# EDUCATION THROUGH CHESS AND PHYSICAL MOVEMENT IN THE PRIMARY SCHOOL 

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#### Abstract

Considering that chess is a game of perspective, which develops logical thinking, imagination, anticipation capacity and vision in space, the purpose of this paper is to teach students to move chess pieces correctly, to think of two or more consecutive moves, to develop a more detailed overview of the pieces in the game. Although chess is a static, no motor sport, we will try to change this game into a dynamic one, turning children into chess pieces. They will perform, on a surface drawn on the ground in the form of a chessboard, the movement corresponding to the piece they represent in the respective move by different variants of jumping from the initial position to the final position, respecting the rules of the game of chess. Thus, we turn the game of chess into a dynamic and funny game, played on teams.


Key words: pupils, game, moving the pieces, chess.

## 1. Introduction

Chess is one of the oldest games, which have come down to us from ages. At the same time, chess is the most modern game, attracting a growing number of sympathizers around the world. The inexhaustible character of the game of chess, the depth of the content, the combination of a strict logic with the unlimited possibilities for the manifestation of initiative and fantasy make the game of chess a part of the universal culture. "The game of the wise", "gymnastics of the mind" - these definitions, like many others like it, reflect
the attitude full of seriousness and respect of more and more people towards this admirable game [4].
The beauty of chess consists in: for both opponents the number of pieces and their value are absolutely equal. The battlefield is uniform and offers White and Black absolutely the same possibilities of attack and defense. The rules of the game are precise and clear. Nothing is left to chance; unpredictability and luck are unknown words in the chess vocabulary. Victory depends on only one factor, the noblest of the player: his mind, which is manifested through science and art [6].

[^0]Chess has an important contribution to the development of thinking and character traits. Also, a beneficial effect of playing chess is the formation of a spirit of analysis, of deepening the phenomena [7]. The most dynamic problems regarding the dynamics of chess thinking are undoubtedly raised by reasoning. The chess player mainly uses three types of reasoning: deductive, inductive reasoning and analogy reasoning [1]. Chess is not only a sport, when the fight between the two opponents can get dramatic accents, but also a means of relaxation and delight for the two partners in competition. Hence the great popularity of chess and the interest it is given in society. In the sage, the game is based on thinking. The player gets to think correctly without making special studies of logic, in its meaning as a science whose object is to establish the correctness of thinking. Brînzeu [2]. Chess develops a new and different way of thinking for children, and practicing this new model contributes to the development of their intelligence. At the same time, this game of kings disciplines and streamlines memory and attention, enhances imaginative-creative abilities, facilitating their applicability to all areas of knowledge [3]. The beginner tries his best, loses a series of games in which the whole range of simple moves is applied, after which, if he is ambitious, he perseveres, gains experience, studies a chess book, learns and gradually gets his revenge [5].

## 2. Issue Approached

The purpose of this paper is to teach students to move chess pieces correctly,
to think of two or more consecutive moves, to develop a more detailed overview of the pieces in the game.
Although chess is a static, motor sport, we will try to change this game into a dynamic one by turning children into chess pieces. They will make the movement corresponding to the piece they represent in the respective move by different variants of jumps from the initial position to the final position (jumps on the left leg, jumps on the right leg, jumps on both legs) respecting the rules of the game of chess. Thus, we transform the game of chess from a static one into a dynamic and funny game, played in teams.
The proposed game will help students learn chess notations, the use of the chronometer, giving them the opportunity to think of two or more consecutive moves of the pieces in order to capture the piece in the target position. The game is played in teams, with two or more teammates, in each team being named a captain, who will coordinate the team's game and note the moves of all players and the execution time for each team on the game sheet.

## 3. Description of the Playing Field

It starts from placing the pieces on the chessboard or on the playing surface drawn on the ground (figure 1).
The playing field is represented by the image of the chessboard without players, respecting the correct numbering on rows and columns. The lines are numbered with numbers from 1 to 8 and the columns with letters from "a" to "h" (figure 2).


Fig. 1. Correct placement of the pieces on the chessboard

### 3.1. Notation elements:

- King - R; Queen - D; Rook - T; Bishop - N; Knight - C; Pawn - P.
- Column A - a; column B - b; column C c; column D - d; column E - e; column F f; column G-g; column H-h.
- Move: -; capture: x
- Game sheet


Fig. 2. Playing surface (playing field)
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### 3.2. Materials required

- for playing on the board: chessboard, chronometer, game sheet.
- for dynamic game: playing surface, chalk, adhesive tape, chronometer, game sheet.

Game sheet model
Table 1

| Team 1(number of players ......) / number of moves -2 |  |  |  |  | Team 2 (number of players ......) / number of moves - 2 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Capture area | Chess pieces proposed | Moves made | Time | Total time | Capture area | $\begin{gathered} \hline \text { Chess } \\ \text { pieces } \\ \text { proposed } \\ \hline \end{gathered}$ | Moves made | Time | Total time |
| Example |  |  |  |  |  |  |  |  |  |
| d4 | - | - | - | - | - | C, P | $\begin{gathered} \text { Cb1- } \\ \text { c3, } \\ \text { Pc3xd4 } \end{gathered}$ | 45" | $45^{\prime \prime}$ |
|  | N, P | $\begin{gathered} \text { Nf8- } \\ \text { d6, } \\ \text { Pd6xe5 } \end{gathered}$ | 40" | 40" | e5 | - | - | - | - |
| g6 | - | - | - | - | - | T, C | Th1- h4, Ch4xg6 | 35" | 80" |
| - | - | - | - | - | - | - | - | - | - |


| Team 1 <br> (number of players ......) / number of moves - <br> $\mathbf{2}$ |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Capture <br> area | Chess <br> pieces <br> proposed | Moves <br> made | Time | Total <br> time | Capture <br> area | Chess <br> pieces <br> proposed | Moves <br> made | Time | Total <br> time |
| f5 | - | - | - | - | - |  |  |  |  |

## 4. Game Description



Fig. 3. Capture area D4

Two teams will be created (the minimum number of players can be 1, and the maximum recommended number is 6 players). The two captains set, by mutual agreement, a playing time ( 10 minutes for each team) or a certain number of choices of the field to be captured (example: 6 fields to be captured by each team). After determining the playing time, the captain of the first team will indicate the position on
the game board where a teammate will be placed and where the opposing team will have to reach, but without this position being on lines $1,2,7$ and 8 , to capture the opponent (Example D4) - figure3. After announcing the position to be captured, the chronometer starts. A player from the opposing team will choose two different game pieces (for example knight and pawn),
with these pieces he will end up capturing the opponent located in D4 (table 1).
He will announce the moves that will be noted on the game sheets by the team captains. The first chosen piece must start


Fig. 4. Move Cb1-c3
from the initial position (for knight b1 or g1), and the second piece will start from the position obtained by moving the first piece (example c3). Example: Cb1-c3 (Figure 4), Pc3xd4 (Figure 5).


Fig. 5. Move Pc3xd4

After completing the moves and capturing the adverse piece, the chronometer stops. Now the captain of the second team chooses where to place the piece to be captured. Example: The second team chooses position e5 as the capture field. The captain of the opposing team chooses the pieces Bishop and Pawn. The moves made are shown in Figures 6 and 7.


Fig. 6. Move Nf8-d6


Fig. 7. Move Pd6xe5 - The pawn occupies the chosen position -e5

After completing the moves and capturing the adverse piece, the chronometer stops. It is the turn of the first team to choose where to place the piece to be captured.


Fig. 8. Move Th1-h4

If the game completion criterion was time, the game ends when the game time expires. In this situation, the team with the most moves wins.

If the chosen criterion was the capture position, after finishing the moves, the chronometer stops. The game ends after the last move. They add up the time of all moves made by each team and the team with the shortest total time will win.

To start from the initial position, a team is not allowed to use the same piece twice, and the two moved pieces must not be repeated (example: the pawn - knight coupling, must not be repeated in this order, it is allowed the coupling pawn - knight). This means that for any number of moves chosen (2, 3, 4

Example: They choose position g6 as the capture field. The captain of the opposing team chooses the pieces Rook and Knight. The moves made are shown in Figures 8 and 9.


Fig. 9. Move Ch4xg6
etc.), the maximum number of moves allowed can be 6 for each team. If you want to increase the number of chosen moves, you can waive the condition that the first move is not repeated and make it a condition that the order of the chosen moves is not repeated (C-T-N, if it was performed in this order, is not allowed to be repeated, any other move being allowed - example $\mathrm{C}-\mathrm{N}-\mathrm{T}$; $\mathrm{N}-\mathrm{T}-\mathrm{C}$; $\mathrm{N}-\mathrm{C}-\mathrm{T} ; \mathrm{T}-\mathrm{N}-\mathrm{C} ; \mathrm{T}-\mathrm{C}-\mathrm{N})$.

In the situation where the hopscotch type game will be played, after the team captain establishes the capture position, he will send a player in that position and both players will score on the game sheets. When the player occupies the indicated position, the chronometers will be started. Then the captain of the
opposing team after determining which pieces the team will use and which player from his team will make the jumps will note the jumps on the game sheet, thing which will be done also by the captain of the opposing team. The player will make the two moves in the shortest time and after capturing the opponent announces to stop the chronometer. It will thus be played consecutively until the end of the set time, when the number of moves for each team will be counted and, respectively, the calculation of the times of each team, in order to determine the winners when the game criterion was chosen based on catch positions (example: each team must capture the position set by the opposing team 6 times).

This game can be made more difficult, passing to three moves, but following the rules mentioned above. Examples: the piece to be captured is in position D4. The three chosen pieces: bishop, rook, knight. Possible moves: Nc3-f4, Tf4-f3, Cf3xd4. Also, at 4 moves: the piece to be captured is in position D4. The four chosen pieces: pawn, rook, knight, bishop. Possible moves; c2-c3, Tc3-f4, Cf4x-e6, Ne6xd4.

## 5. Conclusions

- The game presented is an attractive way to learn the rules of moving chess pieces by turning it into a competitive team game.
- Multiple knowledge are developed interactively (lines, columns, association of lines with columns and their numbering, thinking in perspective as well as vision in space).
- The ability to analyze, team spirit, fair play is developed and decisions are made by consulting all team members.
- The transformation of a static, motor game into a dynamic one that can be carried out without the need for a special material base was achieved.
- The proposed game allows the application in practice in several variants and with an unlimited number of players.


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