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# Number Sense: Promoting Basic Numeracy Skills through a Counting Board Game

Early Math Fluency <sup>[1]</sup>

**DESCRIPTION:** The student plays a number-based board game to build skills related to 'number sense', including number identification, counting, estimation skills, and ability to visualize and access specific number values using an internal number-line (Siegler, 2009).

**GROUP SIZE:** 1-2 students

**TIME:** 12-15 minutes per session

## **MATERIALS:**

- *Great Number Line Race! Form* (attached)
- Spinner divided into two equal regions marked "1" and "2" respectively. (NOTE: If a spinner is not available, the interventionist can purchase a small blank wooden block from a crafts store and mark three of the sides of the block with the number "1" and three sides with the number "2".)

**INTERVENTION STEPS:** A counting-board game session lasts 12 to 15 minutes, with each game within the session lasting 2-4 minutes. Here are the steps:

1. **Introduce the Rules of the Game.** If the student is unfamiliar with the counting board game, the interventionist trains the student to play it.

-The student is told that he or she will attempt to beat another player (either another student or the interventionist). The student is then given a penny or other small object to serve as a game piece. The student is told that players takes turns spinning the spinner (or, alternatively, tossing the block) to learn how many spaces they can move on the *Great Number Line Race!* board. Each player then advances the game piece, moving it forward through the numbered boxes of the game-board to match the number "1" or "2" selected in the spin or block toss.

-When advancing the game piece, the player must call out the number of each numbered box as he or she passes over it. For example, if the player has a game piece on box 7 and spins a "2", that player advances the game piece two spaces, while calling out "8" and "9" (the names of the numbered boxes that the game piece moves across during that turn).

-The player who reaches the "10" box first is the winner.

2. **Record Game Outcomes.** At the conclusion of each game, the interventionist records the winner using the form found on the *Great Number Line Race!* form. The session continues with additional

games being played for a total of 12-15 minutes.

3. **Continue the Intervention Up to an Hour of Cumulative Play.** The counting-board game continues until the student has accrued a total of at least one hour of play across multiple days. (The amount of cumulative play can be calculated by adding up the daily time spent in the game as recorded on the *Great Number Line Race!* form.)

## Attachments

- [Great Number Line Race! Form](#) <sup>[2]</sup>

## References

Siegler, R. S. (2009). Improving the numerical understanding of children from low-income families. *Child Development Perspectives*, 3(2), 118-124.

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