

FIDE Pilot Project INFINITE CHESS.

Latvia's experience in Riga
primary school No. 2 for children
with special needs



During the last school year, we organized weekly chess lessons for a group of four Riga's primary school No. 2 students with ASD. The work still continues with the same group.



The Infinite Chess team provides comprehensive knowledge and tools to enable trainers and education specialists to provide service for children who can truly benefit from well-organized chess lessons that are tailored for their needs.






Prior chess knowledge of the students:

Student A	Student B	Student C	Student D
<ul style="list-style-type: none">•Piece movies•Brief knowledge of chess rules and techniques (checkmate, promotion, fork and pin)	None	None	None

Acquired knowledge and skills of the students in during last school year:

Student A	Student B	Student C	Student D
<ul style="list-style-type: none">•Comprehensive knowledge of chess rules and techniques (including basic checkmate techniques and motives)•Opening principles•Ability to work independently on different tasks•Ability to independently participate in chess games online (Lichess.org)•Tournament ready!	<ul style="list-style-type: none">•Piece movies•Brief knowledge of chess rules and techniques (checkmate, promotion, fork and pin)•Ability to fulfill easy written assignments with guidance•Ability to work independently on basic digital assignments with considerable success (around 50%-70% precision)	<ul style="list-style-type: none">•Knowledge of piece moves (with weekly repetition drills)•Ability to fulfill easy written assignments with guidance•Ability to work independently on basic digital assignments with moderate success (around 25%-50% precision)	<ul style="list-style-type: none">•Knowledge of piece moves (with weekly repetition drills)•Ability to fulfill easy written assignments with guidance•Ability to work independently on basic digital assignments with moderate success (around 25%-50% precision)

Improvements this school year so far:

Student A	Student B	Student C	Student D
<p>Gradual progress in almost all mentioned disciplines.</p>	<ul style="list-style-type: none">•Piece movies•Brief knowledge of chess rules and techniques (checkmate, promotion, fork and pin)•Ability to fulfill easy written assignments independently•Ability to work independently on basic digital assignments with considerable success (around 50%-70% precision) 	<ul style="list-style-type: none">•Knowledge of piece moves (with weekly repetition drills)•Ability to fulfill easy written assignments with guidance•Ability to work independently on basic digital assignments with moderate success (around 25%-50% precision) 	<ul style="list-style-type: none">•Knowledge of piece moves (with weekly repetition drills)•Ability to fulfill easy written assignments with guidance•Ability to work independently on basic digital assignments with moderate success (around 25%-50% precision) 

Structure of the lessons at the beginning of the year:

- 10 minutes for introducing a new topic on the demonstration board from the Fide Infinite curriculum
- 20 minutes for practicing mini-games or other tasks on the chessboard with the coach or assistant
- 15 minutes for workbook assignments
- Around 5 minutes for cool-down activities on digital devices

General obstacles:

- Suboptimal classroom environment (classroom was used for resident students and contained many visual educational elements that caused the distraction, desk arrangement was not constant and resident students were present during chess lessons)
- Lack of parent engagement (parents showed no interest in students chess activities)
- Infrequent attendance
- Different chess skill and capacity levels of students
- Specific mental characteristics for each student that obstructed their success
- No rehearsal between lessons
- Students were not interested in communicating with each other

Individual obstacles:

Student A	Student B	Student C	Student D
<ul style="list-style-type: none">•Insufficient attendance•Refusal to do home assignments•Fixation on one chess element or piece	<ul style="list-style-type: none">•Short attention span•Boredom•Inability to fully grasp turn by turn nature of the game•Distraction by the classroom environment•Short attention span	<ul style="list-style-type: none">•Short attention span•Anxiety attacks•Short attention span•Mood changes•Sensitivity•Distraction by classroom	<ul style="list-style-type: none">•Short attention span•Difficulties composing himself•Distraction by classroom•Working at a very slow pace (except on digital activities)

Teacher testimonials:



Deniss Filatov, an 11th grade student, enthusiastically attends chess lessons. Chess improves Deniss' memory and patience, allows him to be more open-minded, and encourages him to think more broadly.

Ms. Marina Kuļičenko

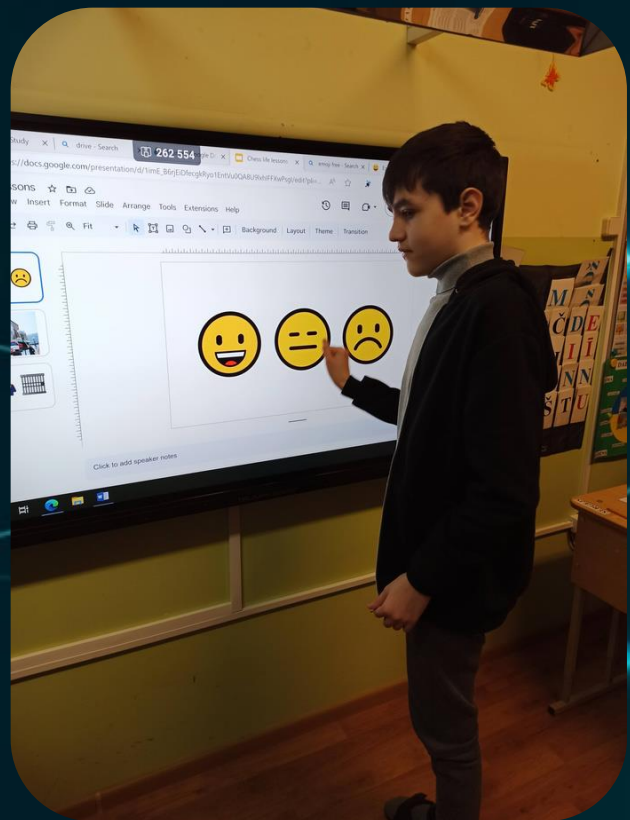
Chess improves Aleks Jeenskov's (6th grade) attention and concentration. His comprehension of school assignments has also improved, as have his commutation skills. Environmental change has proven to be extremely beneficial for Aleks.

Ms. Rimma Lindermane

Chess lessons have proven to have a positive influence on Robert's attention, memory, and thinking processes.

8th grade teacher

Student's feedback is almost always positive



Disclaimer:

Most of the students have a quite severe case of ASD, so adjustments were made according to their abilities and characteristics. Other groups might benefit from a different lesson plan.

Structure of the lessons after adjustments:

Student A

- 10 minutes for introducing the new topic on the students board
- 20 minutes of tactical puzzles (digital or workbook)
- 20 minutes of play against coach OTB or on Lichess.org



Students B, C, D

- 10 minutes for piece moves repetition drills (mini- games or workbooks)
- 20 minutes of mini-games or workbook assignments
- 20 minutes of different digital tasks

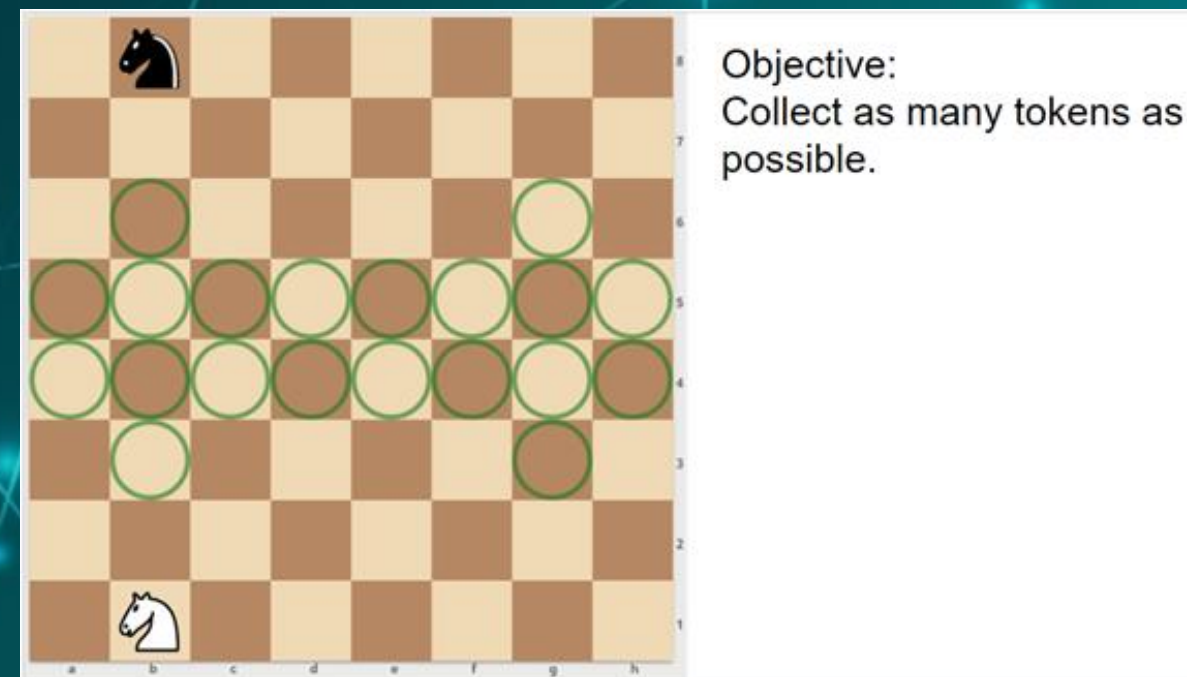
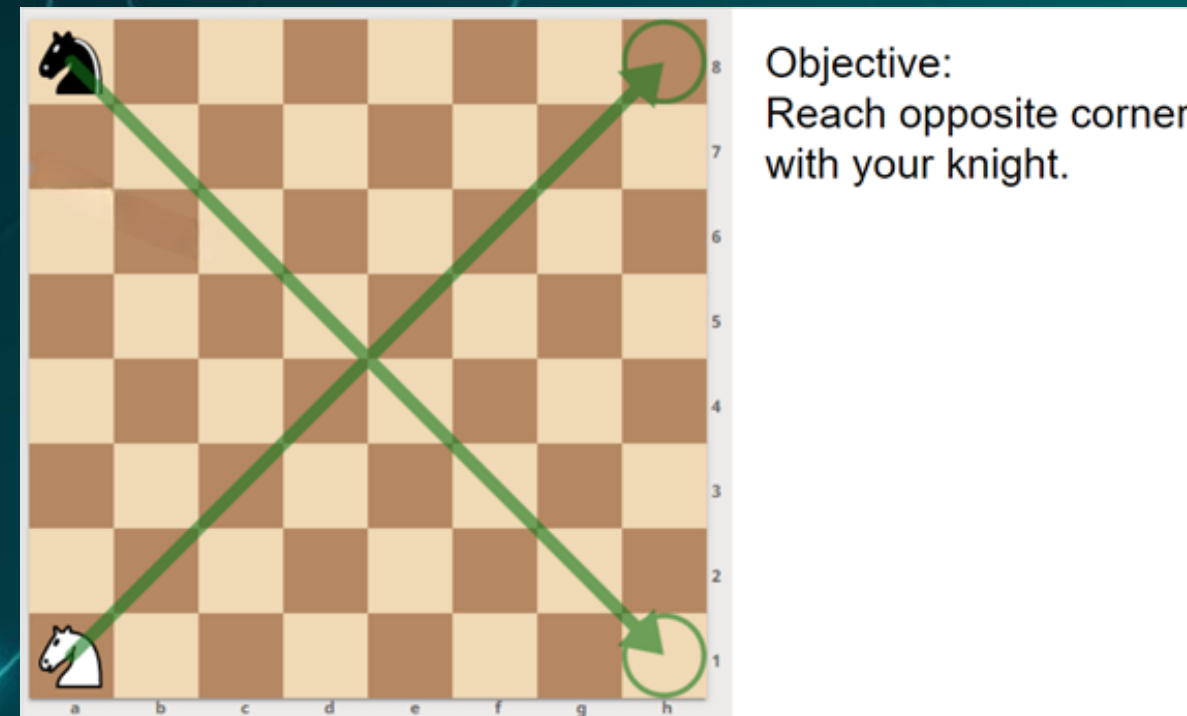
New topics were introduced during different activities according to each student's capability

Useful mini-games:

Different versions of knight mini-games is useful for strengthening understanding of knight moves and characteristics.

Additionally to regular chess sets only thick paper or cardboard circles and plastic tokens were necessary.

Many great mini-games can be found in The Steps Method trainer manuals authored by Rob Brunia and Cor van Wijgerden.



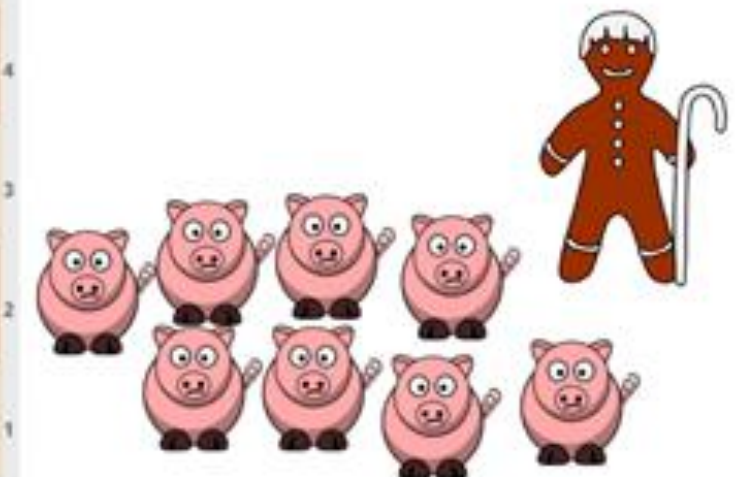
- Organizing pieces in starting position is a very effective piece move repetition drill.
- Pig herder and piglets help students to understand queen's strength and utility but also to appreciate pawns capability and strength by numbers.



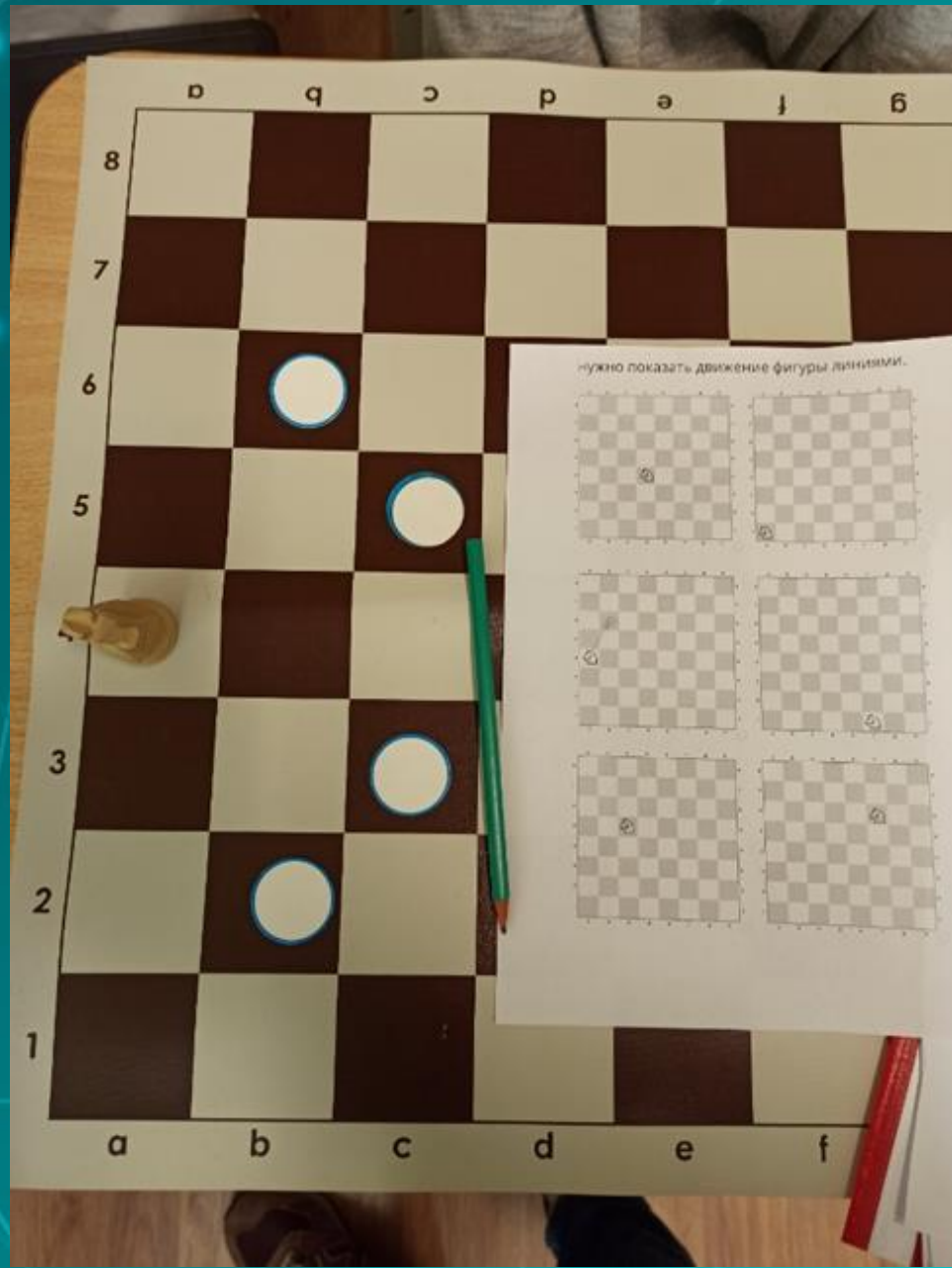
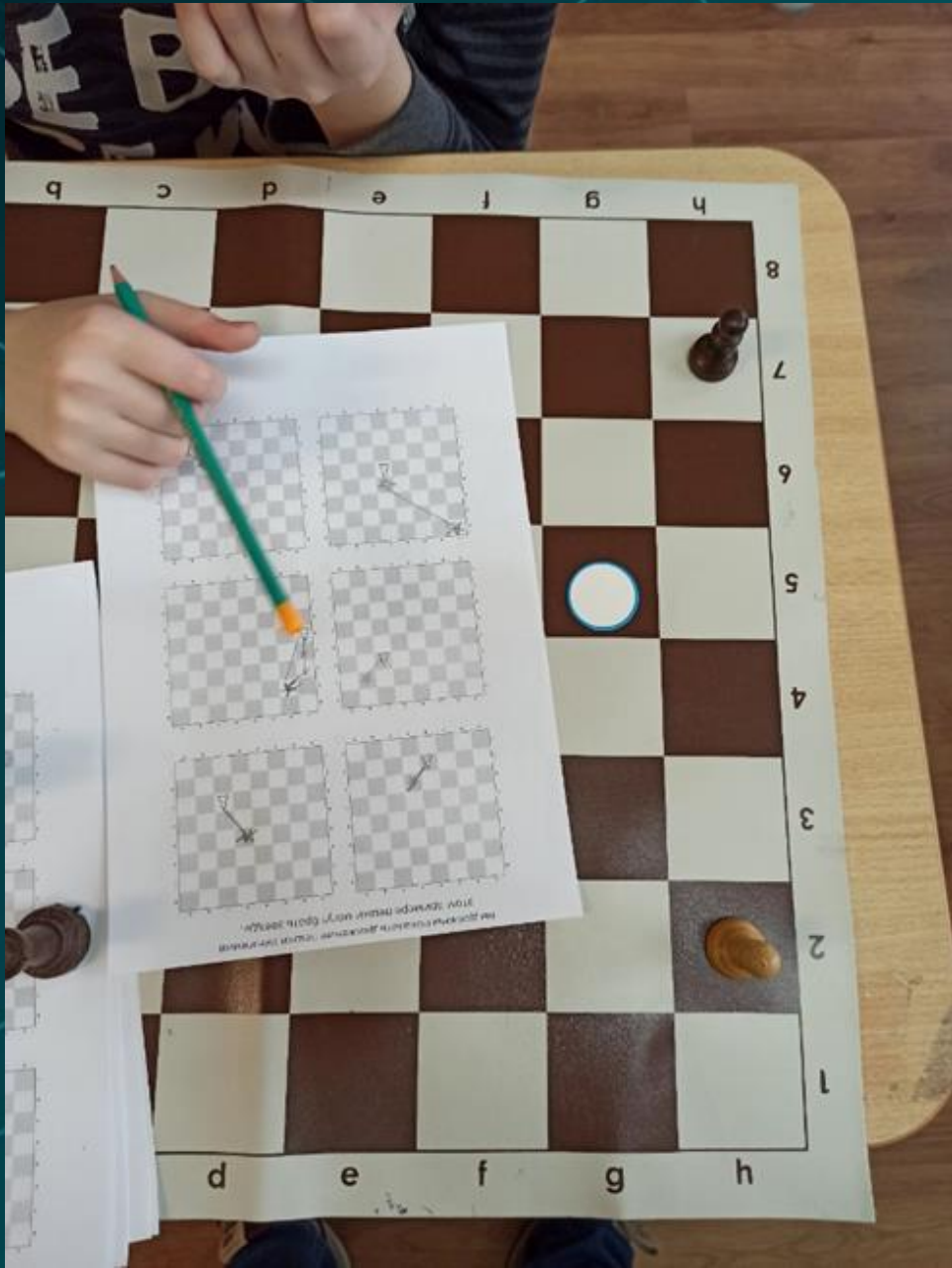
Objective:
Organize your pieces in an appropriate manner.
No captures are allowed.



Pig herder and piglets
8 pawns against 1 queen.



Chessboard and paper circles help students to better understand workbook assignments.



The smart board provides opportunities to engage students in different interactive group and individual activities. Denis and Roberts are answering questions about the rules of the chessboard. In this example, they need to make sure if the chessboard is assembled correctly.

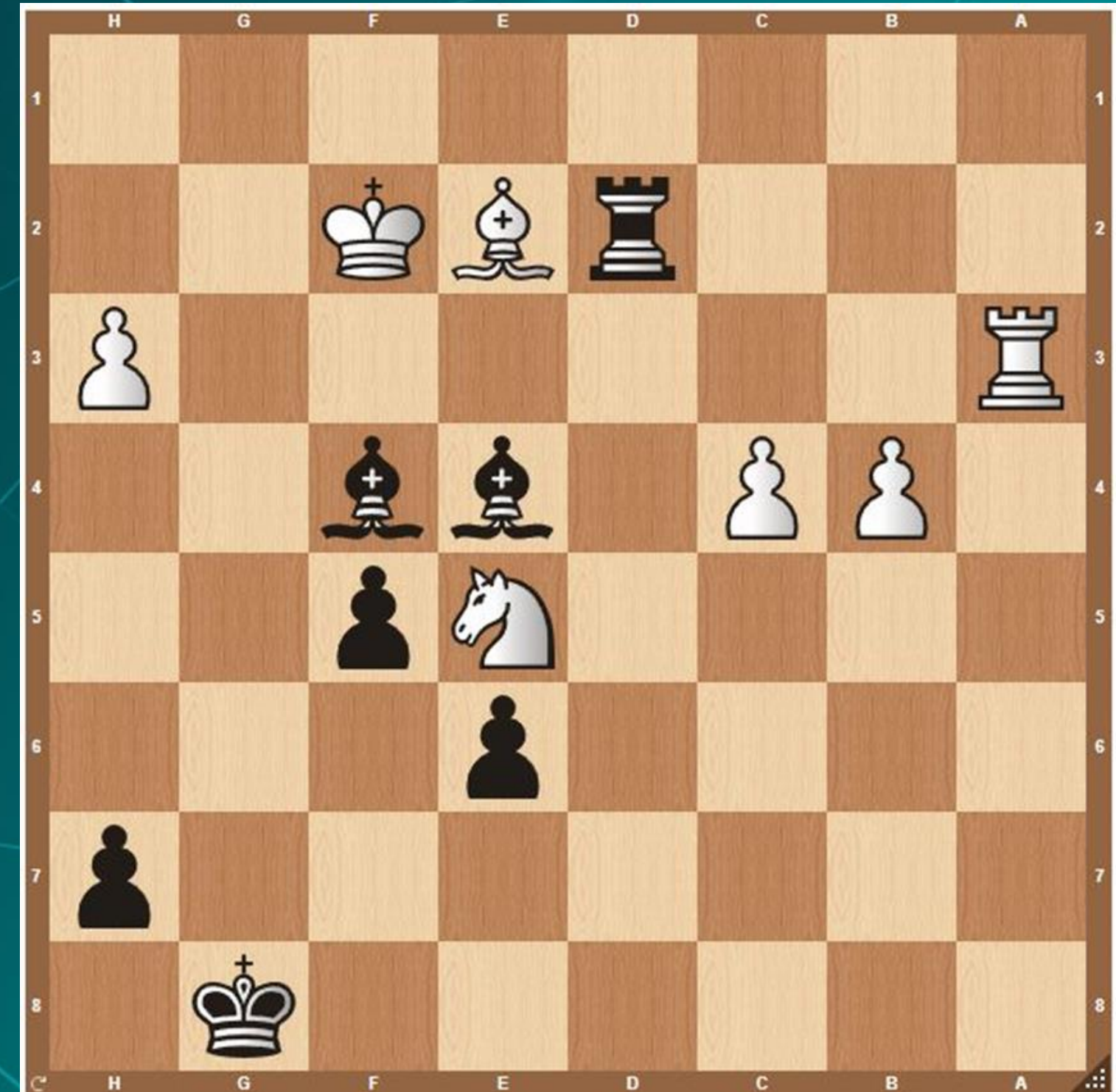


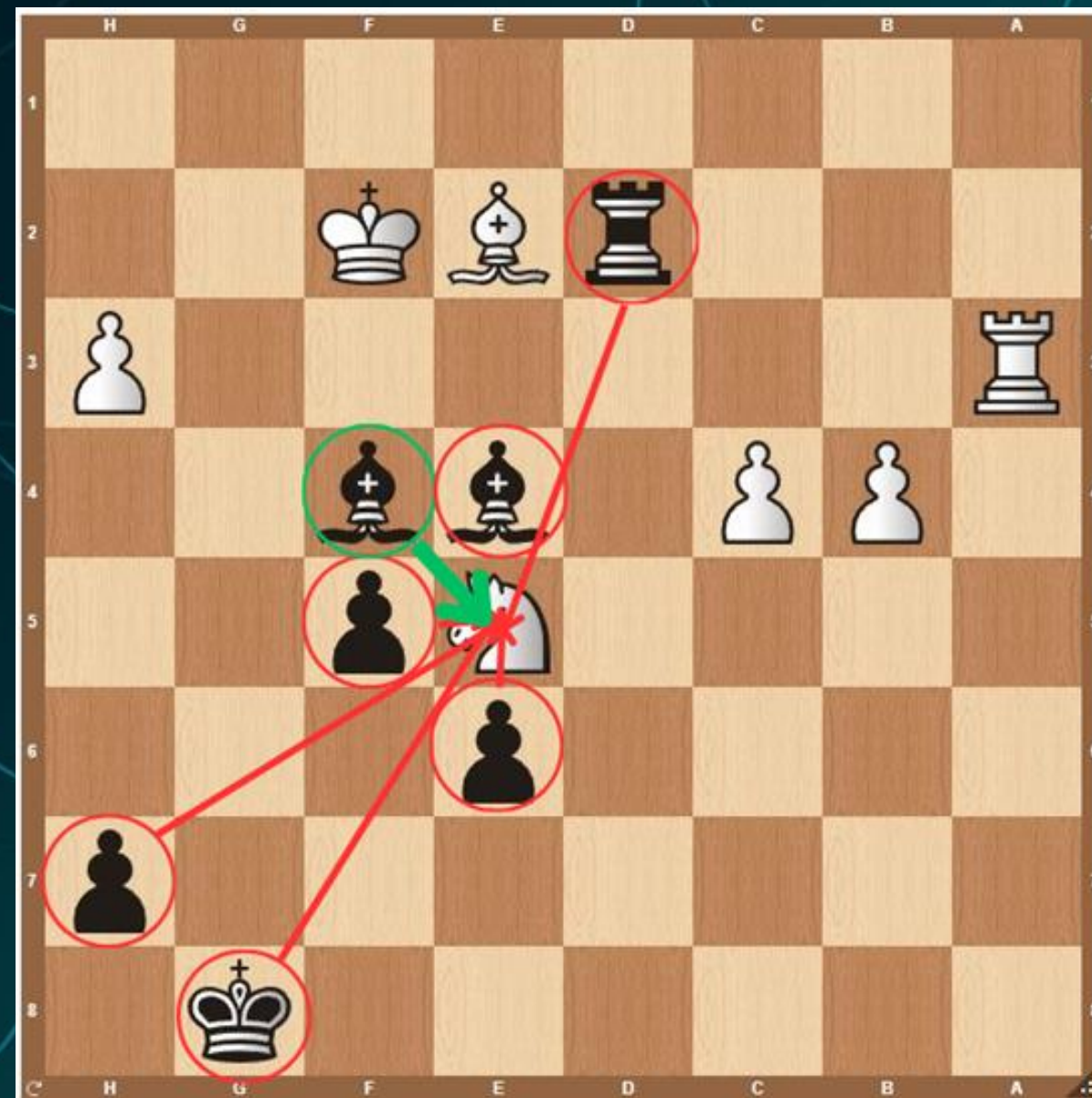
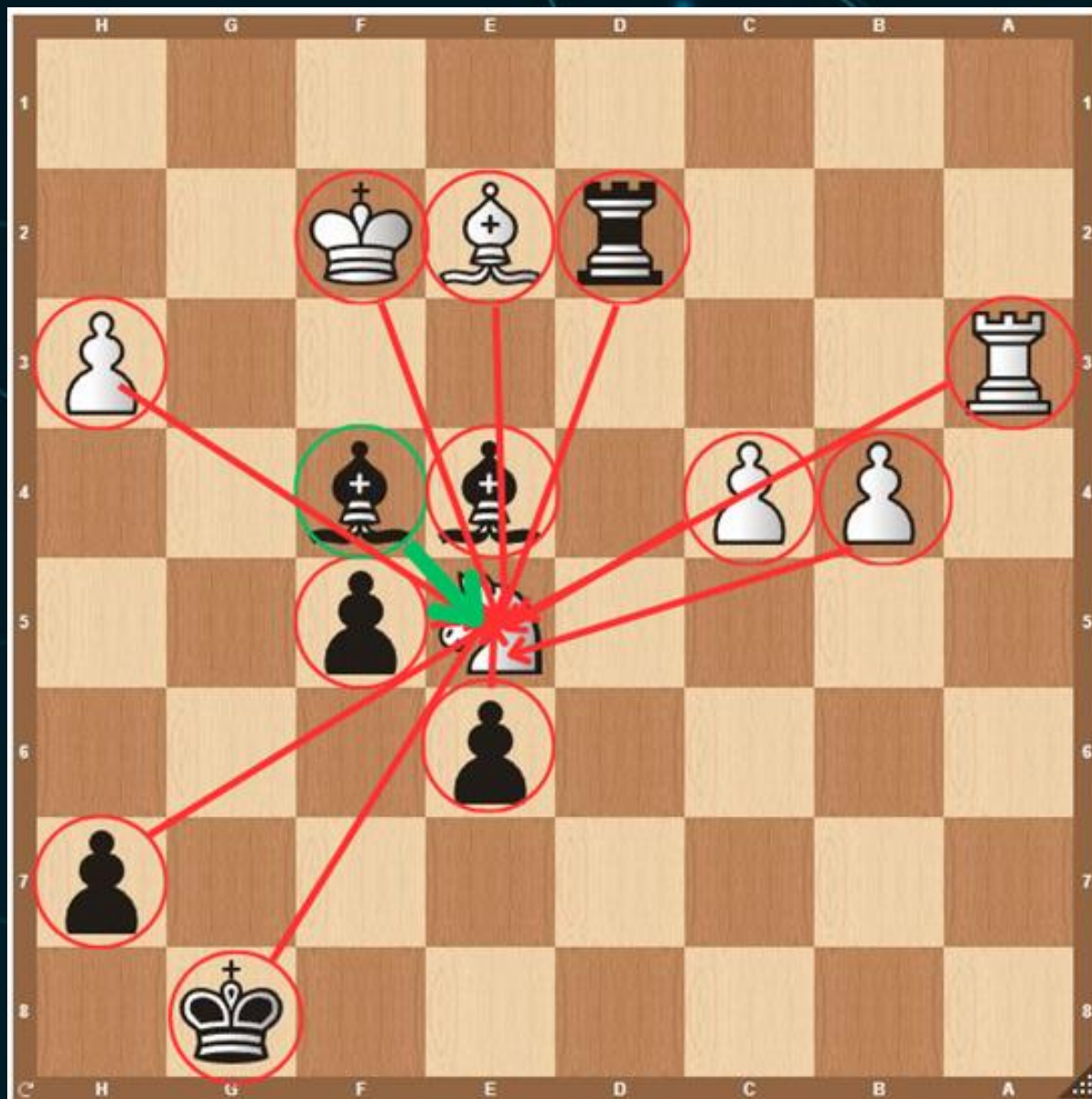
The Stepping Stones workbook is great material for learning fundamental chess rules and rehearsal. Diagrams are clearly visible, and students like the chess art.



Chess King digital app exercise “Capturing Pieces 1” case study:

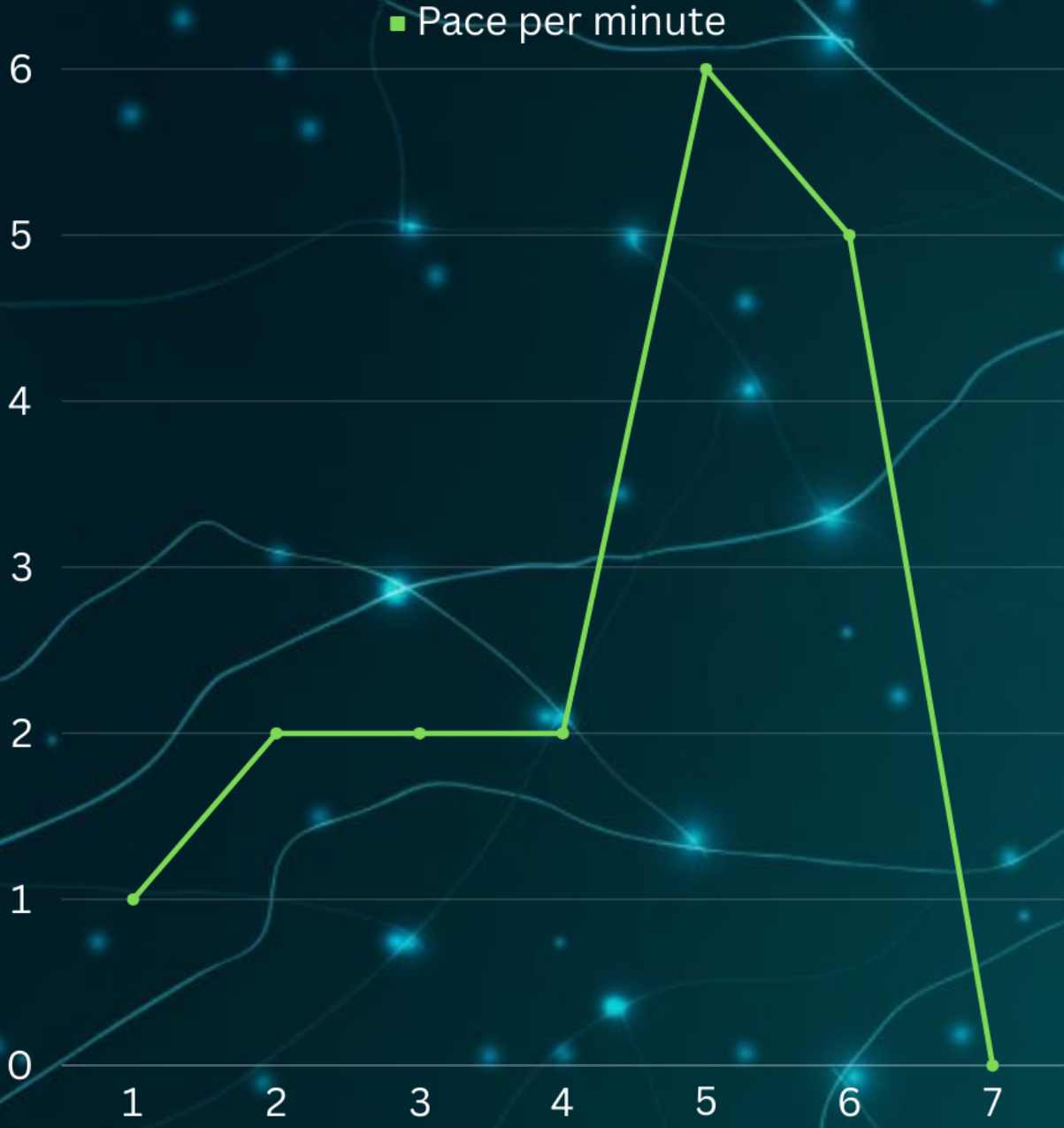
The student is required to capture the white knight after being introduced to piece moves in the previous lesson.





The student tries to use the “brute force method” to accomplish the given task by quickly dragging all available pieces towards the target. Soon he realizes that only opposite-color pieces are able to confront each other, and after several attempts in similar positions, he is focusing on a region close to the target.

After one year, the student attempts to complete the same set of puzzles; he peaks after 5 minutes and performs very well; however, his performance drops significantly after 1 minute, and eventually he abandons the task.



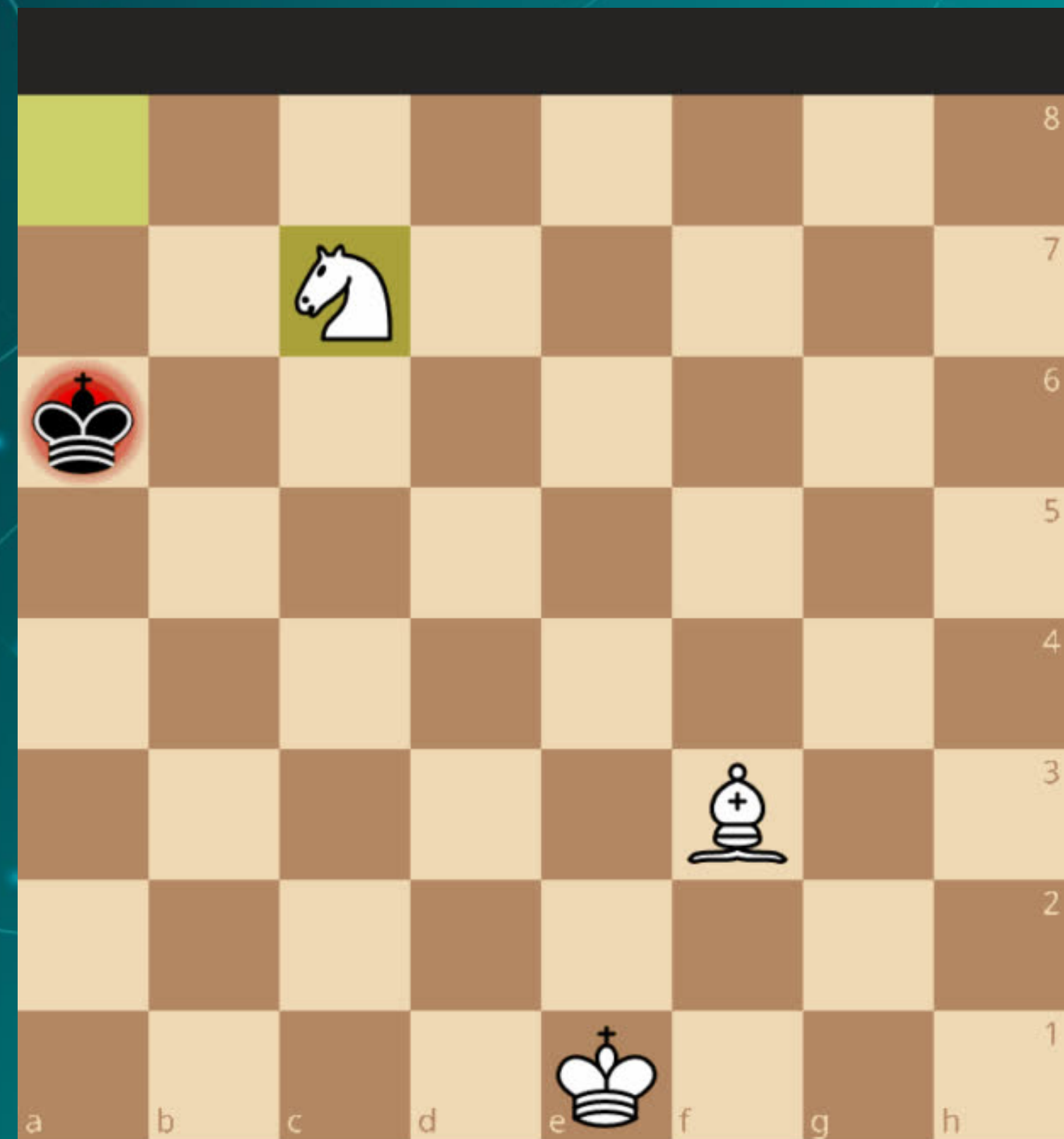
Recently, we started to implement storytelling and life lessons relatable to their comprehension level.



Cause and consequence



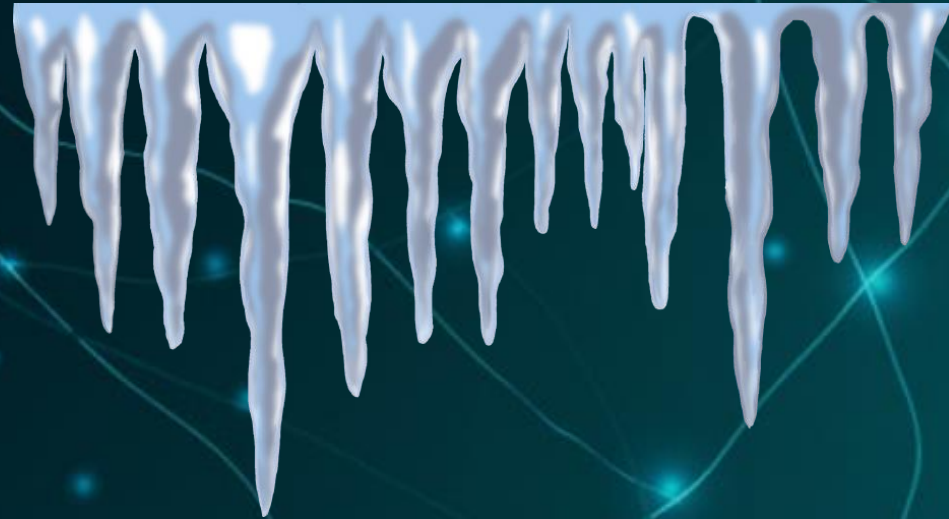
Friendship





The importance of family





Pay attention to the environment and be careful!

Aleks is working on his math skills- he is able to add and subtract up to 10, count up to 20 but we believe that chess can help him improve in this discipline.



Deniss is tournament ready!

Deniss showed true fighting spirit and despite a few losses in the first rounds finished the tournament in 31. place out of 37 participants and scored 2.5 points.



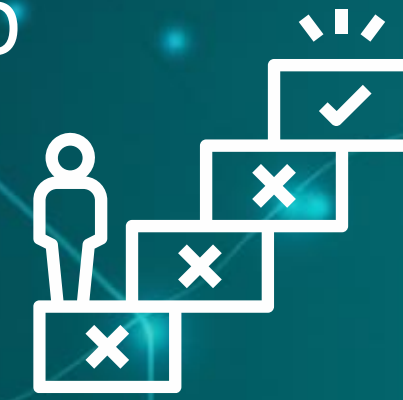
Chess helps to develop new friendships

Besides chess ability, students have also developed friendly relationships; they are less anxious and more willing to cooperate and work together. When we started our lessons, they had difficulties navigating from one class to another; however, at this point, it is no longer an issue because they can easily find our class and usually arrive on time.



Key takeaways:

- Set realistic and achievable goals for each student
- Students with a severe case of ASD struggle to grasp topics conceptually and learn them instinctively by trial and error.
- Focus on process and consistency
- Group micromanagement is very important
- Help to reach each student's potential
- There are no small achievements!
- Cooperation between the coach, assistant, teachers, and parents is essential for greater achievements
- Digital tools can be very useful lesson components if used properly.



Recommended digital tools

- <https://chessking.com/>
- <https://lichess.org/>
- <https://www.chessmatec.com/>
- <https://chess-universe.net/>
- <https://play.google.com/store/apps/details?id=com.kahoot.chess> Magnus Kingdom of Chess
- <https://play.google.com/store/apps/details?id=net.pyrosphere.chesslight&hl=en&gl=US> Chess light app
- <https://chess-endgame-trainer.firebaseio.com/home> Web based endgame training
- <https://play.google.com/store/apps/details?id=com.supertorpe.chessendgametraining&hl=en&gl=US>
- <https://www.smarttech.com/en/lumio> Lumio interactive LMS
- <https://www.baamboozle.com/> Interactive and fun quiz platform
- <https://chessmadra.com/> Visualization and board vision training
- <https://www.baamboozle.com/game/1263568> Sample game of the knight moves

Video recordings from lessons

<https://drive.google.com/drive/folders/1xmX7eJZ0MwkQGqdHJpYEaTGwzJvZexiE?usp=sharing>