



## INSTRUCTIONS

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Connect the Drops is a collaborative game for 3 to 5 players that reinforces ratio conceptual understanding while allowing players opportunities to exercise and reflect on executive function processes. The goal of Connect the Drops is for a team of players to form the **longest possible strings** of ratios in order from lowest to highest (dirty to clean water drops). At the end of the game, each of the team's strings are scored and the scores combined to give a total. The highest scoring team wins!

**Setup:** Ask students to break into teams of four around table stations. It is also okay if there are a couple teams of 3 or 5, but teams of 4 are best for Connect the Drops. Each team is handed one deck of Connect the Drops cards. One student shuffles the cards and then deals four cards to each of the players. Each player immediately places the cards **face up** in front of them. The dealer then places the remaining cards as a draw pile **face down** on the table.

**Starting Play:** The player to the left of the dealer goes first. That player then chooses a card from their hand to play first. After playing a card, that player should draw a single card from the draw pile and place it face up with the rest of their hand.

**Play Sequence:** Following the first play, the sequence moves to the player next in clockwise order from the initial player. To extend the string, the next player plays another ratio card that is either higher or lower ratio of dirty to clean water drops than the first played card. If it is lower they play it to the original card's left, if it is higher they place it to the original card's right. The player then draws one card and places it face up in their hand on the table. *Thus, until the end of the game, players should have four cards in their hand.* The goal of all the players on the team is to create the longest string of ratios possible.

**Finishing a Ratio String:** Play proceeds, with players playing a card to the left or right of the string of ratios, until a player is *unable to play a card that has a higher ratio than the card on the right, or a lower ratio than the card on the left.* At this point, the existing string of cards is moved to another part of the table, in a place for "completed card sets." The player who could not play a card on that string then plays any of their cards to start a new ratio string, and play proceeds clockwise from there.

**Finishing a Game:** Play ends when the players run out of cards to play. At this point, the players work together to score all the completed ratio strings using the following table. The team with the most points wins!

**Strings of  $\leq 4$  cards: 1 point**

**Strings of 5 cards: 3 points**

**Strings of 6 cards: 5 points**

**Strings of 7 cards: 10 points**

**Strings of 8 cards: 20 points**

**Strings of 9 cards: 40 points**