## Line 'Em Up!

YOUNG
MATHEMATICIANS
Players 2-4 $\quad$ Ages 4+ $\quad \begin{array}{r}\text { 4-10 min }\end{array}$

## GOAL

To replace your line of face-down cards with a line of face-up cards laid out in numerical order.

## CARDS TO USE

Circles 1-4


Triangles 1-4


Squares 1-4


Rectangles 1-4


## HOW TO PLAY

1. Select and shuffle the cards.

2. Pass out five face-down cards in a line to each player and put the rest of the cards in a face-down pile in the middle.

3. On your turn, take one card from the pile in the middle. Match the number on the card to the card in the same number position in your line.

4. Replace the matching card in your line with the card from the center pile.

5. Turn over the card you just removed from your line. Then match the number on this card to that same number position in your line.

6. If you have already turned over the card in the matching position in your line, place the card face up in the middle. It's now the next player's turn.

7. The next player can choose to either take the top card from the face-up pile in the middle or the top card from the face-down pile in the middle.
8. The game ends when one player has turned over all of their cards!

## WHAT CHILDREN ARE LEARNING

- Children practice noticing number order. As they play, they're seeing that the number one corresponds to the first position, that two corresponds to the second position, and so on.


## MATH TOPICS

## VIDEO



## Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play Line 'Em Up. Development
Center

## Go Fish with Shape Cards

## Players 2-4 $\quad$ Ages 4+ $\quad$ 5-10 min

## GOAL

To create matching pairs by asking other players for cardsand by pulling cards from the deck.

## CARDS TO USE

Circles 1-4


Triangles 1-4


Rhombuses 1-4


Squares 1-4


Rectangles 1-4


Hexagons 1-4


## HOW TO PLAY

1. Select and shuffle the cards.

2. Ask another player if they have a Shape Card that matches a Shape Card in your hand.

The Shape Cards allows you to play Go Fish in two different ways. Players can either ask for cards by number ("Do you have
any 3's?") or they can ask for cards by shape ("Do you have any hexagons?").

3. If the other player has a card of the shape (or number if you are matching by number) that you asked for, they must give it to you. Place that pair of cards down.

4. If they don't have the type of card you asked for, the other player says, "Go fish!" and you draw a card from the center pile.

5. If you draw a shape that matches a shape in your hand, place that pair of cards down.
6. You can keep playing until one player runs out of cards, or you can decide that the game ends after one player gets a certain number of matches. If you are playing till a certain number of matches, players can just draw cards from the middle each time their hand runs out.

## WHAT CHILDREN ARE LEARNING

- This game helps children practice saying shape names out loud. They're also practicing their matching and sorting skills by matching Shape Cards together and putting each type of Shape Card in a pile.
- This game also helps children learn to focus their attention. When they match the cards by shape, they need to ignore the numbers on the card and focus only on the shapes they see.


## MATH TOPICS

Shapes and Geometry Sorting and Attributes

## VIDEO



## Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play Go Fish with Shape Cards

## Top It! with Shape Cards

## GOAL

Collect all of the cards by turning over higher number cards than other players.

## CARDS TO USE

Start with:


Circles 1-6

Squares 1-6

For later games: use more shapes and higher numbers:


## HOW TO PLAY

1. Select and shuffle the cards.

2. Pass out the cards face-down into equal piles for each player.

Don't look at your cards yet!

3. Then say, "We're each going to turn over the top card in our pile. Whoever has the highest number on their card wins this round and gets to keep all of the cards. Ready?"

Each player turns over the top card and puts it in the center for all to see.

4. Ask, "Which card has the highest number? Who gets to keep all of the cards? How can we tell?"

Players can either compare the numbers on the cards or they can count the number of shapes.

5. If two players flip over the same highest number, those players flip over their next top cards. Whoever has the highest number wins all of the cards from both rounds.
6. The game ends when one person has all the cards.

## TIPS FOR PLAYING

- Sometimes you need to end the game before one player gets all the cards. You can stop playing at any time and count the cards that each player has won so far. The player with the most cards at that point wins the game.
- Once you go through all the cards in your hand, you can pick up the cards you've won, shuffle them, and keep playing.


## WHAT CHILDREN ARE LEARNING

- In this game, children practice recognizing written numerals. If they aren't familiar with the written numbers, they can count how many shapes there are on the cards and compare which
has more that way.
- Children also get lots of practice comparing which number is larger or smaller, an important early math skill.


## MATH TOPICS

## Shapes and Geometry

 Sorting and Attributes
## VIDEO



## Watch Game Video

View the QR code in your smartphone's camera app or $Q R$ code reader to watch a video that shows how to play Top It with Shape Cards.

## Snap!

Players 2-5 $\quad$ Ages 4+ $\quad \vdots \quad 5-10 \mathrm{~min}$

## GOAL

Be the first to notice two cards match to win the most cards.

## CARDS TO USE

Deck of Shape Cards with the Wild Cards removed


## HOW TO PLAY

1. Shuffle the cards.

2. Deal all the cards face down into equal piles for each player.

3. Players take turns turning over their top card and placing it face-up in a central pile on top of the previous card.

4. If two cards placed consecutively on the pile match by shape or number, the first player to say, "Snap!" and place their hand on top of the central pile takes the pile of cards and adds them to the bottom of their stack.

5. The player who gets all the cards wins the game.

## TIPS FOR PLAYING

- Instead of placing hand on the central pile, players can clap their hands and say, "Snap!" Or players can touch the side of the table and say, "Snap!"
- If the game is going on too long, you can decide that the player with the most cards wins or call it a draw and have a rematch another day.


## WHAT CHILDREN ARE LEARNING

- In this game, children are practicing their numeral and shape recognition, but their brains are working on a lot more than that. They have to pay careful attention to the cards other players put down and to keeping both matching rules in their head. Sometimes the cards will match on number, and sometimes on suit.
- Children are practicing skills like taking turns, finding pairs or matches, keeping track of and counting up cards. These skills are important in and of themselves because they allow children to access other opportunities for card games.
- Many card games have mathematical elements including numeral recognition, comparing numbers, logic, strategy, rule
shifting, and classification that are worthwhile and can extend children's learning outside of school. For most children, the game-playing skills take time, patience, and explicit support to develop.


## MATH TOPICS

## Shapes and Geometry

 Sorting and Attributes
## VIDEO



## Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play Snap.

## Wild Shapes

## GOAL

Be the first player to have no cards left. This game follows rules similar to Crazy $8 s$ and Uno.

## CARDS TO USE

Deck of Shape Cards with the 4 Wild Shape Cards


## HOW TO PLAY

1. Shuffle the cards.

2. Deal 5 cards face down to each player. Place remaining cards face down to form a draw pile. Turn over the top card of the draw pile to begin a discard pile.

3. Players look at their cards. When it's their turn, players try to match the top card on the discard pile - by shape or number with a card in their hand.

If a match can be made, the player puts the card on the top of the discard pile face up and says what the match is - i.e. " 4 " or "hexagons." That card becomes the new top card and it's the next player's turn.

4. However, if a player cannot make a match, but has a joker/ wild card in their hand, they can play that card and name which shape (i.e. blue rhombus) and a number (i.e. four) the next player has to play from.
5. If players can't make a match and don't have a joker/wild card, they have to draw from the deck until they can make a match.
6. Players say "One card!" when they only have one card left in their hand.
7. Keep playing until a player has no more cards. If you run out of cards in the deck, reshuffle the discard pile.

## TIPS FOR PLAYING

- For the first few games, you can play with the cards face up and talk aloud about your possible moves. Support each child in turn by having children talk through their options.
- It can be very challenging for young children to hold cards in their hand so others can't see them. You can use a shoebox or other small box where they can put their cards face up without having to hold them.
- If a player cannot make a match and does not have a joker or wild card, instead of having players draw from the deck until they get a card they can play, have them just draw one card and then play moves on to the next person.
- If you need to end the game early, you can call it a draw and have a rematch another day.


## WHAT CHILDREN ARE LEARNING

- In this game, children are practicing their numeral and shape recognition, but their brains are working on a lot more than that. They have to pay attention to the cards in their hand and to the rule shifting. Sometimes they will want to match on number, and sometimes they will want to match on shape, depending on the cards in their hand and the top card in the discard pile. What the "best" move will be is constantly changing and they have to pay attention to their game play as well as the other players'.
- As they get more experienced, they will start paying attention to strategy - which card will be easier or harder to get rid of? When should I play the wild card?
- Children are practicing skills like taking turns, finding pairs or matches, keeping track of and counting up cards. These skills are important in and of themselves and they allow children to access other opportunities for card games such as Crazy 8s, Uno, Go Fish, and Top It (War).


## MATH TOPICS

## Shapes and Geometry

 Sorting and Attributes
## VIDEO



## Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play Wild Shapes.

