal, he runs and delivers the mail to the first post office, who passes it to the next, etc. not to



miss any post office. After having gone through all post offices, the mail reaches the recipient. The game can be replayed, changing the students holding the balls, so that each student takes part in the game.

- Organizational remarks: The teacher informs the students during the game how mail is delivered. The game can be extended by introducing different means of transportation between the post offices (e.g. train, car, bike).

PERSONAL PRONOUNS

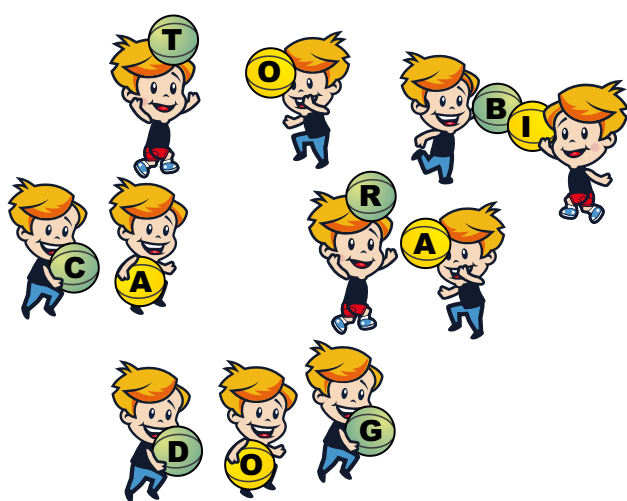
- Objective: to develop language skills and improve running speed.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: The students are divided into three teams. They run independently and gather in their teams at the teacher's whistle signal. Each team's task is to create as many personal pronouns as possible using eduballs (e.g. I, you, they, him, she, them, we, etc.) The students form the words standing in a row and holding the balls. After having formed each word, the students write it down on a sheet of paper and try to come up with the next one. The winning team is the team that has found the most personal pronouns within five minutes.



- Organizational remarks: the teacher observes the cooperation in teams, their engagement and the correctness of the task. After the task has been completed, the students tell others the words they have been able to form. The teacher gives an additional task to students who have not been able to find any personal pronouns. He watches the interactions between the individual students.

VOWELS AND CONSONANTS

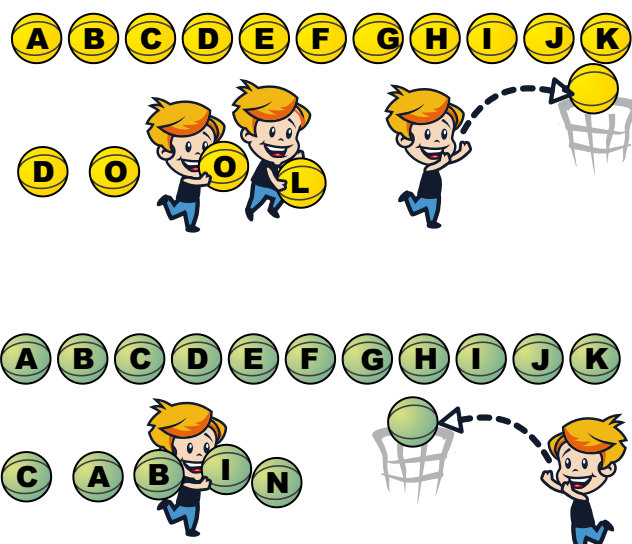
- Objective: to develop language skills, improve running speed, and practice certain motor abilities and physical skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has an eduball and moves about randomly throwing the ball up with both hands. At the teacher's signal, the students pair up (according to the letters on their balls). Students who have consonants find students with vowels to form syllables. Then they look for other pairs or students to form short words.



- Organizational remarks: this kind of task allows students to memorize consonants and vowels, form syllables and words, as well as practice motor skills.

WORD FORMATION

- Objective: to develop language skills, practice coordinated movement, and improve certain motor skills.
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into two teams. The first team should form and write down as many words as possible starting with the letters "do" using green balls. The second team forms words starting with the letters "ca" using yellow balls. After having formed each word, all team members have to shoot a ball into the basket (each team member has one shot). The winning team is the team with the most words formed within five minutes.



- Organizational remarks: the teacher observes the interactions between the students and tries to notice if there are students who are leaders or if the students work on the task together, e.g. one student grabs the balls, another writes the solution down, another forms words with the balls, etc.

ENIGMA

author: João Tapiço

- Objective: to improve students' knowledge of the letter order in the alphabet, develop logical thinking and improve certain motor skills.
- Number of participants: any number
- Props: eduballs and coded messages
- Area: gymnasium or open air
- Description: The students are divided into two teams. They get coded messages. The digits and numbers on their sheets represent the order of the letters in the alphabet. The students' task is to decode the message and to form the given word out of eduballs.

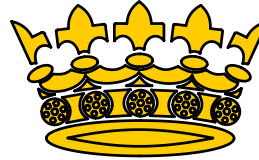
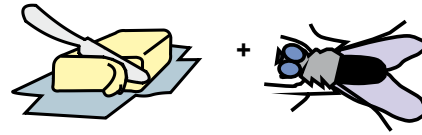
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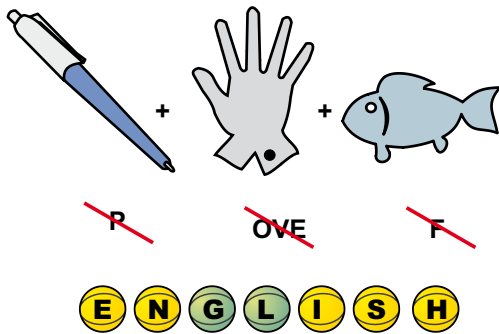
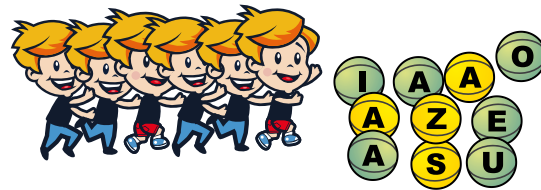
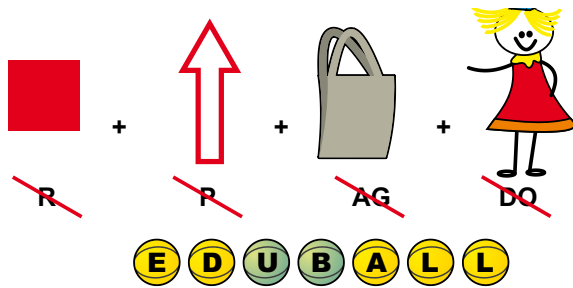
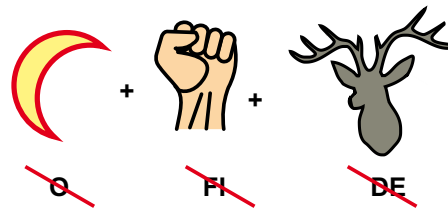
- Organizational remarks: the teacher may prepare a board with the alphabet to make it easier for students to find the relevant letters.
- Variation: there are letters assigned to numbers on a board. In this task, A is number 3, D is 6 and N is 16. The students need to first find the rule behind it and then decode the message.

RIDDLES

- Objective: to develop creativity and logical thinking, improve the ability to work in a team, and practice certain motor skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into teams of 4-6. Their task is to find a solution to the riddle and to form the answer using eduballs. At the end of the game, the students share their solutions with others.



R = L



- Area: gymnasium or open air
- Description: The students are divided into four groups of five. The teacher hands a sash to the captain of each team. The teams draw a lot with their riddle. After they have figured out the solution, they have to find balls with the letters of the answer (the balls are strewn across the pitch) and should place them on the rubber rings at the indicated places to form the word which is the solution to the riddle. The students look for the balls moving around in a line holding each other's shoulders forming a "train". The train cannot lose its wagons; the children cannot split up. After the students have finished their task, each group has to tell a story containing all the answer words.
- Organizational remarks: the riddles should be picked according to the abilities of the students.

RIDDLE STORY

author: Daria Ptoszek

- Objective: to develop creativity and the ability to work in a team effectively, and to improve certain motor skills.
- Number of participants: 20
- Props: eduballs, four sashes: a green one, a red one, a blue one and a yellow one, 35 rubber rings

EDUball



EDUBALLS – LEARN AND PLAY

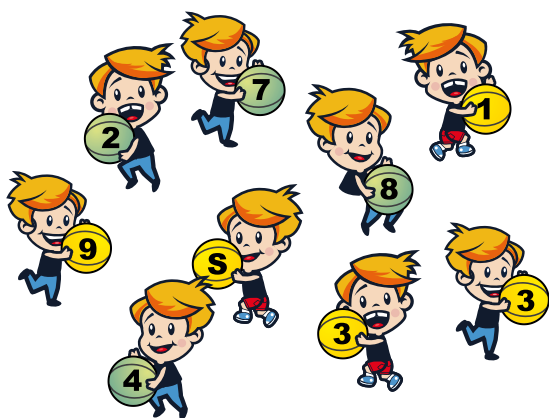


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MATHEMATICS EDUCATION

NUMBER TAG

- Objective: to get familiar with the digit "5", learn mathematical operations with the number "5", develop orientation in space and time, and improve speed.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has a ball in any color. The student who has the ball with the number "5" is the chaser. When the chaser tags a student, they exchange their balls and the tagged person becomes the chaser.



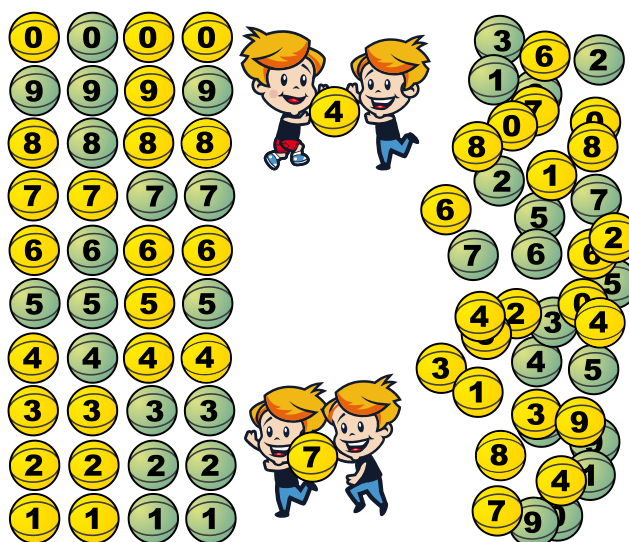
$$4 + 5 = 9$$

- Variation: all students have green or yellow balls. The student who has the ball with the number "5" on it is the chaser. The person who gets tagged by the chaser, can gain protection if they say what the sum of their number and the number "5" is. They only have five seconds to do so. When someone says an incorrect sum or takes too much time, they become the chaser.

DIGIT ORDER

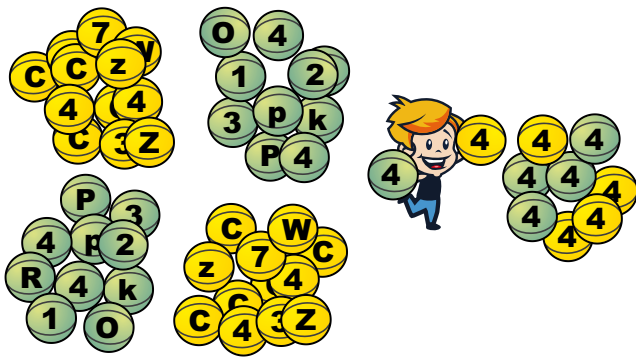
- Objective: to improve the recognition of digits in an increasing number sequence, develop the ability to work in a team, and practice certain motor skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air

- Description: The balls are strewn across one half of the gymnasium. The students pair up. Their task is to find all balls containing the digits mentioned by the teacher, to roll them to an indicated spot and form an increasing sequence. After all balls have been lined up, the students perform a special task that has been assigned to each number and repeat it according to the number, e.g. 1 - a 360° turn, 2 - 2 jumps, 3 - 3 squats, etc.



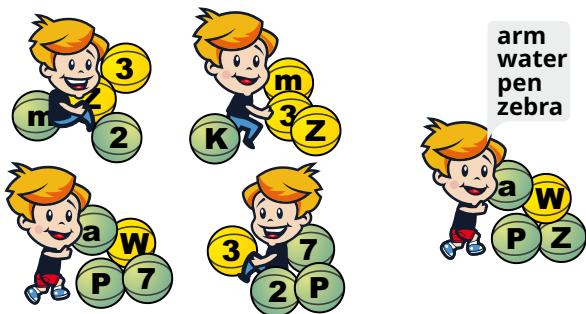
4 TASKS

- Objective: to get familiar with the digit "4", improve the ability to work in a team, and practice certain motor skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: the teacher says "4" aloud. At the center of the pitch, the students should form the digit "4" out of their bodies. The students then have to complete four tasks as quickly as possible and return to their starting position. The following are the tasks:
 - Task 1: divide the balls according to their colors and put them into four corners of the gymnasium.
 - Task 2: collect the balls with the digit "4".
 - Task 3: each student should gather any four balls.
 - Task 4: each student should say four words beginning with the letters on the collected balls.



task 1

task 2

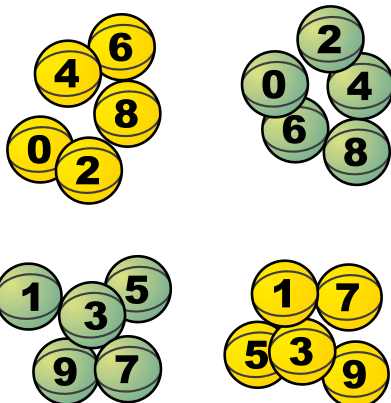


task 3

task 4

EVEN AND ODD NUMBERS

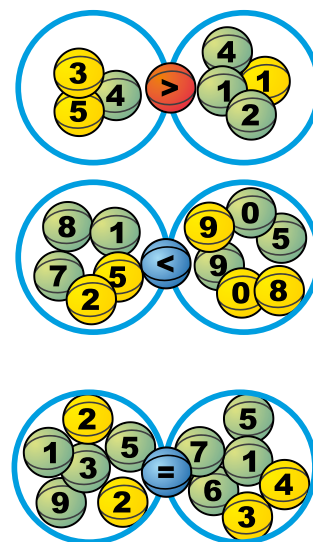
- Objective: to practice the distinction between even and odd digits, and improve certain motor skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: eduballs are strewn across the whole gymnasium. The students stand at the center circle. The teacher indicates places for even and odd numbers in the corners of the gymnasium. The students move freely across the pitch. At the teacher's signal, they should put the balls into the indicated places according to the previous instructions.



- Organizational remarks: the teams can compete against each other.
- Variation: each student has a green or yellow ball. The teacher indicates bases for even and odd digits in the corners of the gymnasium. The students move across the pitch in a manner indicated by the teacher. At the teacher's signal, the students have to put their ball into the right corner according to the color of the ball and the digit on it. After they have completed the task, the students exchange balls.

COMPARE SETS

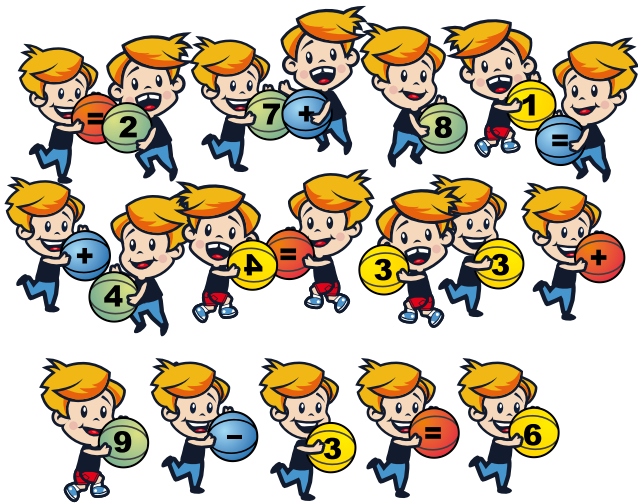
- Objective: to practice the use of mathematical signs (<, >, =) and mathematical operations, develop the ability to work in a team, and improve certain motor skills.
- Number of participants: any number
- Props: eduballs, hoops and rubber rings
- Area: gymnasium or open air
- Description: the students are divided into five teams. Two hoops and a rubber ring between these hoops are assigned to each group. Eduballs are strewn across the pitch. The first task of each team is to place green and yellow balls into the hoops within 30 seconds. The next task is to count how many balls there are in each set and to place a ball with a sign (<, =, >) accordingly on the rubber ring. After the task has been completed, the whole team has to run around their sets three times as fast as they can and return to their starting/finishing position. After that, the teacher checks the correctness of the comparisons.



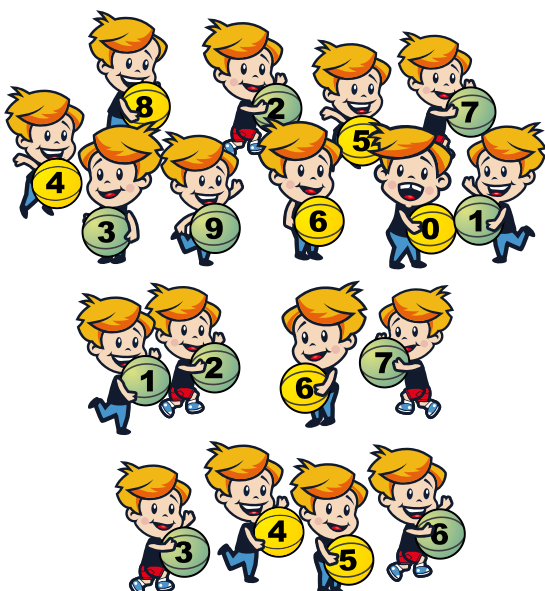
- Variation: a more difficult task would be to sum up the numbers on the balls in the hoops and placing the relevant sign (<, >, =) according to the sums, not the number of the balls.

MATHEMATICAL SIGNS

- Objective: to practice forming simple mathematical operations, develop the ability to work in a team, and improve certain motor skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: the students move about the pitch in different directions with eduballs in four colors (yellow, green, blue with the signs +, -, = and red with the signs +, -, =) in their hands. At the teacher's signal, they regroup to form mathematical operations, e.g. $3+4=7$; $9-8=1$. If a student has not joined any group, they have to say an operation with the number or sign they have on their ball. After the task has been completed, the students exchange balls.



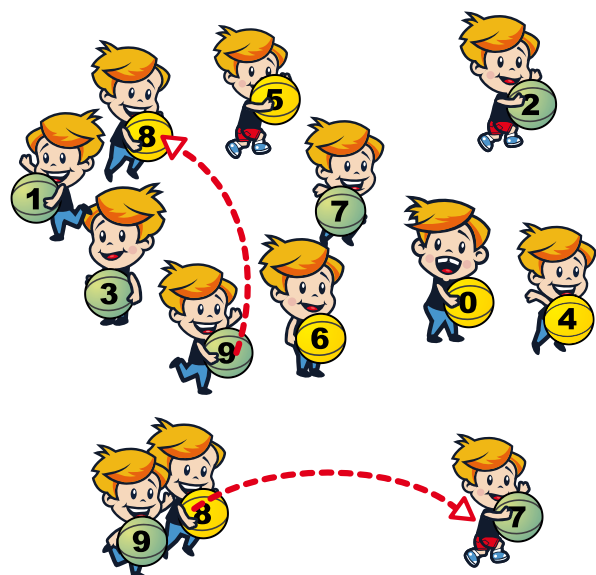
ATTRACTIVE DIGITS



- Objective: to improve the students' knowledge of the digit order in an increasing number sequence, practice their perceptiveness and orientation in space and time, and improve certain motor abilities and physical skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has a ball with a digit from 0 to 9. They move about in different directions. At the teacher's signal, they have to pair up with someone who has the successor, e.g. 12, 67. After that, the students move in pairs. At the next signal, the students should form groups of four (e.g. 6789) or three (e.g. 123). The game is over when the students have formed the entire number sequence from 0 to 9. The teacher gives instructions as to how the students should move across the pitch.

DIGITS, WATCH OUT

- Objective: to improve the students' knowledge of the digit order in an increasing number sequence, practice their perceptiveness and orientation in space and time, and improve certain motor abilities and physical skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has a green or yellow ball with a number from 0 to 9. The teacher appoints catchers. The catchers are the students with balls with the digit "9". The catchers' task is to tag students with the digit "8". After a student has been tagged, they pair up with the catcher and try to tag the student with the digit "7" together, etc. The game is over when all the digits have been tagged.



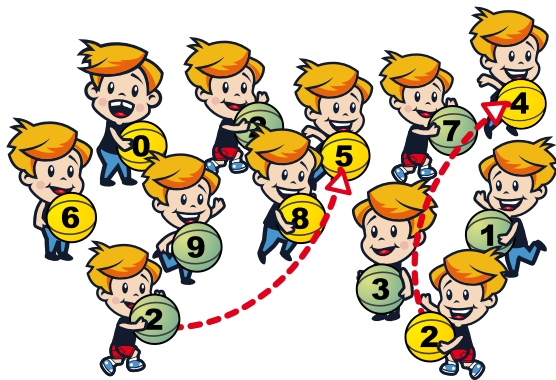
- Variation: each student has a ball with a number from 0 to 9. They all have to tag a person with

their predecessor, e.g. a student with an “8” tries to tag the student with a “7” and a student with a “0” tries to tag a “9”. After the predecessor has been tagged, the students pair up. The game is over when all students have formed the entire number sequence.

DOUBLE TAG

author: Adrian Stachurski

- Objective: to practice the distinction between even and odd numbers and improve certain motor abilities and physical skills.



- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has a ball with a number from 0 to 9. The teacher chooses two chasers. One chaser gets a red ball, the other one a blue ball. The red chaser tries to tag students with even numbers (0,2,4,6,8), the blue chaser students with odd numbers (1,3,5,7,9). To gain protection from the chaser, students can pair up to form two-digit numbers. Then the chaser has to regard them as one number to decide if it is even or odd. When a student is tagged by the chaser, they become the chaser.

FROM 0 TO 9

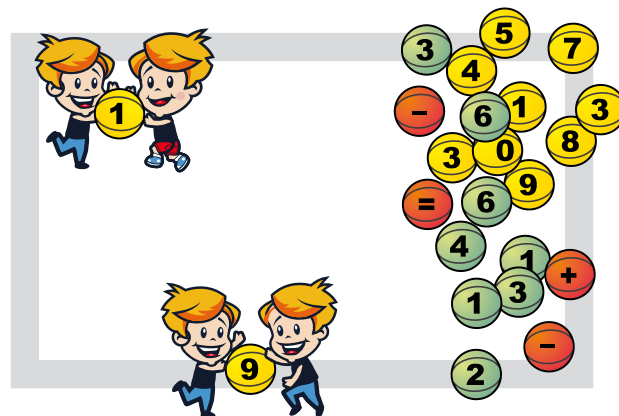
- Objective: to practice the order of digits in an increasing and decreasing number sequence and improve certain motor skills.
- Number of participants: any even number
- Props: an eduball for each student
- Area: gymnasium or open air
- Description: the students are divided into two teams (yellow and green team). The students



freely move across the whole pitch. At the teacher’s signal, the students with the yellow balls need to line up as fast as they can from the smallest to the biggest number. The green team has to line up from the biggest to the smallest number.

WORD PROBLEMS

- Objective: to practice simple word problems, develop the ability to work in a team, and improve certain motor skills.
- Number of participants: any even number



In the playground, there were 6 girls and 9 boys. How many children were there in the playground?

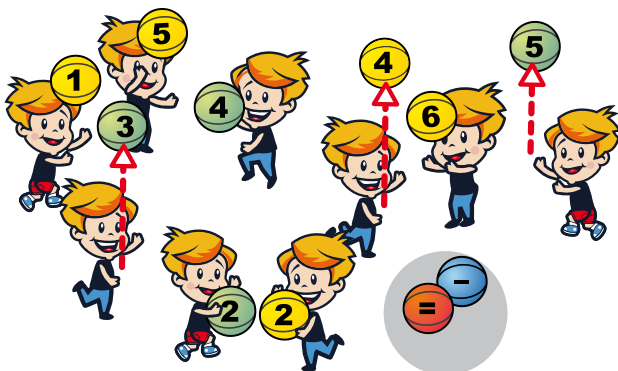
$$6 + 9 = 15$$

- Props: eduballs
- Area: gymnasium or open air
- Description: The students are divided into two teams. The eduballs are strewn across the whole gymnasium. The students’ task is to solve the word problem and to form the entire operation out of eduballs. The students move about in pairs (each pair can only carry one eduball). Af-

ter they have formed the operation and found the solution, the students perform a motor task together, e.g. at the center circle they all hold hands and do squats together; the number of squats depends on the solution, e.g. 15.

OPERATIONS IN THE AIR

- Objective: to practice simple mathematical operations and improve orientation in space.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: the students move across the pitch, throwing eduballs as high as they can. At the teacher's signal, they stop. The teacher lifts a ball with the addition (+) or subtraction (-) sign and sets a task, e.g. add the number you have on your ball to 2. After several tasks, the students exchange their balls. The tasks can also be solved in pairs. Then the students can check each other's answers and compare them, e.g. $<$, $>$, $=$.



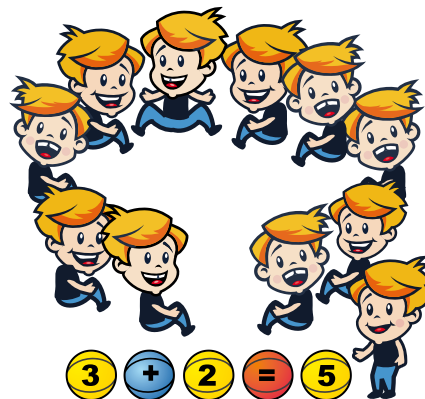
- Organizational remarks: the students performing these tasks practice addition and subtraction, as well as certain motor skills. The teacher evaluates the quality of their performance and how much time they need to make a decision. There is a higher probability of the task being completed when students work in pairs.

MATHEMATICAL CHINESE WHISPERS

- Objective: to practice simple mathematical operations and improve orientation in space and time.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: the teacher whispers a mathematical formula to the students sitting in a circle, e.g. $3+2=5$. The last child stands up, says the formula

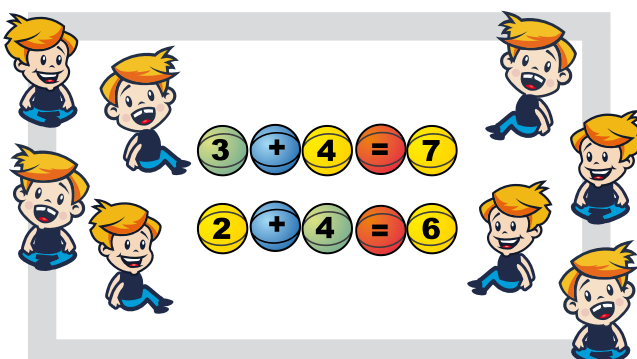
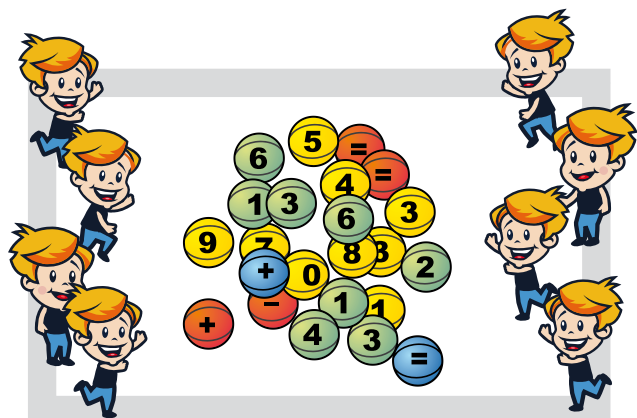
aloud and forms it out of eduballs. Then all the students stand up and jump as many times as was the solution of the operation. The teacher whispers the next formula starting from another student and assigns a new motor task to perform (e.g. bouncing or throwing a ball).

- Organizational remarks: during this game, the students practice calculations from memory (addition and subtraction) in the range established by the teacher, and improve certain motor skills.



FORM AN EQUATION

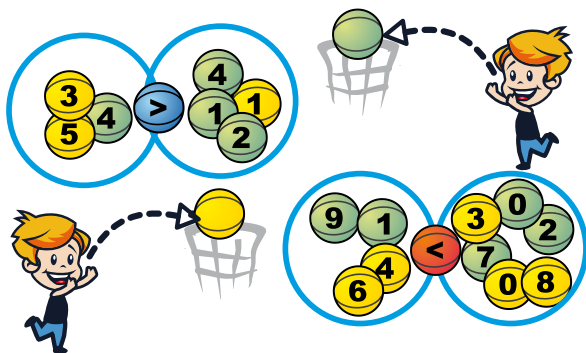
- Objective: to practice calculations and the ability to form equations, develop orientation in space and time and strengthen postural muscles.
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air



- Description : the students are divided into teams lined up at the endlines of the court. At the teacher's signal, they run to the indicated positions, where they find eduballs. Their task is to form a correct arithmetic equation, e.g. using the balls 1, 2, 3, 4 and 7 and the signs $-$, $+$, $=$, the students can form the equation $3+4=7$. After having completed the task, they return to their starting position and sit down cross-legged.
- Organizational remarks: the teacher checks the formed equation. The winning team is the first team to form a correct equation. Returning to their starting positions, the students move backwards in a tabletop pose.

NUMBER SETS

- Objective: to practice calculations, develop orientation in space and time and improve running speed.
- Number of participants: any even number
- Props: eduballs and 4 hoops
- Area: gymnasium or open air
- Description: the students are divided into two teams. Each team has a set of balls in two hoops. They have to make them equal not moving the balls from one set to the other, but using the remaining balls which have been strewn across the pitch. For example, there are five balls in one hoop and one in the other. The winning team is the team who have equaled the sets and shot as many balls into the basket as is the number of balls in both sets.

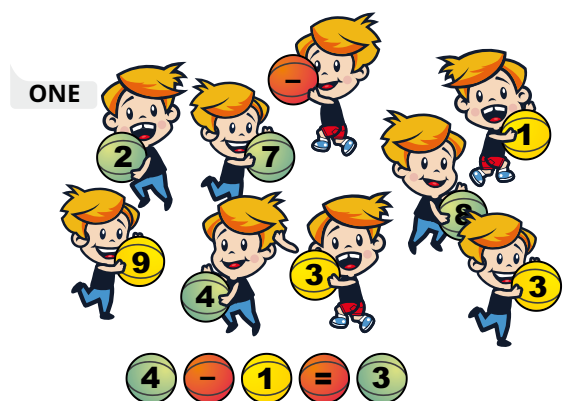


- Variation: there are two sets of balls in hoops. The teams have to count them as quickly as they can and put a ball with the according sign ($<$, $=$, $>$) between the hoops to compare them. After having completed the task, the students run around the sets twice as fast as they can and return to their starting position.
- Organizational remarks: the teacher has to check the correctness of the completed task and evaluate the speed. The winning team scores two points, the losing team 1 point. This grad-

ing scale allows all participants, even the losing team, to be valued for their accomplishments. The teacher observes which students have trouble with comparing the sets or do not engage in the task, and takes notice whether the group works as a team.

SUBTRACTIONS

- Objective: to practice calculations, develop orientation in space and time and improve running speed.
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air
- Description: each student has an eduball and moves freely across the gymnasium. At the signal, the teacher lifts a red ball with the minus sign ($-$). The students' task is to calculate the result of subtraction of the number they have on their ball from the number given by the teacher and saying the difference aloud. After having performed the task, the students exchange their balls. However, if the subtrahend is bigger than the minuend, the operation is infeasible.



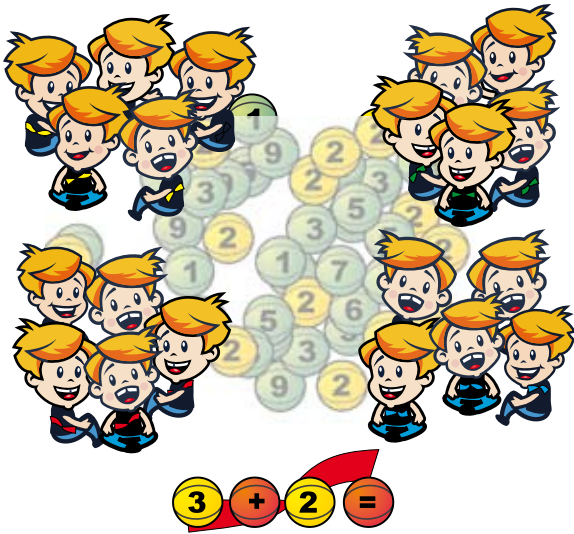
- Organizational remarks: The students performing this task practice subtracting up to 10. The teacher can also ask for the result individually, to find out which students have trouble with it.

OPERATIONS

author: Jakub Widziak

- Objective: to practice mathematical skills in addition and subtraction, develop orientation in space and time, and improve the ability to work as a team.

- Number of participants: 20
- Props : eduballs and sashes
- Area: gymnasium or open air



- Description: the teacher divides the students into four groups of five. Each group has a different sash color. The groups sit in a small circle. The balls are strewn across the whole gymnasium. The teacher gives each group a certain mathematical operation. Each group has to find the digits and signs they need on the balls in the gymnasium to be able to form the operation. While giving the task to the students, the teacher does not say what the result is. The students have to find the number themselves. For example, the teacher gives the students with red sashes the following operation: $7+2=...$ and the students of this group need to find the digits (7 and 2) and the signs (+ and =) and the digit that is the result of the operation. All groups start to look for the relevant balls at the same time.
- Organizational remarks: the area where the students play needs to be kept in order. The rules of fair play should be discussed.

EDUball



EDUBALLS – LEARN AND PLAY

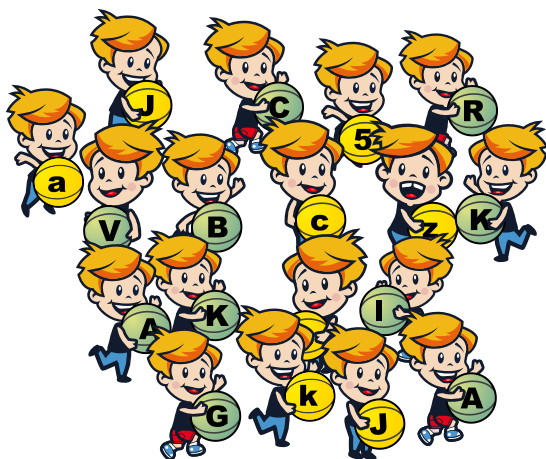


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FOREIGN LANGUAGE EDUCATION

LETTERS

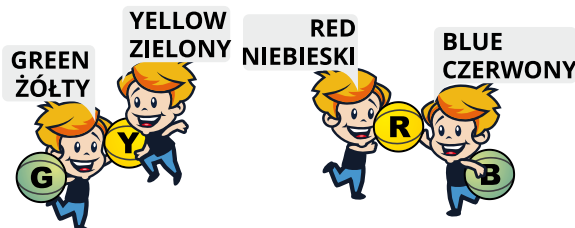
- Objective: to practice the order and pronunciation of the letters of the English alphabet and improve certain motor abilities and physical skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: the students move across the pitch holding eduballs in a manner indicated by the teacher. At the teacher's signal, they stop and say the letter they have on their ball aloud in their native language and in English. After that, they exchange balls.



- Organizational remarks: to enhance the effectiveness of practicing the alphabet, the students can be divided into smaller groups. Furthermore, to teach the alphabet, the popular "ABC" song can be used. At the beginning stage, the pronunciation of the English alphabet should be practiced with the whole group, then in smaller groups, pairs, and finally, individually.

COLORS

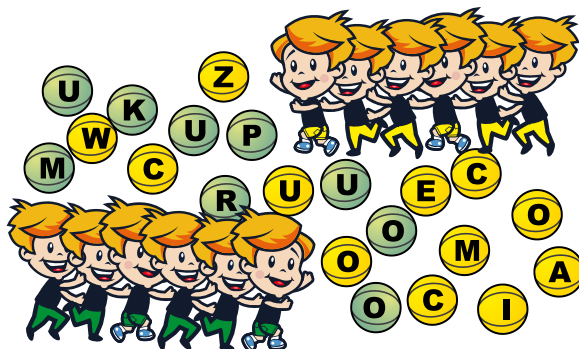
- Objective: to teach the names of the colors in English and improve certain motor abilities.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air



- Description: the students have eduballs in five colors and move freely across the pitch. At the teacher's signal, the students exchange balls saying the color of their ball in English (e.g. "green", "yellow", "red", "blue", "orange"). The receivers' task is to name the color in their native language.

ALPHABET

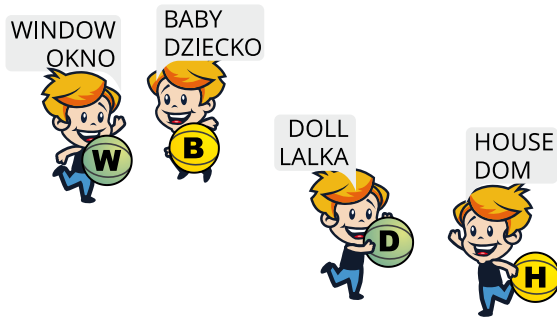
- Objective: to practice the order of the letters of the English alphabet, develop perceptiveness and focus and improve the ability to work in a team.
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into two



teams (the green and yellow team). In the teams, the students line up with their hands at each other's shoulders, forming eduball trains. The students set out on a journey to Eduballland to get to know all the letters of the English alphabet. The students move across the whole gymnasium singing the ABC song: "A - B - C - D - E - F - G; H - I - J - K - L - M - N - O - P; Q - R - S - T - U - V; W - X - Y and Z. Now I know my ABC. Next time won't you sing with me?". The yellow team collect yellow balls and the green team look for green balls.

WORDS

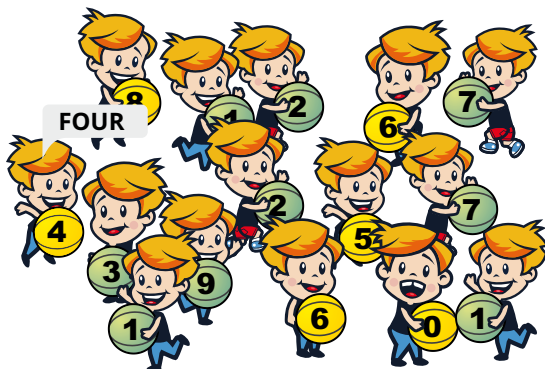
- Objective: to enrich English vocabulary and improve certain motor skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has a yellow or green



eduball and move freely across the gymnasium. At the teacher's signal, the students exchange balls saying a word in English beginning with the letter on their ball. The receivers' task is to name the equivalent in their native language. After the task has been completed, the student exchange their balls again.

NUMBERS

- Objective: to practice numbers in English and improve certain motor skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: the students move across the pitch holding eduballs in a manner indicated by the



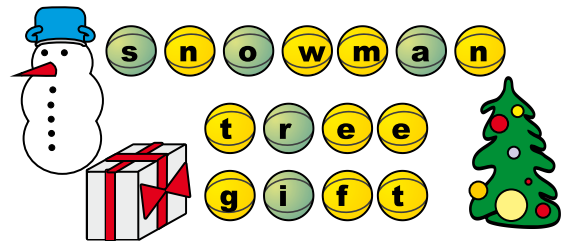
teacher. At the teacher's signal, they stop. The teacher names a number in their native language or English and the students' task is to name the relevant equivalent and at the same time perform a motor task as many times as is the given number.

EDUWORDSEARCH

- Objective: to expand English vocabulary in a given theme category (e.g. Christmas), develop perceptiveness, creativity and abstract thinking, and practice certain motor skills.

A	E	G	H	J	K	L	B	X	J	T	W	B	D	T	G
O	S	N	O	W	M	A	N	A	M	D	E	C	H	Y	I
Q	O	I	K	F	A	W	U	Y	N	J	T	T	J	P	F
C	M	P	R	T	R	E	E	G	Z	C	F	R	H	I	T

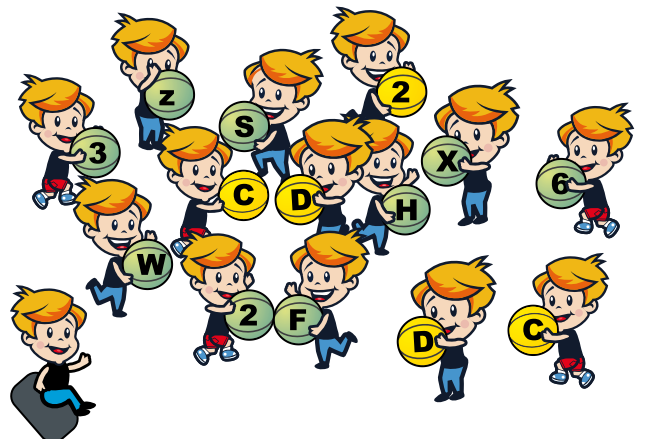
C h r i s t m a s



- Number of participants: any even number
- Props: eduballs and wordsearch boards
- Area: gymnasium or open air
- Description: the students are divided into teams. Each team's task is to find words encoded in the board and to form them out of eduballs. The teacher prepares the boards for each team. After the task has been completed, the students present the words they have found to the other teams.

CATCH ME IF YOU CAN

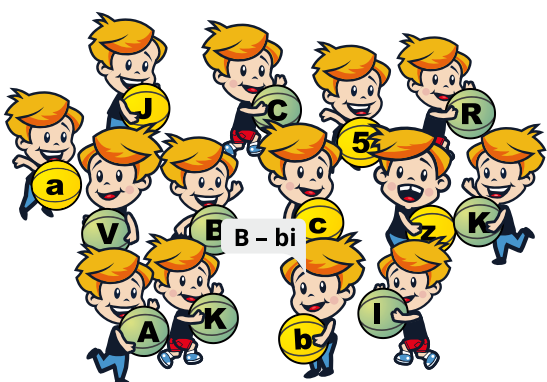
- Objective: to enrich English vocabulary, get to know English names of animals, develop the ability to work in a team, and improve certain motor abilities and physical skills.



- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has a green ball. Two students with balls with the letter C are chasers. They are the cats. The cats' task is to catch as many mice as possible. However, two dogs (students with balls with the letter D) and two pieces of cheese (students with yellow balls) will try to disturb them. Mice may find shelter from the cats for five seconds behind the dogs. The mice which have been tagged by cats go into the cage (e.g. sit on a bench). They can be, however, freed when tagged by the students with the yellow balls.
- Organizational remarks: The teacher needs to often change roles performed by the students.

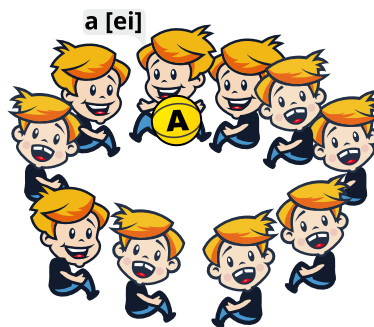
RECOGNIZE IT AND SAY IT IN ENGLISH

- Objective: to practice the order and pronunciation of the letters of the English alphabet and improve certain motor abilities and physical skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: the students move across the pitch in a manner indicated by the teacher. At the teacher's signal, they stop and say the letters they have on their balls aloud in their native language and English (A - [eɪ], B - [bi], etc.). After they have stopped, they also exchange their balls with others.



- Variation I: the students sit in a circle. The teacher hands the ball with the A [eɪ] to one of the students saying it loud and clearly. The student who has received the ball spells the letter on the ball aloud and, handing it over to the next person, performs a certain motor task (e.g. jumps, squats, bouncing the ball, etc.). The student who receives the ball next does the same. After

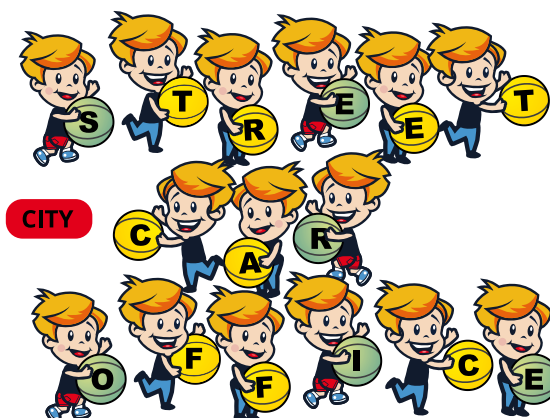
the ball has been through the whole circle, the teacher takes the next letter of the English alphabet (B [bi], C [si], etc.).



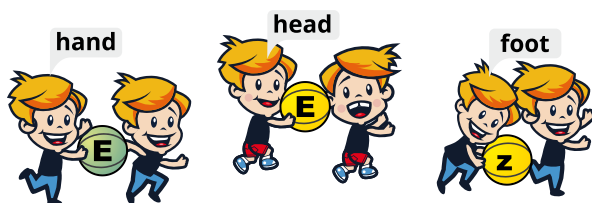
- Variation II: the teacher adds the next ball to the ball that is already in the circle (e.g. after A [eɪ], B [bi], C [si], D [di], etc. are added). Each student has to say each next letter that they get on a ball aloud.
- Organizational remarks: to enhance the effectiveness of practicing the alphabet, the students can be divided into smaller groups. Furthermore, to teach the alphabet, the popular "ABC" song can be used. At the beginning stage, the pronunciation of the English alphabet should be practiced with the whole group, then in smaller groups, pairs, and finally, individually.

EXPANDING ENGLISH VOCABULARY

- Objective: to enrich vocabulary, practice writing and pronunciation of English words, develop logical thinking and the ability to work in a team and improve certain motor skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has an eduball and moves freely about the pitch playing with it. At the teacher's signal, the students exchange balls, naming a word in English beginning with the letter they have on their ball. The receivers' task is to name the equivalent in their native language.



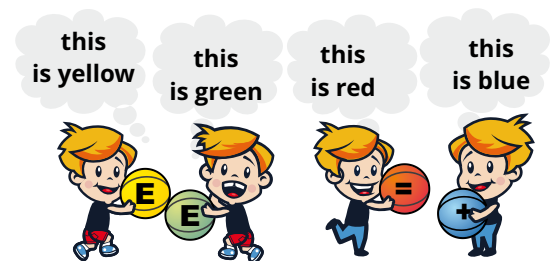
- Variation I: the students first name words in their native language and then find their English equivalent.
- Variation II: the students are divided into groups according to the colors of their balls. Their task is to form as many words as they can that are connected with the word given by the teacher (e.g. the teacher says "city" and the students form the words "street", "car", "house", "office", etc. out of eduballs).
- Variation III: each student has an eduball and moves freely about the pitch. At the signal, the teacher names an animal in English. The students' task is to move with the ball in a manner that is specific for the given animal (e.g. bird, cat, horse, elephant, etc.).
- Variation IV: pair tag; each student in a pair (the chaser and the runner) has an eduball and bounces it. The chaser decides and names the manner that they should move in (e.g. jump, run, walk, etc.).



- Variation V: the chaser needs to tag the runner naming the body part they touched with the ball (e.g. hand, arm, elbow, knee, foot, finger, etc.).

ENGLISH COLORS

- Objective: to develop logical thinking, improve quick reaction time, speed and nimbleness.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has an eduball and moves freely about the pitch playing with it. At the teacher's signal, the students exchange their balls, saying the color of the ball they had (e.g. "this is green", "this is yellow", "this is red", "this is blue", "this is orange"). The receivers' task is to name the color in the native language.

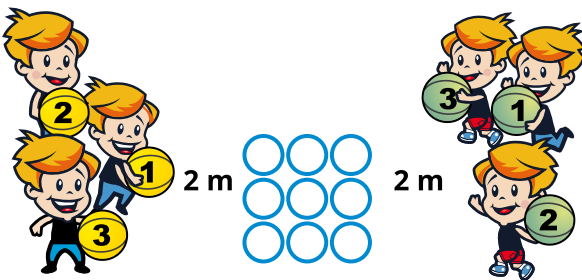


- Variation I: the students use full sentences in their native language and translate them into English (e.g. "this ball is red", "this ball is blue", "this ball is green", "this ball is yellow", "this ball is orange").
- Variation II: the students are divided into teams according to the color of their balls. Their task is to form as many words as possible beginning with the letter on the teacher's ball (e.g. "f": floor, foot, four, friend, etc.).

INTERDISCIPLINARY EDUCATION

TIC-TAC-TOE

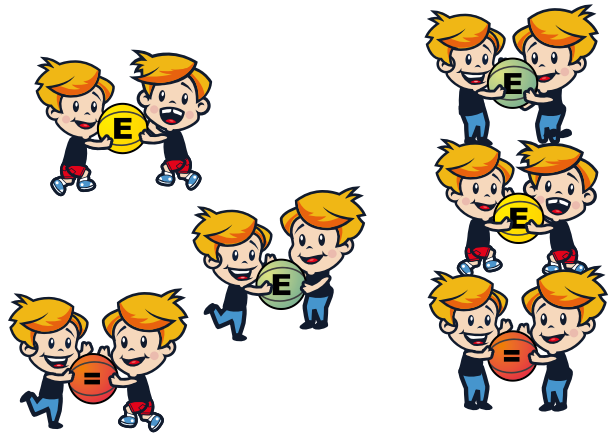
- Objective: to develop logical thinking, improve quick reaction time, speed and nimbleness.
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into two teams (yellow and green). Each team has to place three balls in their color on rubber rings in the relevant digit order "1, 2, 3" in a horizontal, vertical, or diagonal row. At the teacher's signal, the first participants place their balls on the rubber ring, come back to their base, and the next person is ready to go, etc. When the students do not have any more balls in their base, they can change the place of a ball that has been already placed on the ring. The participants have to watch their opponents to keep them from forming a row. The winning team is the team who have placed all the balls in the right order before the other team have.



- Variation: instead of using digits, colors or letters can be used (e.g. ABC)

TRAFFIC LIGHTS

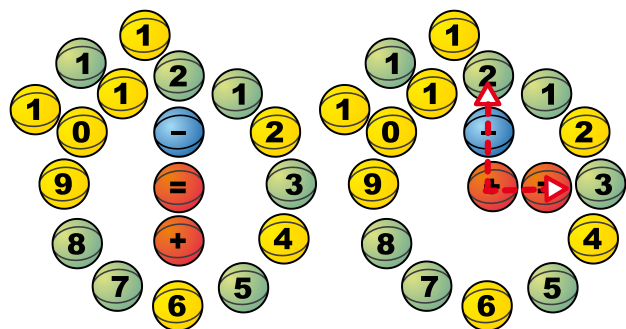
- Objective: to enhance the habit of correct behavior in traffic and practice basic traffic rules (traffic lights), and improve orientation in space and time.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: students pair up. Each pair has a red, green or yellow eduball. All students move freely in different directions. At the teacher's signal, the students form traffic lights. After the task has been completed, they exchange balls.
- Variation: after having formed traffic lights, the teacher says "GREEN" and the students with green balls run across the pitch, then "YEL-



LOW" and the students with yellow balls have to regroup with students with green balls and imitate slowing down while moving, and finally "RED" and the students with red balls catch the remaining groups. As soon as they have caught them, the group has to stop.

WHAT TIME IS IT?

- Objective: to teach reading the time on an analog clock, develop the ability to work in a group and improve certain motor skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air

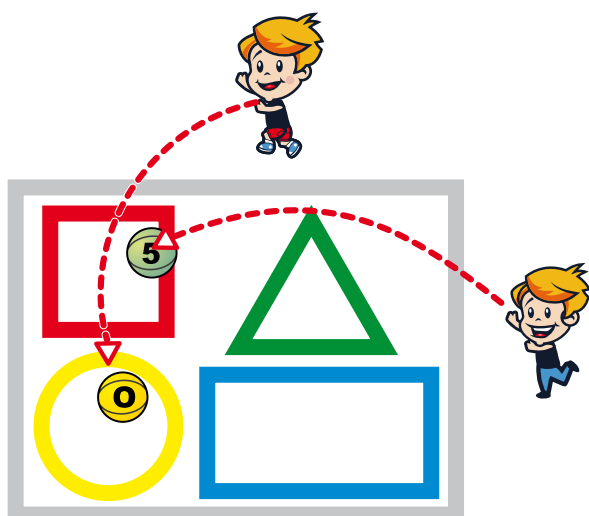


- Description: the teacher uses rubber rings to form the outline of an analogue clock. Together with the students, they place eduballs with digits to mark the hours. In the center, the teacher places an orange ball. A red ball is placed for the hour hand and a blue ball for the minute hand. The students ask the question "What time is it?" and the teacher answers "It's three o'clock". The

students now have to place the hands in the clock accordingly and perform a motor task as many times as is the number stated in the time, e.g. jump three times.

SHAPES

- Objective: to learn about basic geometrical figures (circle, square, triangle, rectangle) and improve certain motor skills.
- Number of participants: any number
- Props: an eduball for each participant and a board with figure outlines
- Area: gymnasium or open air
- Description: the students move about the gymnasium with eduballs in four colors (red, blue, green and yellow). At the teacher's signal, the students approach the board with figure outlines in different colors. Their task is to throw the ball through the geometrical figure matching their color of the ball and say the name of the figure out loud. After they have performed the task, they exchange balls.
- Organizational remarks: when the game is over, the students tell the teacher how many good shots they have had.



- Variation I: The students are divided into four teams. They line up 2 meters from the board with figure outlines. Their task is to shoot the ball into the given figure. With a good shot aimed at the figure of the same color as their ball, they score two points. With a good shot, but at a differently colored figure, they score one point. The points are summed up, and the winning team is the team with the highest score.
- Variation II: The students are divided into four teams. Their task is to form a geometrical figure using eduballs in a given color. They have three minutes to do so. Each team presents their figure to the remaining students.

CHARADES

Objective: to develop creativity and abstract thinking, improve the ability to work in a team and practice certain motor skills.

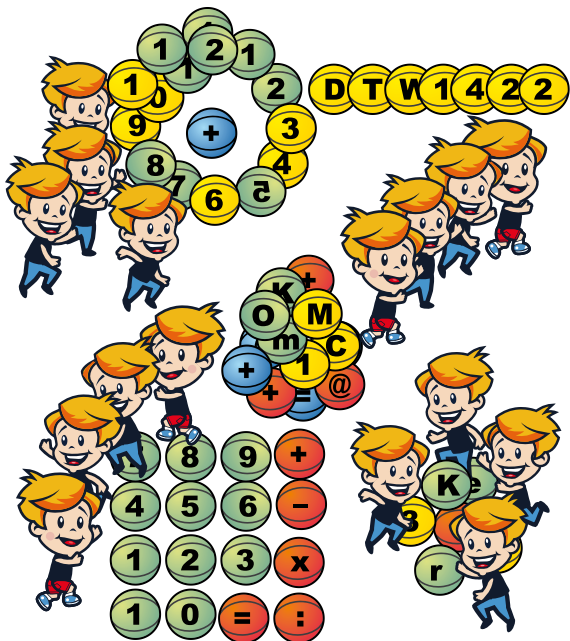
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into four teams. Each team's task is to form the name of an object indicated by the teacher out of eduballs, e.g. car, plane, tram, bus, train. The teams place eduballs on rubber rings to form the object that must not be seen by other teams. Each team presents their object, the other teams should guess what the word is. If the name is the same as the eduball word, the teams each score 1 point.



- Variation: the students are divided into three teams. The teacher tells the students what object they should show using their bodies. The other teams' task is to form the given solution word out of eduballs within two minutes. The winning team who manages this first scores 1 point. After the task has been completed, the teams change roles.

EDU-CREATIONS

- Objective: to develop creativity and abstract thinking, improve the ability to work in a team and practice certain motor skills.
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into four teams. They gather in four bases in the corners of the gymnasium. The eduballs are put in the center of the pitch. The students' task is to form any edu-creations making use of the features of the eduballs (their colors, letters, digits, mathematical signs, etc.). They have five minutes to

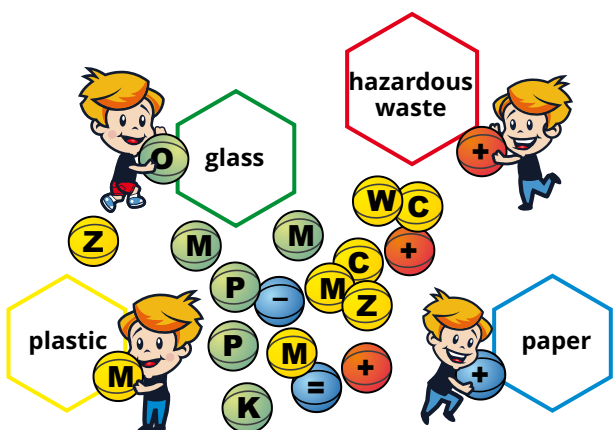


complete the task. In order to move the necessary elements of the edu-creation (the balls) from one place to another, the students need to cooperate. The students may pass the ball from one to another, but they cannot move carrying it. Only one ball at a time can be transported. At the end of the game, each team presents their work to the remaining students, who try to find out what they are.

ECOBALL

author: Fabian Ponitka

- Objective: to teach the basic rules of ecology (waste sorting), develop perceptiveness and improve certain motor abilities and physical skills.
- Number of participants: any number
- Props: eduballs
- Area: gymnasium or open air
- Description: the teacher places several boxes, bins or bags which are marked as "plastics", "glass", "paper", "residual waste" and "hazardous waste" in different spots in the gymnasium. The children run freely around the pitch and

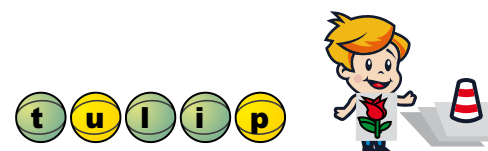
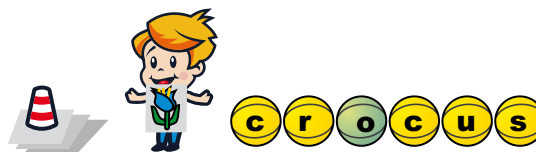


stop at the teacher's signal who says a simple mathematic operation. The students have to say the correct result and perform a motor task as many times as is the result of the operation, e.g. squats or jumps. After that, they run to get the nearest ball and throw them into the relevant box or bin according to the rules below:

- yellow balls into the bin marked as "plastics"
- blue balls into the bin marked as "paper"
- green balls into the bin marked as "glass"
- red balls into the bin marked as "hazardous waste"
- orange balls into the bin marked as "residual waste"

FIND AND SIGN IT

- Objective: to practice knowledge acquired in science education, improve the ability to work in a team, develop orientation in space and time.
- Number of participants: any even number
- Props: eduballs

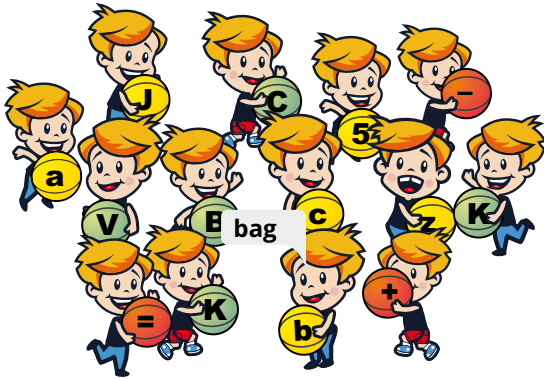


- Area: gymnasium or open air
- Description: the students are divided into four teams. Each team gets a picture, e.g. of a spring flower. Several notes with the written names of the items in the pictures are hidden under training cones in different spots in the gymnasium. The students' task is to find the relevant description under the cone on the pitch and form the name of what is on the picture out of eduballs.

MULTI-TAG

- Objective: to practice knowledge in interdisciplinary educational areas (e.g. native language, mathematics, science, foreign languages), improve orientation in space and time and reaction speed.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air

- Description : each student has a green or yellow ball. The teacher appoints three chasers with orange balls. The chasers have to tag the remaining students who can gain protection by saying a word in a given theme category (e.g. plants, animals, etc.) beginning with the letter on their ball.



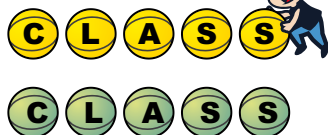
- Variation: each student has a green or yellow ball. The teacher appoints three chasers with an orange, red and blue ball. The orange chaser is assigned to English, the red one to the native language and the blue one to mathematics. The chasers have to tag the remaining students who can gain protection by saying a word in their native language or English beginning with a letter on their ball, or a mathematical operation where the digit on their ball is the result. When someone says an incorrect word, repeats it or takes too much time, they become the chaser.

CROSSWORD

- Objective: to practice knowledge in interdisciplinary educational areas and improve the ability to work in a team.
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into two teams (yellow and green). The students line up in a queue at the starting line. Their task is to solve a crossword and form its solution out of



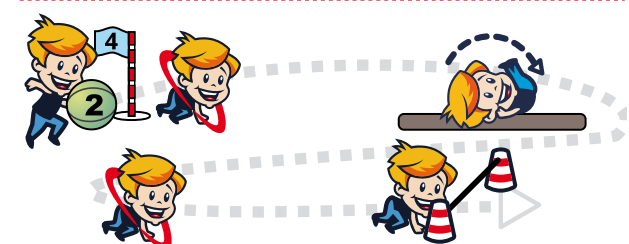
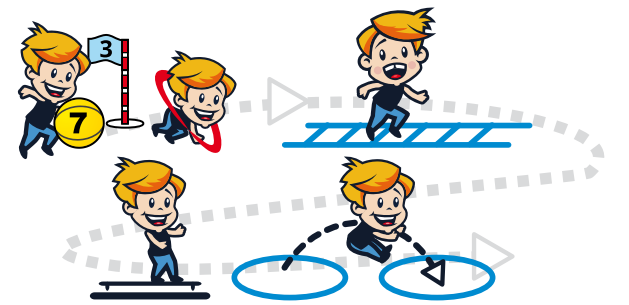
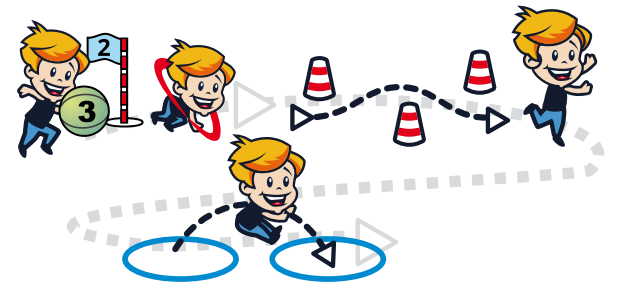
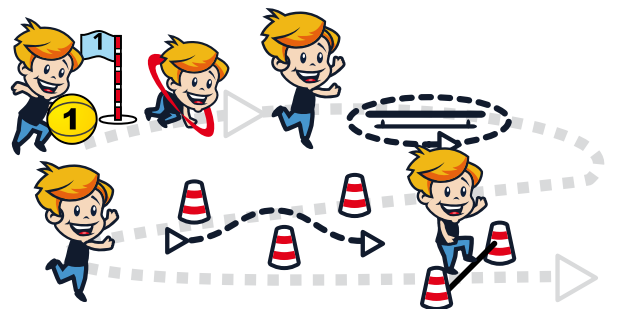
C	A	T		
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eduballs. First, they have to solve the crossword at the halfway point. The students can reach the balls in pairs in a manner indicated by the teacher (run, jump, side step, A-skip, etc.). Each pair can answer only one question and write it down. After the crossword has been solved, all students have to form the solution out of eduballs at the starting line. At the end of the game, the teacher scores points for the speed and the correctness of the completed task.

EDUBALL OBSTACLE COURSE

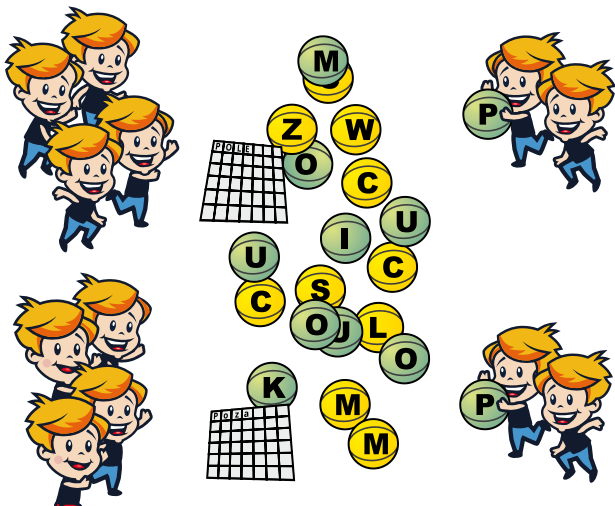
- Objective: to practice mathematics and native language skills, improve nimbleness, speed and coordinated movement.
- Number of participants: any even number
- Props: an eduball for each participant, sashes, benches, training cones, poles, hoops, agility ladder, mattress
- Area: gymnasium or open air



- Description : the students are divided into four teams. Each student has a yellow or green ball. The students' task is to get across the obstacle course as fast as they can and to complete all the tasks at stations marked with flags. At the first station, the students write down an equation with the number on their ball, then complete a part of the obstacle course: getting through a sash, running around a bench, slalom between training cones and jumping over poles. At the second station, the students write down a word that includes as many letters as is the number on their ball and complete the next part of the obstacle course: getting through a sash, slalom between training cones, two-legged jump through a hoop. At the third station, the students write down a word beginning with the letter on their ball and move on to the next part of the obstacle course: getting through a sash, two-legged side jump through an agility ladder, balancing over a bench turned upside down, one-legged jumps through a hoop. At the fourth station, the students fill in the blank in a mathematical equation and complete the last part of the obstacle course: getting through a sash, rolling sideways over a mattress, getting through a sash and moving underneath poles.

SCATEGORIES

- Objective: to practice knowledge in various fields, improve the ability to work in a team, and develop certain motor skills.
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into two teams and gather in pairs at the starting line. At the halfway point, there is a table with categories: country, city, animal, plant, name, object. The eduballs are strewn across one half of the gymnasium. The teacher says a letter, e.g. "P". The first two students have to find a ball with the letter "P" and write a word under one of the

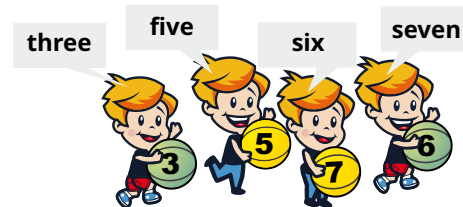


categories beginning with the letter, get back to the starting position, and hand the ball to the next pair. The first round is over when the students have filled out all the fields in the table. The teacher says another letter and the next round begins.

- Organizational remarks: the teacher can score points for the speed and correctness of the task.

GETTING TO KNOW NUMBERS AND COUNTING

- Objective: to practice knowledge in various fields, improve the ability to work in a team, and develop certain motor skills.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: the students move across the pitch in a manner indicated by the teacher. At the teacher's signal, the students stop, the teacher says a number in their native language or in English and the students translate it. They perform a motor task as many times as was the number given by the teacher.
- Variation I: at the teacher's signal, the students stop and say the name of the digit they have on the ball in their hands in their native language and English. Then they exchange balls.



- Variation II: the students sit in rows with eduballs in their hands. They sit in the right order, the first student in a row holding a ball with the number 1, the last but one with the number 9 and the last one with 0. The teacher or an appointed student says any number in English. The person holding the ball with this number starts performing a certain motor task (e.g. running, throwing, shooting, etc.).



- Variation III: the students sit in the same positions as above. However, the students holding an even or odd number do not start (the teacher decides what the rule is). The student performing the motor task has to repeat the number loudly in English before doing so.
- Organizational remarks: just as in native language or mathematics classes, eduballs can help introduce the names of operations in English (e.g. to add, to subtract, to multiply, to divide).
- Variation IV: the students sit in the same positions as above. However, the teacher says an operation in English (e.g. What is two plus two?) The student has to say the whole solution in English (e.g. Two plus two is four) before performing their motor task.
- Variation V: the students sit in the same positions as above. The teacher forms other mathematical operations (e.g. What is eight minus five?, What is six times three?, What is twenty-four divided by eight?).

MOVEMENT CLASSES WITH EDUBALLS COMBINED WITH NATIVE LANGUAGE AND MATHEMATICAL EDUCATION¹

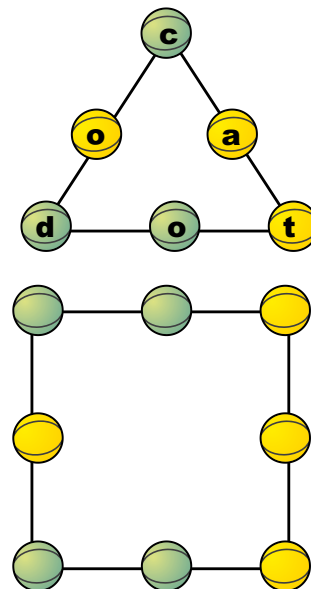
ENCODED WORDS

- Objective: to practice word formation through combining letters and digits and recognizing geometrical figures, and improve certain motor skills.
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air
- Description: the students are divided into two teams who gather in different spots in the gymnasium (e.g. the two halves of the gymnasium, the two halves of the volleyball court, etc.) strewn with eduballs (each team gets the same set). At the signal, the teacher shows a pattern of numbers (writes them down on a board or shows them on a board prepared earlier). Each number has a certain letter assigned (the number corresponds to the letter on the same eduball). The students' task is to find balls with the given numbers and read the encoded word.
- Variation: the students are divided into two teams and hold sheets with a geometrical outline (e.g. a triangle), where there are balls with letters on each apex. At the sides of the triangle, there are

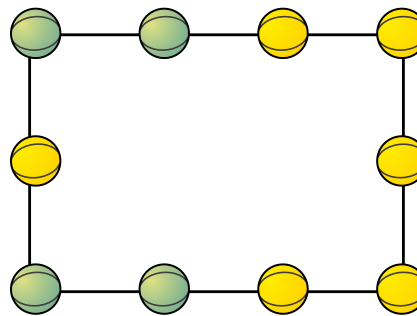
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Eduballs used in combining native language education with mathematics.

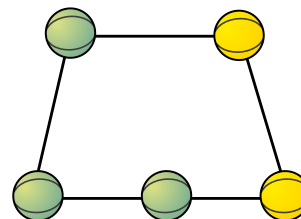
blank balls, which should be filled in with a letter to form three-letter words. The winning team is the team who have completed the task and read the formed words faster. The tasks can be also drawn on the outline of a quadrilateral (e.g. a square) to form four three- or four-letter words, or on a rectangle two two-letter and two three-letter words, etc.



Recognizing geometrical figures - forming four-letter words (eduballs on the outline of a rectangle).



Recognizing geometrical figures - forming two-, three- and four-letter words (eduballs on the outline of a rectangle).

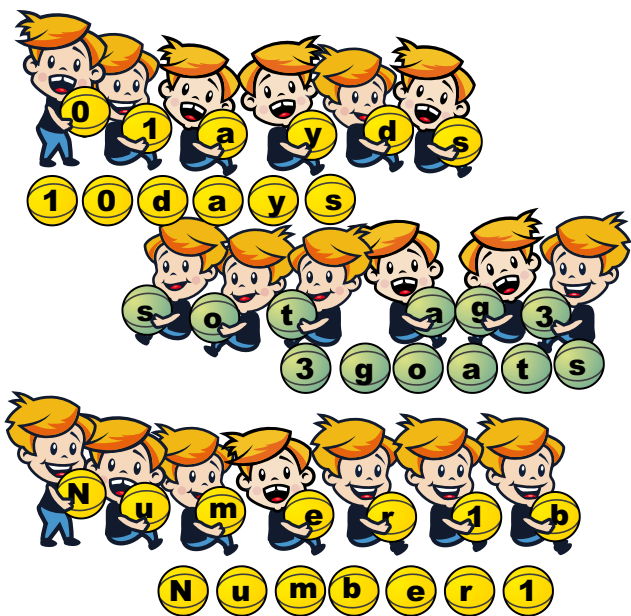


Recognizing geometrical figures - forming two-, three-, four- and five-letter words (eduballs on the outline of a trapezoid).

¹ the content derives from the publication by A. Rokita, T. Rzepa: *Piłki edukacyjne w kształceniu wczesnoszkolnym [Educational Balls in Primary School Education]*, Wrocław 2005

FORMING WORDS AND MATHEMATICAL OPERATIONS

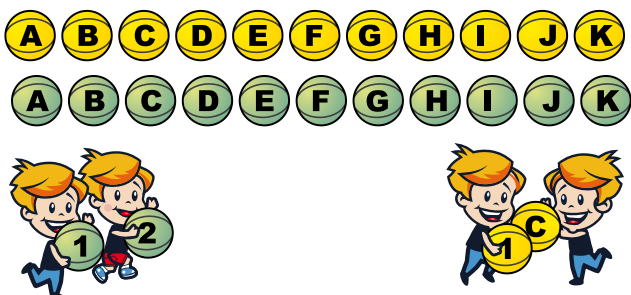
- Objective: to practice logical thinking in word formation and addition, subtraction, multiplication and division, and improve certain motor skills.
- Number of participants: any even number
- Props: an eduball for each participant
- Area: gymnasium or open air



- Description: each student has an eduball. The students are divided into teams according to the color of their balls. The students' task is to form as many words as they can out of the eduballs they have, and to sum up the numbers on the balls they use to do so.
- Organizational remarks: any other mathematical operations can be introduced.

SOUNDS OF MUSIC

- Objective: to practice certain motor skills and get to know tone names
- Number of participants: any even number
- Props: eduballs
- Area: gymnasium or open air



- Description: the students are divided into two teams and sit in two rows. Their task is to form what they have heard out of eduballs and sum up the numbers on the eduballs they used as quickly as they can. The team who have completed the task, shoot the ball into the basket as many times as was the sum they calculated. After that, the team sit down in an indicated spot and put their hands in the air.
- Organizational remarks: the teacher observes the whole game and evaluates the correctness of the tasks. After the game, they announce the winning team and explain any errors that might have occurred. When the teacher sees that the task they have set is too difficult for some students, they give them another task which could be more attractive to them.

DOGS ON A WALK, DOGS AT HOME

- Objective: to develop orientation in space and time and practice the names of colors.
- Number of participants: any number
- Props: an eduball for each participant
- Area: gymnasium or open air
- Description: each student has an eduball in any of the colors. At the teacher's signal "the dogs go for a walk", the students run freely around the pitch playing with the ball (throwing it, shooting it, bouncing it off the wall, rolling it, etc.). At the signal "the dogs go home", the students have to line up as fast as they can in an indicated spot on the pitch.



- Organizational remarks: the game's aim is to practice organization and order. It allows the students to choose from a variety of moves that suit them. The teacher should observe the students' reaction and is able to see how creative and active the students are.



SZS DOLNY ŚLĄSK IS THE PROGRAM COORDINATOR



Eduball Games and Sports
A Guide for Primary School Teachers and Cooperating Physical Education Teachers Carrying out the "Little Champion" Program

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YOU ARE WELCOME TO JOIN
OUR POSTGRADUATE PROGRAM

PHYSICAL EDUCATION IN EARLY CHILDHOOD AND PRIMARY EDUCATION

ORGANIZER:

Professional Development Center (Centrum Doskonalenia Kadr)
at the University School of Physical Education in Wrocław

The objective of the program is to provide primary school and kindergarten teachers with supplementary qualifications to conduct physical education classes according to the core curriculum. The program

includes: anthropometrics; dance and rhythm in movement; educational ball games, gymnastics; movement games and sports; theory, didactics and methodology of physical education.





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EDUball

