

Comparing like skills

Chess skills

- Addition and subtraction. Comparing and counting the material or pieces captured. 10
- Location points and coordinates. When children learn notation they identify a square and record according to its coordinate. 10
- Children identify and refer to the division of the chess board in half and in quarters. 10
- Evaluating spatial imbalance. 10
- Rounding and Estimating is a direct math skill children apply to determine positional advantage or value of the piece. 11
- Understanding compensation. Evaluating good and bad trades of pieces. Sacrificing pieces for positional reasons. 11

Math skills

- Addition and subtraction of real numbers. 11
- Children write ordered pairs to locate points on a graph. 10
- This is directly related to and draws upon children's prior knowledge of symmetry as they apply principles of geometry. 10, 4
- In creating bar graphs, children analyze data to discover proportional imbalances 10
- Rounding and estimate whole numbers in real world situations. 11
- Exchanging monetary values. Children learn to count and exchange monetary value and make change as a result. 1

<ul style="list-style-type: none"> • Moves in multiples. Children draw from prior knowledge of the patterns or “footprints” a chess piece makes. Every move of a piece in chess is made in relation to available squares and its previous position. 11 • Time is the system of sequential relations that any event has to any other event. In chess we measure time in terms of distance, recognizing the relationships between time and space. Visualizing the board with moving pieces¹ • Tactical motifs allow the children to create combinations of measured moves by grouping and regrouping their pieces. 2. Visualizing the board with moving pieces • Children engage in long term strategic planning through the parts or phases of the game. They learn to recognize Landmark positions and determine the probable advantage. 3 • Conflict and Harmony are central themes of every chess game as students experiment with problem solving. 4 	<ul style="list-style-type: none"> • Children utilize skip count technique by identifying common patterns in multiples. 12 • Children tell time to the minute and calculate elapsed time – determining the relationship between the past and present. 1 • Children apply metric measurements of length by building scale models. 2 • Fractions are identified using Landmark numbers as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$. The children further conduct experiments to determine probability and predict possible outcomes. 3 • Through the study of pure geometry children are able to find harmony in congruence and conflict in irregular figures. These concepts are used to build models and solve real world problems. 4
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