

# BEATING BOARD+DOM!

DAY NINE

## AWITHLAKNANNAI!

FUNNY NAME! GREAT GAME!

The full name of this game is kolowis awithlalnannai, though it is usually known as awithlalnannai. It is a variant of alquerque, a game which also inspired the more common game of draughts, or checkers. Pieces in awithlalnannai move a single step from one point to an adjacent point along a marked line. They can capture enemy pieces by jumping, as in draughts.

### HISTORY OF AWITHLAKNANNAI



*Stewart Culin's awithlalnannai board, made by Zuni native Nick Graham.*

At some time after the Spanish conquest, the game of alquerque was introduced into Mexico and the surrounding regions. The native tribes took the game and modified into something more to their liking. They played two versions, one on a smaller and one on a larger board.

Today it is largely credited to the Zuni Native American Indian tribe of New Mexico, USA, and it plays like a combination of checkers and Pente. It is unknown how old the game is.

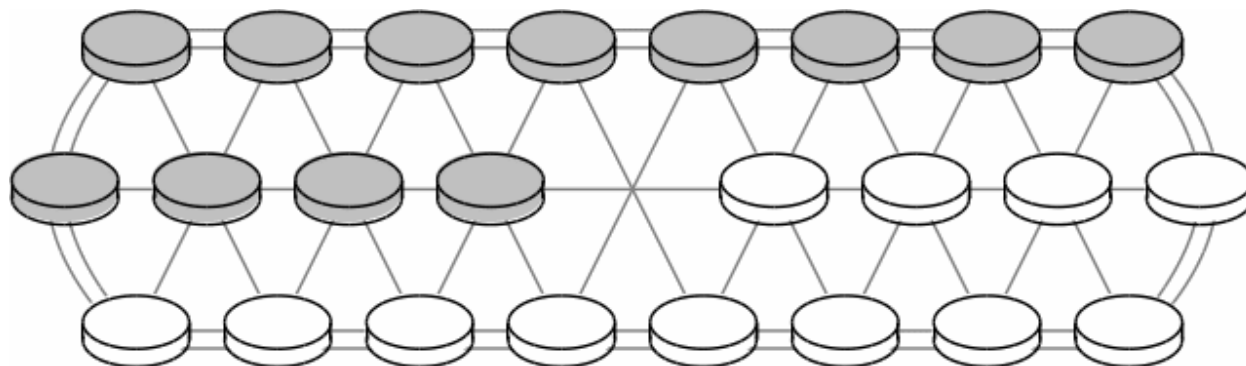
*Prerequisites:* None

*Materials:* Partner, game board, two different-colored sets of 12 markers (24 total)

*Objective:* Capture all of the other player's markers

*How To Play:*

1.) Awithlalnannai played by two people on the intersections, or points, of boards marked with a pattern of lines. Pieces are set out in a symmetrical pattern, leaving just one point empty. The center point should be the only open spot. *Arrange your markers on the board as shown below.* Players decide at random who will make the first move.



2.) Take turns. In his turn a player will move a piece one step along a marked line, to an adjacent empty point/empty spot.

3.) There are two types of moves, capturing and non-capturing.

**In a non-capturing move** (i.e. no jump), a player may move one marker to any adjacent space.

**In a capturing move**, a player jumps over the other player's piece only if they are adjacent and there is an empty space on the other side of their piece. A piece captures a neighboring enemy piece by jumping over it to land on the empty point beyond. If a capture is available, **it must be made**.

Only one piece can be captured in a single jump, however, if possible, multiple jumps are allowed on a single turn.

4.) Having captured an enemy, a piece must make a further jump and capture from its new location if possible. Any number of captures can be chained in this way.

5.) Only one piece can be moved per turn.

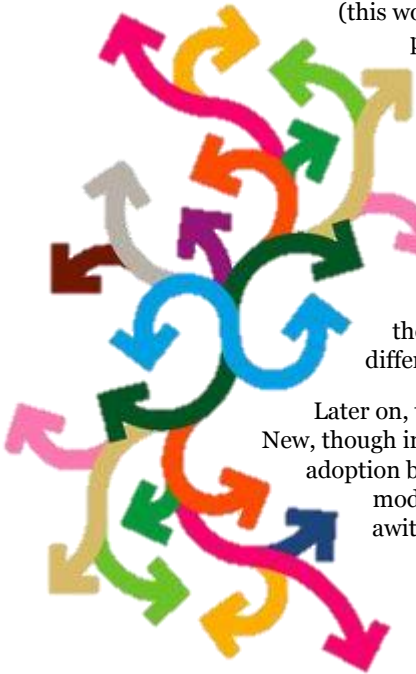
6.) Play continues until one player captures all of the other's markers or one player cannot make a move (this would happen if their markers were all blocked from moving or jumping). The winner is the player who has captured the most/all of their opponent's counters.

Note: If a player can jump but fails to do so, they lose that counter to the opponent.

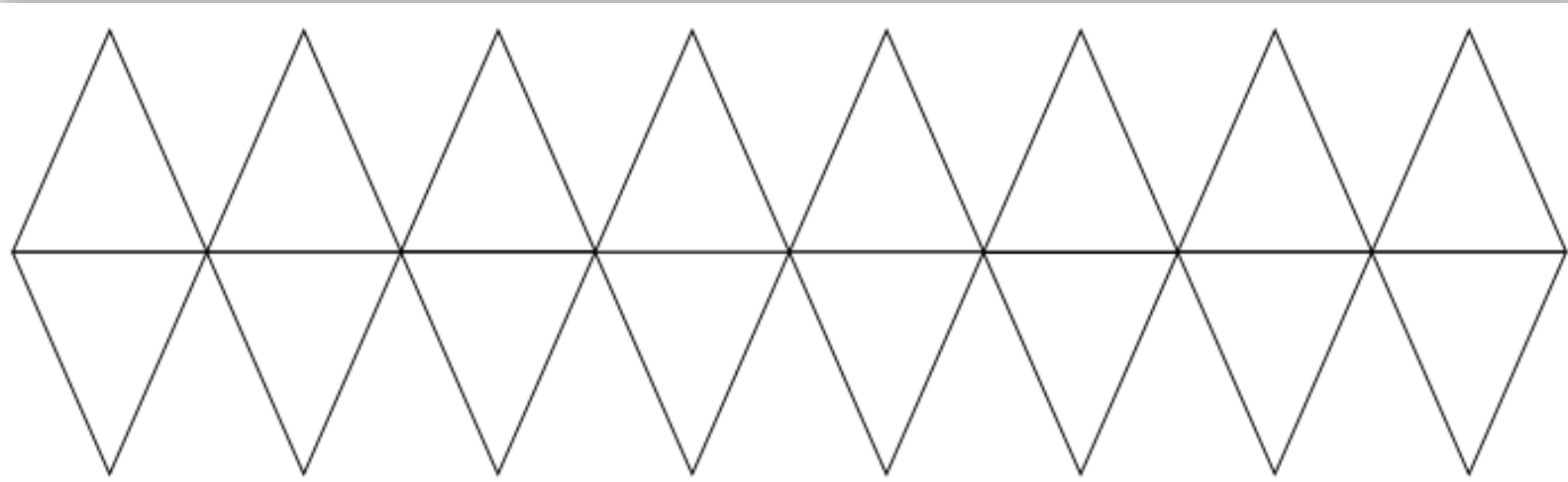
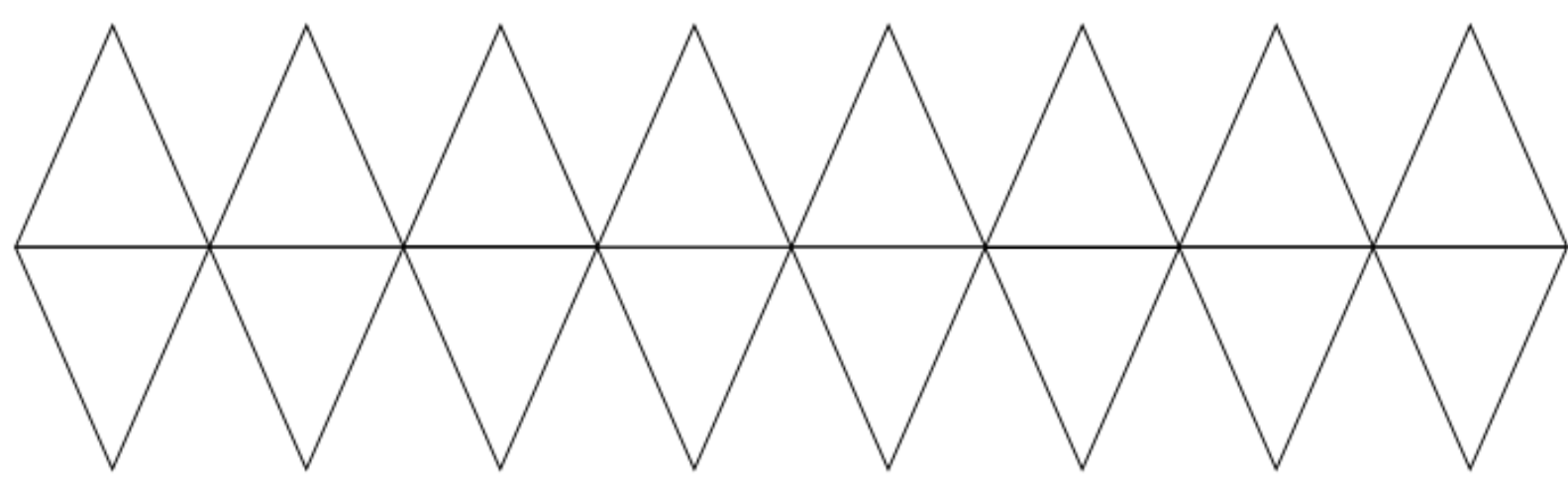
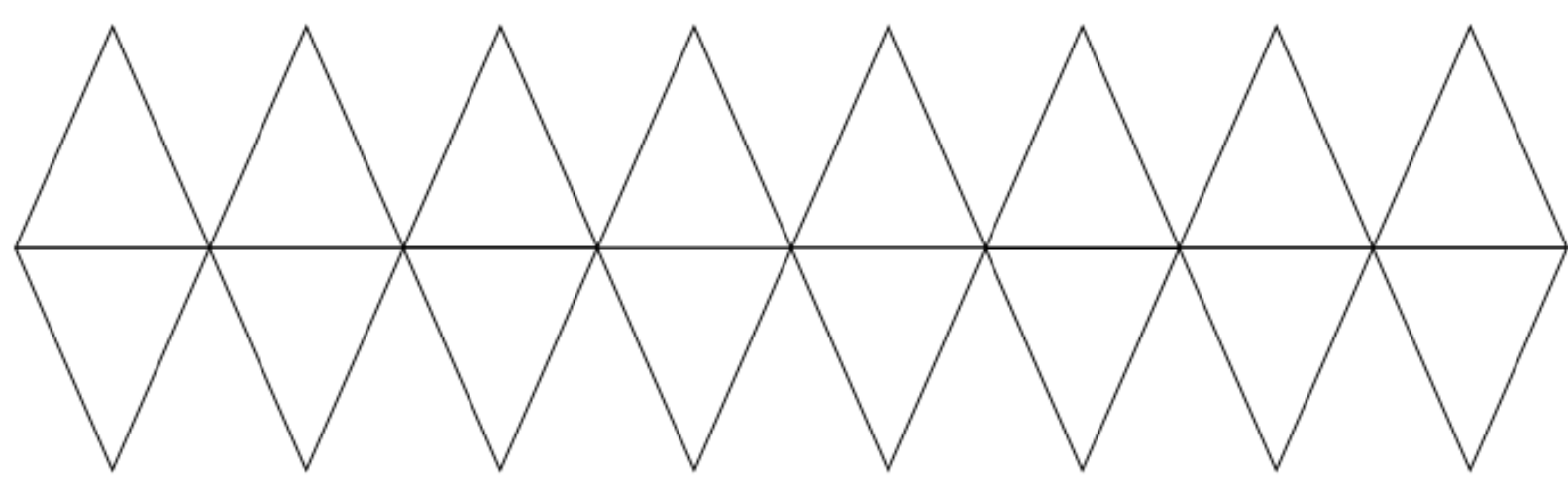
### INTERESTING TO NOTE:

It seems that it would be impossible to write a single history covering board games in general. They were invented separately in at least three different places: New Zealand (mu torere), the Americas (totolospí, puluc, zohn ahl and many native games), and the "Old World". To this might be added Hawaii (konane); it's unlikely that the earliest board games in any of these places owe their existence to one another due to their differences and the evidence of their earliest play.

Later on, the histories of these areas of gaming converge, with travel between the Old World and the New, though interaction between these separate families of games is scarce. Mainly this involves adoption by New World natives of board games coming from Europe, Africa and Asia, with frequent modifications in their new home (for instance, the way in which alquerque was modified into awithlaknannai in North America).



# WITH LAKNANNAI GAME BOARDS



# 2 WITH LAKNANAI GAME SCORE CARD

PLAYER'S NAME: .....

NAME OF OPPONENT	WHO WON?	POINTS: <i>1 point for each captured stone</i>
<b>TOTAL POINTS:</b>		

## DAY 9 K-8 STANDARD ALIGNMENT

K

- SL.K.1. Participate in collaborative conversations with diverse partners with peers and adults in small and larger groups.
- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.

*These standards will be met and reinforced as students learn how to play Awithlaknannai and compete with other students through a series of rounds/individual games to accrue the most points (which they will keep track of). They will discuss moves and strategies prior to, during, and after the games with their partners and the group as a whole.*

1

- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.
- SL.1.1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

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2

- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.
- SL.2.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly.

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3

- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.
- 1.1.2 Execute prescribed strategies in a variety of games.
- 2.3.1 Identify and implement the concepts of offensive and defensive strategies in a dynamic, unpredictable game environment.

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- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.
- 1.2.1 Demonstrate offensive and defensive strategies in individual/dual and team sports.
- 1.3.3 Exhibit advanced offensive, defensive and transition strategies in a variety of physical and mental games and activities.

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# WAYS TEN AND ELEVEN

## WIFFLE BALL!

Miniature versions of baseball have been played for decades, including stickball, improvised by children, using everything from rolled up socks to tennis balls. The ball most commonly used in the game was invented by David N. Mullany at his home in Fairfield, Connecticut in 1953 when he designed a ball that curved easily for his 12-year-old son. It was named when his son and his friends would refer to a strikeout as a "whiff". The classic trademarked Wiffle Ball is about the same size as a regulation baseball, but is hollow, lightweight, of resilient plastic, no more than 1/8 inch (3 mm) thick. One half is perforated with eight .75-inch (19 mm) oblong holes; the other half is non-perforated. This construction allows pitchers to throw a tremendous variety of curveballs and risers.



This is a Wiffle Ball



This is NOT

## THE PITCHES

The WIFFLE ball is thrown like a baseball and will curve very easily. The diagrams below show how the ball should be held for curving and controlling the ball. These are the 6 main pitches of wiffle ball. There are others, but they're mostly just variations of these. If you can throw all six of these pitches well, you'd be nearly unhittable. Experiment with different grips and releases to find the pitches that work best for you. There is no need to throw the ball hard to produce results!



STRAIGHT FASTBALL



CURVE BALL



RISER



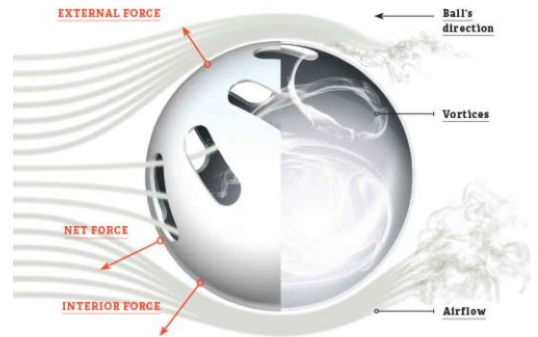
SCREWBALL



KNUCKLEBALL



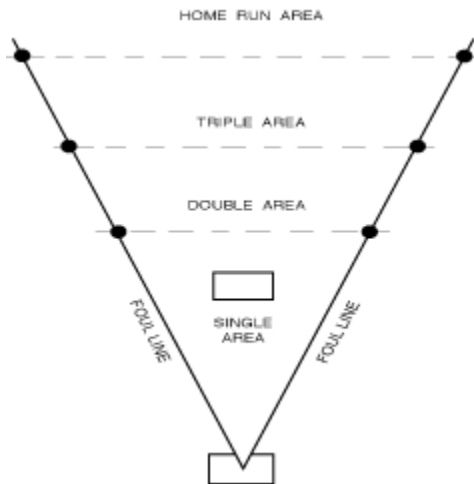
SINKER



## THE GAME

The WIFFLE ball was designed for use in congested areas. Because the ball will not travel far when solidly hit, ball chasing and base running have been eliminated. An ordinary broom handle can be used if a WIFFLE bat is not available. The size of the playing field is optional, but we recommend a minimum dimension of 20 feet in width at the home run markers (approx. 8 paces) by about 60 feet long (approx. 23 paces) from home plate to each home run marker. The field is laid out with foul lines and markers for singles, doubles triples and home run areas. See sketch of suggested playing field.





The minimum number of players required to play a game with the WIFFLE ball is two – the pitcher and batter – one player per side. The maximum number of players that can compete are ten – five players to a side. If a full team is playing, each side will consist of a catcher, pitcher, double area fielder, triple area fielder and home run area fielder. Fielders cannot move from one area to another when a full team is playing. When more than two players are playing, captains for each side are picked and they choose their respective teams alternately.

As in baseball, the game is played with one team at bat and one team in the field. The batting order of the team at bat shall be Pitcher, Catcher, Double Area player, Triple Area player and finally Home Run area player. The rules of play are similar to baseball, however there is no base running. Three outs to retire a side, per inning, nine innings per game (*For kids: The game is 4 or six innings long (not nine). If it rains, an “official” game is four innings (instead of five), 3½ if the home team is ahead. In most leagues and in tournament play, the game ends if one side holds a ten-run lead in an official game.*) In case of a tie, additional innings are played. For a complete inning, both sides must bat.

An out for the batter can be made in three ways:

1. The batter can strike out only if he/she swings at a pitched ball and does not foul tip the third strike. Foul tips count as a strike for the first two strikes only. A foul tip caught in back of the batter’s box does not count as an out.
2. Fly balls caught in fair or foul territory
3. Ground balls caught while the ball is in motion, in fair territory. Bunting is not allowed and the batter cannot obtain a base on balls.

## SCORING

Single markers are placed approximately 24 feet from home plate on the foul line. A ball hit in the single area (i.e. the area between batters box and single markers and not caught, constitutes a single. Double markers are placed approximately 20 feet in back of the single markers on the foul line. A ball hit in the double area (between the single marker and the double marker) and not caught constitutes a double. Triple markers are placed on foul lines 20 feet back of the double markers. Balls hit in the triple area (between the double markers and triple markers) and not caught, constitute a triple. Balls hit past the triple markers, and not caught, constitute a home run.

The baseball rules of scoring apply:

Example: A player hits a single – his/her team has a man on first base (imaginary runners). The next player hits a single – the team now has a man of first and second. Third batter hits a home run – three runs score! (The imaginary runners on first and second, plus the home run.)

- A batter earns 1 imaginary base on a single, 2 imaginary bases on a double and 3 imaginary bases on a triple.
- A runner on 1st advances one base on a single, 2 bases on a double and scores on a triple

- A runner on 2<sup>nd</sup> base scores on a single, double, or triple.
- A runner on 3<sup>rd</sup> base scores on any hit.

## MODIFICATIONS IDEAS

In order to accommodate larger classes in Wiffle ball, multiple teams can be set up with a minimum of 6 players per team and the format is similar to softball.

Pitchers may pitch overhand or underhand. Batters are considered out after swinging and missing 3 times (3 strikes) The first two foul balls are considered strikes. If a batter hits four foul balls during an at bat, they are out.

There is base running in softball style wiffle ball. Base runners are not permitted to leave the base until the pitch crosses homeplate. There is no leading or stealing in wiffle ball.

Batter runners and base runners will be out if the based is tagged by a fielder catching/holding the batted ball before the runner arrives or if they are tagged/pegged with the ball. If the fielder catches a batted ball hit in the air the batter is out and all base runners must tag up before proceeding to the next base.

Batters are not awarded base on balls or a base due to being hit by a pitch. Teams may choose a batting order in the first inning up to bat. All players on a team must bat and bat in the same order for the remainder of the game. Teams who bat out of order will be given an out for each player out of turn.

The home team begins in the field and will bat last. One complete inning consists of playing in the field and being up to bat. Players change sides when the fielding team gets the batting team out three times.

Positions: Pitcher, Catcher, First Baseman, Second Baseman, Short Stop, Third Baseman, Left Fielder, Right Fielder, Center Fielder

### Indoor Modification Ideas:

Special inside rules for playing in a gym:

- 3 foul balls is an out
- Ball hits the ceiling is an out
- Leading off the base or stealing is an out.



**NOTE!** One of the most important goals of kids' sports is to promote a sense of good sportsmanship. **Inform students that teams can and will lose points for unsportsmanlike conduct by any member of their teams (from the coaches on down) towards any member of any team, including their own.** Encourage students to play fair, to have fun, and to concentrate on helping the team while polishing their own skills.

**Option:** Give penalties for Unnecessary Roughness (pushing), Interference (giving an answer when not your turn), Unsportsmanlike Conduct (rude to a teammate, teacher, or member of another team), Excessive Celebrating (that is not what it is called in professional sports, but it's basically when the player brags and showboats about beating someone)...

## WHAT IS GOOD SPORTSMANSHIP?

Good sportsmanship is when teammates, opponents, coaches, and officials treat each other with respect. Kids learn the basics of sportsmanship from the adults in their lives, especially their parents, teachers, and their coaches. Kids who see adults behaving in a sportsmanlike way come to understand that **the real winners in sports are those who know how to persevere and to behave with dignity — whether they win or lose a game.**

Help students understand (and demonstrate) that good sportsmanship includes both small gestures and heroic efforts. It starts with something as simple as shaking hands with opponents before a game and includes acknowledging good plays made by others and accepting bad calls gracefully.

Remember the saying "Actions speak louder than words"? That's especially true when it comes to teaching your kids the basics of good sportsmanship. Your behavior during practices and games will influence them more than any pep talk or lecture you give them.

As they get older and more competitive, kids often become more focused on winning and forget to have fun. Without constant reminders and good examples, they may also forget what behavior is appropriate before, during, and after a sporting event.

Displaying good sportsmanship isn't always easy: It can be tough to congratulate the opposing team after losing a close or important game. But the kids who learn how to do it will benefit in many ways.

Kids who bully or taunt others on the playing field aren't likely to change their behavior when in the classroom or in social situations. In the same way, a child who practices good sportsmanship is likely to carry the respect and appreciation of other people into every other aspect of life.

Here are some suggestions on how to build sportsmanship in your kids:

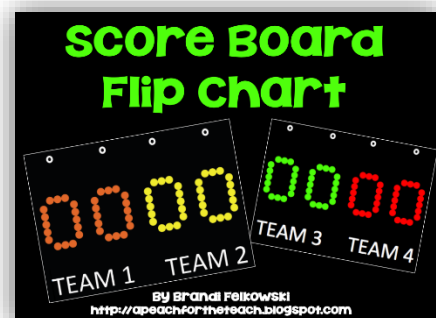
- Shout words of encouragement, not directions, from the sidelines (there is a difference!).
- Keep your comments positive. Don't bad-mouth coaches, players, or game officials.
- After a competition, it's important not to dwell on who won or lost. Instead, try asking, "How did you feel you did during the game?" If your student feels weak at a particular skill, like throwing or catching, offer to work on it together before the next game.
- Applaud good plays no matter who makes them.
- Set a good example with your courteous behavior toward everyone.
- Remember that it's your kids, not you, who are playing.
- Keep your perspective. It's just a game. Even if the team loses every game, it's unlikely to ruin your students' life or chances of success.
- Finally, don't forget to have fun!



## WIFFLING UP RESOURCES:

Find the 'Official James Brown WiffleBall Field Score Card' as a printable pdf [here](#)

Keep score during any game with a score board flip chart. Display scores for up to four teams, with scores from 0-99. You can buy one or [make your own](#) using cardstock or find a printable [here](#). Simply print, cut, and secure with binder rings on a cardboard or cardstock table tent.



# REFERENCE GUIDE TO WIFFLE PITCHES



STRAIGHT FASTBALL



CURVE BALL



RISER



SCREWBALL



KNUCKLEBALL



SINKER

## STRAIGHT FASTBALL

The straight fastball is the easiest pitch to throw in the game of Wiffle® Ball. Holes should face home plate and the tips of the index and middle fingers should be placed over the top holes with the thumb on the bottom seam of the ball. The ring finger and pinky finger are together along the seam of the ball. Throwing the ball with a straight over hand motion will create the ball to go straight towards the target, even on a windy day. This grip is the same for a right handed pitcher and left handed pitcher. Do not grip the ball too tight, a nice loose grip is more effective.

## CURVE BALL

The curve ball is the bread and butter pitch for most pitchers. Holes out for right handed pitchers. The middle finger should be placed to the left of the holes where the seam of the ball is. The index finger is spread two inches from the middle finger, like making the peace sign. The thumb is placed in the middle of the two fingers. The ring finger and the pinky finger are together and against the center of the ball, where the trademark and patent number are. Again a loose grip is very effective. An over hand motion has the biggest curve and can be thrown accurate with some practice. This pitch breaks from right to left on right handed batters (it actually starts behind them). When thrown properly, expect a three to four foot break. Left handed pitchers grip the ball the opposite of above.

## THE RISER

The riser is harder to throw than the curve ball. The main reason being, this pitch has to be thrown side arm. The grip is holes down. The index and middle fingers are tightly together above the holes along the seam. The thumb is opposite of the index and middle fingers along the seam too. The ring finger and pinky finger are together and touching the center of the ball where the trademark and patent number is. This pitch has to be thrown side arm. When thrown properly, with a whip motion, expect the ball to rise from two to three feet. If you are throwing the ball too high, you must lower your body while in the wind up to lower the location of the ball while entering the strike zone. This pitch is very difficult to hit when thrown hard. The spin on the ball causes many hitters to foul the ball straight back. The grip is the same for both left handed and right handed pitchers. The big difference with the grip of this pitch is, hold the ball tight, a tight grip is very effective.

## SCREWBALL

The screwball is like the curve ball except the grip is the exact opposite. Holes in for the right handed pitchers. Place the index finger on the seam of the ball. The middle finger is spread two inches from the index finger, like making the peace sign. The thumb is on the seam of the ball and the ring finger and the pinky finger are together and touching the solid part of the ball. This pitch is thrown over hand and on right handed batters it breaks inside from left to right about three feet when thrown properly. A loose grip is recommended and is the most effective. This pitch is very hard to master and have control of. You must practice this pitch quite often. Left handed pitchers grip the ball opposite of the above.

## **KNUCKLEBALL**

The knuckle ball. This pitch is not seen very often because it is very hard to throw accurately. The holes of the ball should be facing home plate and the fingernails of the index finger and middle finger should be dug into the ball on the seam. The thumb should be on the bottom seam of the ball and the ring finger and pinky finger should be together. This pitch is thrown over hand and will move back and forth like a knuckle ball moves in baseball. The grip is held the same way for left handed and right handed pitchers. A very tight grip is recommended to be effective. You have to practice this pitch often, it is very hard to master.

## **SINKER**

The sinker is the most difficult pitch to throw and is feared by every hitter. Hold up with this pitch and place the index finger on the seam of the ball. The middle finger is spread two inches from the index finger, like making the peace sign. The thumb is on the seam of the ball and the ring finger and the pinky finger are together and touching the solid part of the ball. This pitch is thrown SIDE ARM or Three-Quarters. This pitch sinks hard on both right and left handed batters. The grip is the same for right handed and left handed pitchers. This pitch is thrown just like the screwball, but it is thrown side arm to three-quarters. This makes the sinker almost impossible to master, few Pro pitchers have this pitch in their arsenal. This pitch is very hard on a pitcher's arm and is NOT recommended for younger pitchers to throw. A loose grip is recommended and is the most effective.

# "SHORT GAME" SCORE CARDS

## WIFFLE BALL SCORE CARD

<b>TEAM NAME:</b>	<b>TEAM NAME:</b>
Score (1 <sup>st</sup> Inning):	Score (1 <sup>st</sup> Inning):
Score (2 <sup>nd</sup> Inning):	Score (2 <sup>nd</sup> Inning):
Score (3 <sup>rd</sup> Inning):	Score (3 <sup>rd</sup> Inning):
Score (4 <sup>th</sup> Inning):	Score (4 <sup>th</sup> Inning):
Final Score:	Final Score:
<b>WINNER:</b>	

## WIFFLE BALL SCORE CARD

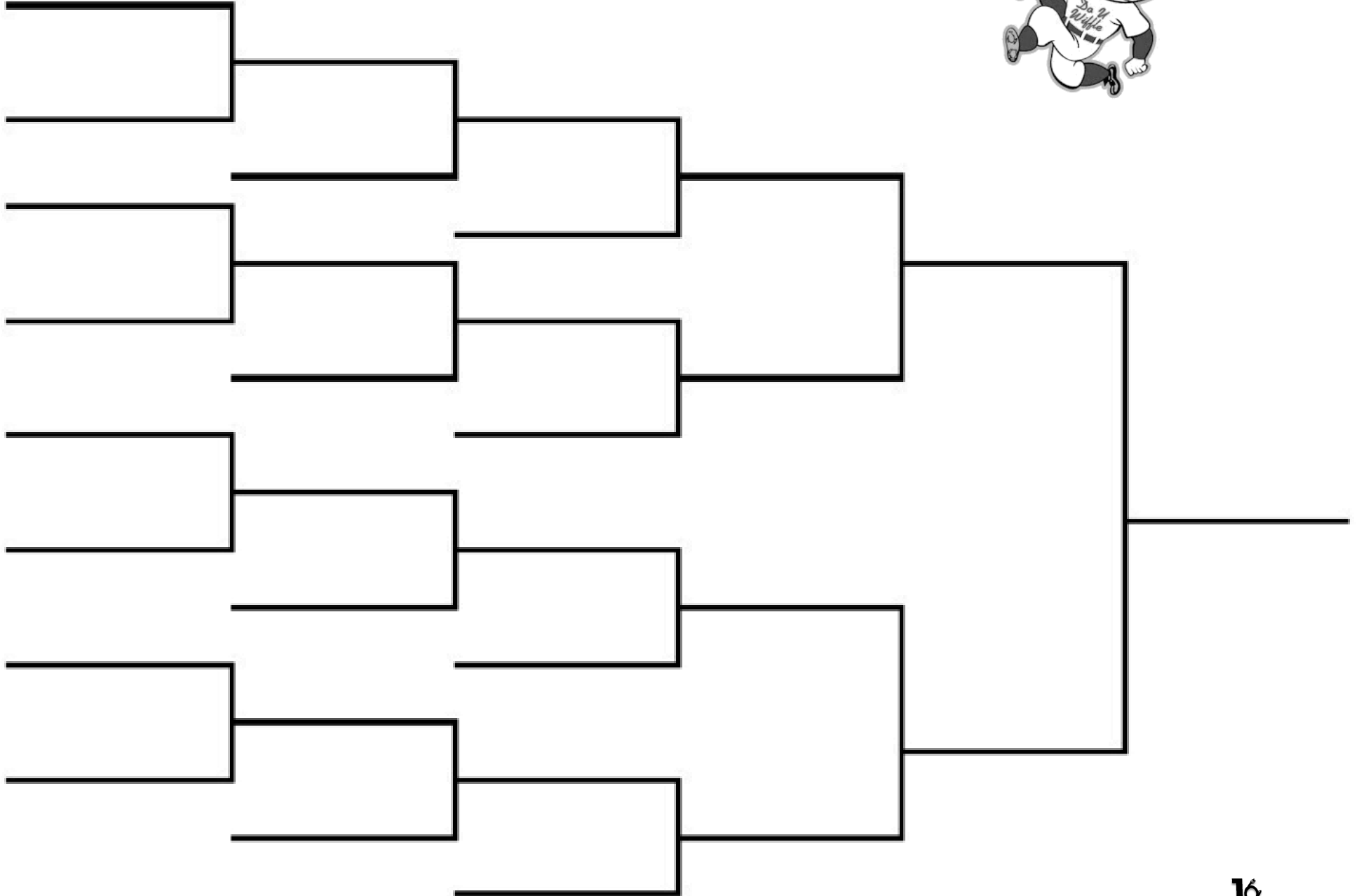
<b>TEAM NAME:</b>	<b>TEAM NAME:</b>
Score (1 <sup>st</sup> Inning):	Score (1 <sup>st</sup> Inning):
Score (2 <sup>nd</sup> Inning):	Score (2 <sup>nd</sup> Inning):
Score (3 <sup>rd</sup> Inning):	Score (3 <sup>rd</sup> Inning):
Score (4 <sup>th</sup> Inning):	Score (4 <sup>th</sup> Inning):
Final Score:	Final Score:
<b>WINNER:</b>	

# "LONG GAME" SCORE CARDS

## WIFFLE BALL SCORE CARD

<b>TEAM NAME:</b>	<b>TEAM NAME:</b>
Score (1 <sup>st</sup> Inning):	Score (1 <sup>st</sup> Inning):
Score (2 <sup>nd</sup> Inning):	Score (2 <sup>nd</sup> Inning):
Score (3 <sup>rd</sup> Inning):	Score (3 <sup>rd</sup> Inning):
Score (4 <sup>th</sup> Inning):	Score (4 <sup>th</sup> Inning):
Score (5 <sup>th</sup> Inning):	Score (5 <sup>th</sup> Inning):
Score (6 <sup>th</sup> Inning):	Score (6 <sup>th</sup> Inning):
Score (7 <sup>th</sup> Inning):	Score (7 <sup>th</sup> Inning):
Score (8 <sup>th</sup> Inning):	Score (8 <sup>th</sup> Inning):
Score (9 <sup>th</sup> Inning):	Score (9 <sup>th</sup> Inning):
Final Score:	Final Score:
<b>WINNER:</b>	

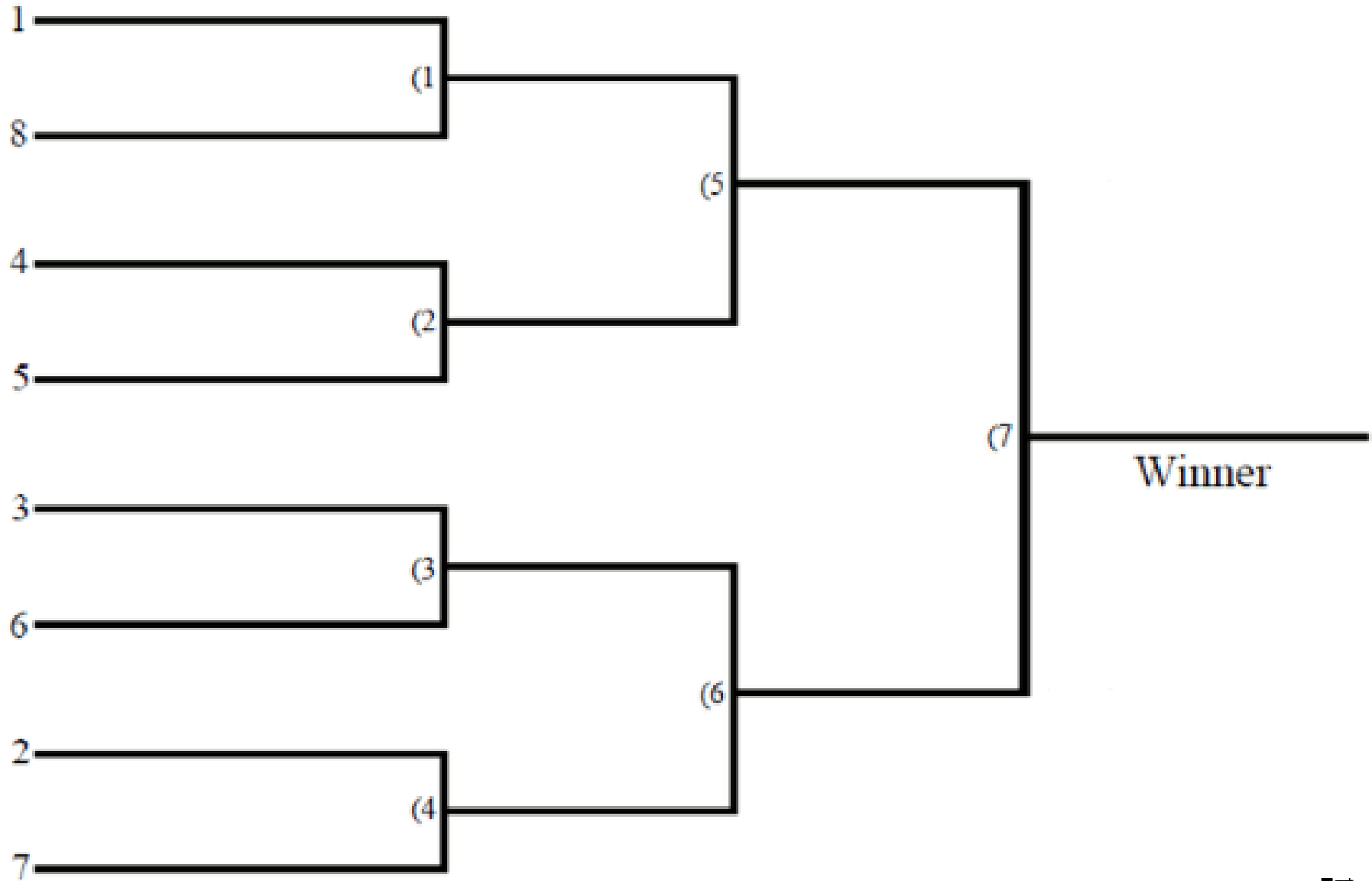
# WIFFLE BALL TOURNAMENT DOUBLE ELIMINATION BRACKET





# WIFFLE BALL TOURNAMENT

## SINGLE ELIMINATION BRACKET



## DAY 10 K-8 STANDARD ALIGNMENT

K

- 7.T/E.2 Apply creative thinking to solve problems.
- SL.K.1. Participate in collaborative conversations with diverse partners with peers and adults in small and larger groups.
- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.

*These standards will be met and reinforced and used as a guide for expectations of student outputs and performance as students practice with Wiffle balls and participate in playing Wiffle ball. Team members will have to work together, communicate clearly and effectively with all team members throughout the game, practice good sportsmanship, plan and discuss their strategies (e.g., offensive and defensive techniques, what positions players will have and roles, etc.), allow every team member to participate effectively, utilize everyone's strengths (and realize everyone has strengths), and work together test/implement their ideas in order to be successful, score points, and win the game(s).*

1

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- 7.T/E.2 Apply creative thinking to solve problems.
- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.
- SL.2.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly.

*These standards will be met and reinforced and used as a guide for expectations of student outputs and performance as students practice with Wiffle balls and participate in playing Wiffle ball. Team members will have to work together, communicate clearly and effectively with all team members throughout the game, practice good sportsmanship, plan and discuss their strategies (e.g., offensive and defensive techniques, what positions players will have and roles, etc.), allow every team member to participate effectively, utilize everyone's strengths (and realize everyone has*

*strengths), and work together test/implement their ideas in order to be successful, score points, and win the game(s).*

3

- 7.T/E.5 Apply a creative strategy to solve a particular problem.
- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.
- SL.3.1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
- 1.1.2 Execute prescribed strategies in a variety of games.
- 2.3.1 Identify and implement the concepts of offensive and defensive strategies in a dynamic, unpredictable game environment.

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- 2.2 Demonstrate critical thinking skills in addressing assignments and performing tasks.
- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.
- SL.6.1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
- 1.2.1 Demonstrate offensive and defensive strategies in individual/dual and team sports.
- 1.3.3 Exhibit advanced offensive, defensive and transition strategies in a variety of physical and mental games and activities.

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# DAY TWELVE: MADAGASCAR SOLITAIRE

You can find symmetry everywhere! Even in ancient (but still really fun) games.

Madagascar Solitaire is an ancient game from the island country of Madagascar and a brain-teasing puzzle played by one player. This game encourages players to think about strategy and symmetry. It also teaches skills related to graphing.

Your goal is to remove marbles from a game board so that only one remains. Make one wrong move and it will cost you the game because if more than one marble is left, you must start from the beginning.

## MATERIALS:

- A handful of stones, beans, paperclips or other small objects to use as markers. (There is a sheet of printable 'markers' included as well.)
- Copies of the boards and score cards for the students

If you have a group of students this game can be played individually or as a group and it's a great game to use in a group where skill levels vary. By using the different game boards you can make this game easier or more challenging and because it is solitaire your students can easily start with a simpler board and move on to more advanced ones when they are ready.

Ask your students if they know any kind of solitaire games. Some students may not be familiar with the term solitaire, though they may know of games like this.

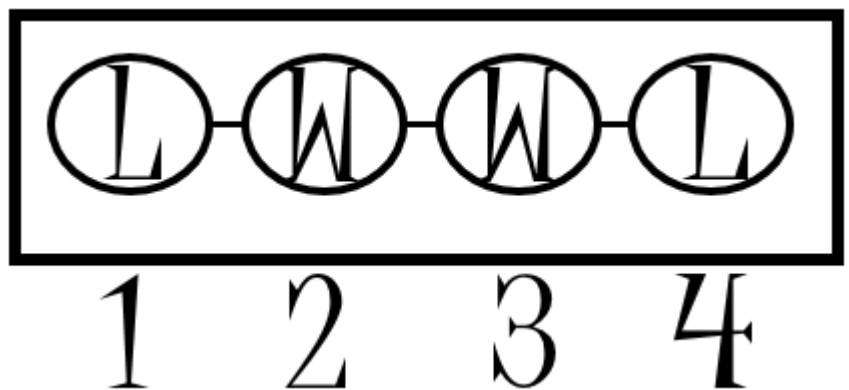
The instructions for the game suggest that players keep track of their moves as they play. This lets them learn what strategies result in winning games and show others how they won. In the intermediate game this also allows students to practice identifying locations using (x,y) coordinates, a graphing skill.

Note: If students find it too frustrating to keep track of their games moves while they are playing simply let students play for a while and when they win, ask them to repeat the moves to see if they can do it again. After students have won, they have much more incentive to record their moves—so that they can show everyone else how they did it. Even players who aren't recording **all** of their moves will find it useful to record their first moves because certain starting moves make it impossible to win!

## TIPS FOR TEACHERS:

In simple solitaire whether a player wins this game depends on which marker the player takes away first.

For an example look at the image. A player will always lose if they start the game by removing the markers in spots 1 or 4, but will win if they start in the middle, in spots 2 or 3. It's symmetry. The two winning moves are the same move, if you look at the board mathematically. Since it is symmetrical, removing 2 has the same effect as removing 3 would. They're mirror image moves. It's easy to see the symmetry in Simple Solitaire, so looking for the line of symmetry doesn't help much, but where symmetry really comes into play is when students move on to more advanced boards. Now remember, it's possible to lose a game even if you start with a winning first move.



## STRATEGY:

Strategy involves looking ahead and thinking about what will happen after each move, how that move will change what you can do next. Thinking ahead helps you win more often. Now, the point of the game isn't just to win, but to be able to show others what moves help you win and why. Challenge your students to win a game, and then demonstrate how they did it.

## DOES SYMMETRY REALLY HELP?

Winning moves are mirror images of each other. Just like in Simple Solitaire, where the winning moves are mirror images of each other, it is the same in Intermediate Solitaire. You can win if you start by removing the marker at 4,1. Now imagine that the lines of symmetry on the board are like a mirror. What is the mirror image of that move? Can you find multiple mirror images of that move? A player can win by starting with this move and playing a game in which every move is a mirror image of the move in the winning game.

You may want to have some students work in pairs, with one student playing, and the other keeping track of the moves. Players can use a score card to track their moves. Other students may want to play until they win, and then repeat the moves that led to their win and record them.

For students that have a hard time getting started, draw a large group game board and use sticky notes for markers, so you can all play together.

## THE GOAL OF THE GAME:

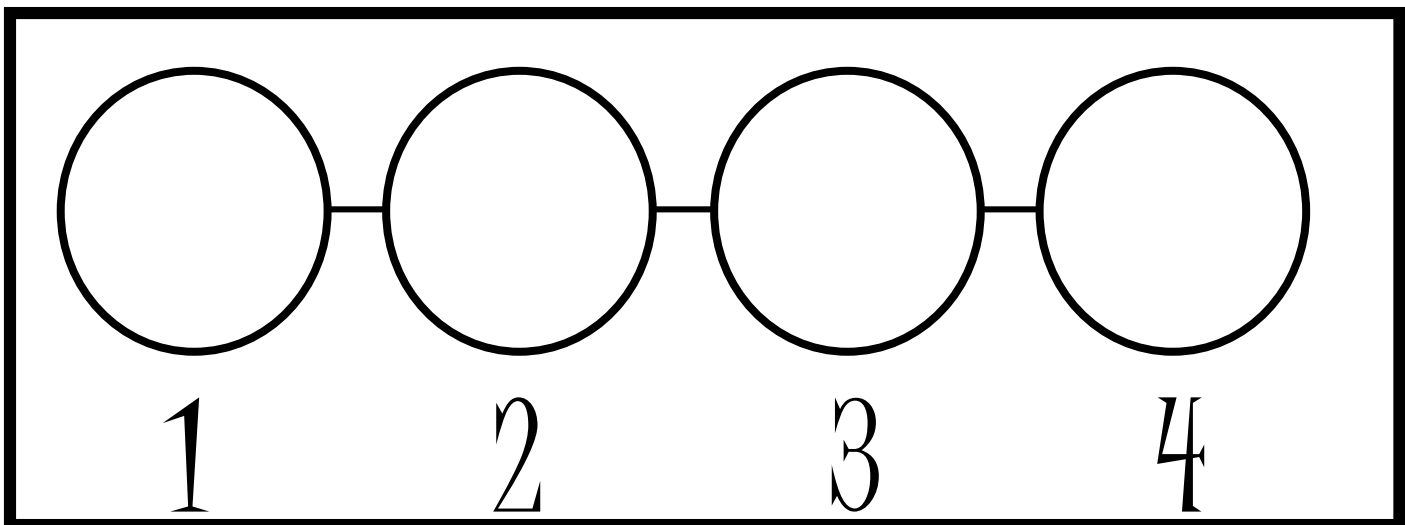
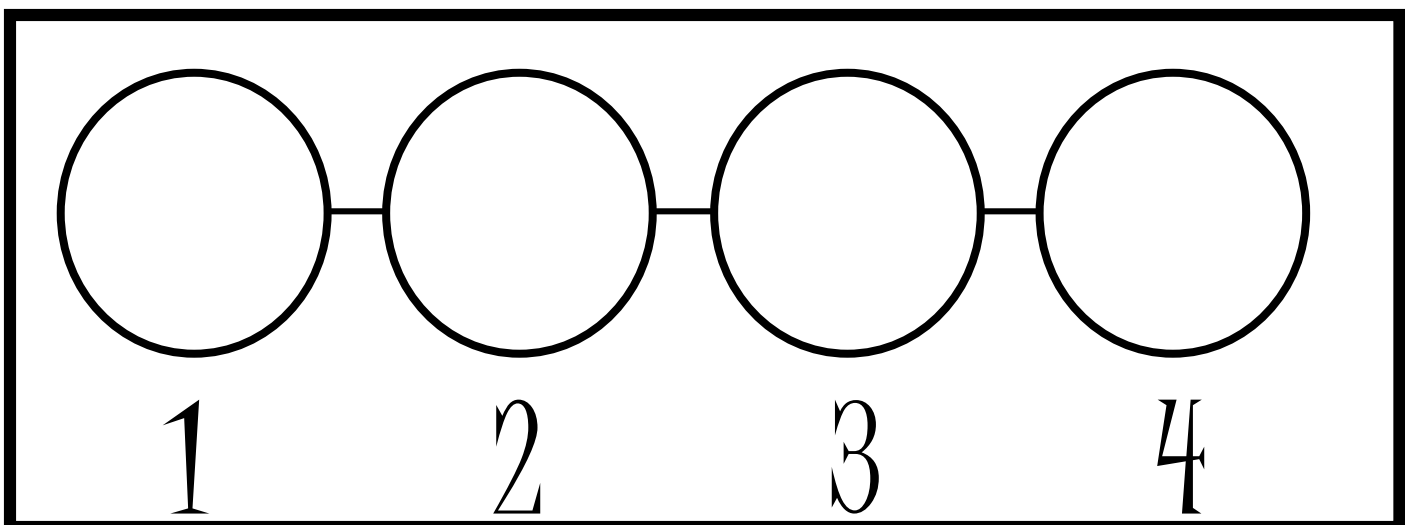
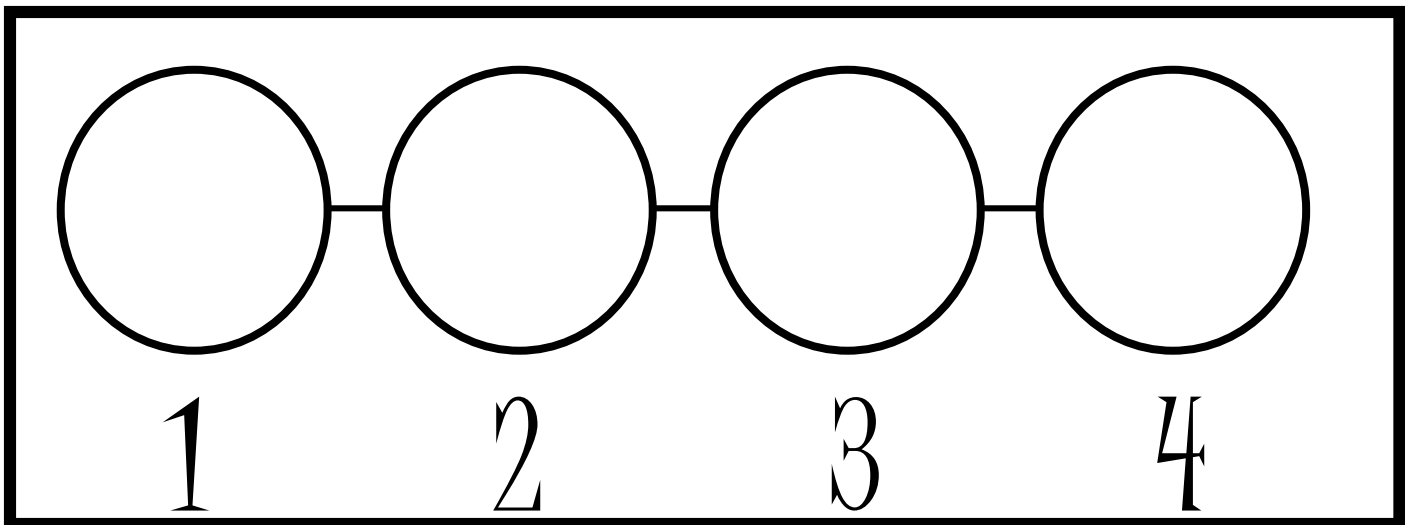
Remove all the markers from the game board one by one by jumping over them with other markers. You win when you only have one marker left, alone on the board.

## HOW TO PLAY:

1. Place a marker in every circle on your game board.
2. Remove one marker from your board. In classic Madagascar Solitaire, on the large board, it is the center circle that remains empty.
3. Jump one marker over another. You can't jump over multiple markers, you can only jump over one marker at a time and you have to jump over a marker, you can't jump over an empty space. And you must **land** in an **empty** circle.
4. After you jump over a marker, you take it off of the board. Then, jump again, using any marker, not only the one you just used.
5. If you end up with only one marker left on the board, you win! More than one marker left on the board and no jumps possible, try again!

## LET'S PRACTICE! SIMPLE SOLITAIRE

1. Have students play a game using the following 4 circle board, keeping track of their moves on the basic scorecard. If they won have them put a star on their scorecard. (This isn't just because you won, it's to help them start noting what moves lead to a winning game.)
2. Have them play again, starting with a new marker. Can they figure out what marker they need to start with in order to win?
3. After they figure out one winning move, can they figure out another? How many can they find? Are the winning moves similar? Have them always put a star next to a winning game.





Game #	
Marker Moved	New Position

Game #	
Marker Moved	New Position

Game #	
Marker Moved	New Position

Game #	
Marker Moved	New Position

# GETTING MORE ADVANCED!

## INTERMEDIATE SOLITAIRE

This version has more possible moves than our previous practice did. Markers can jump up and down or left and right, but **they still can't jump diagonally**.

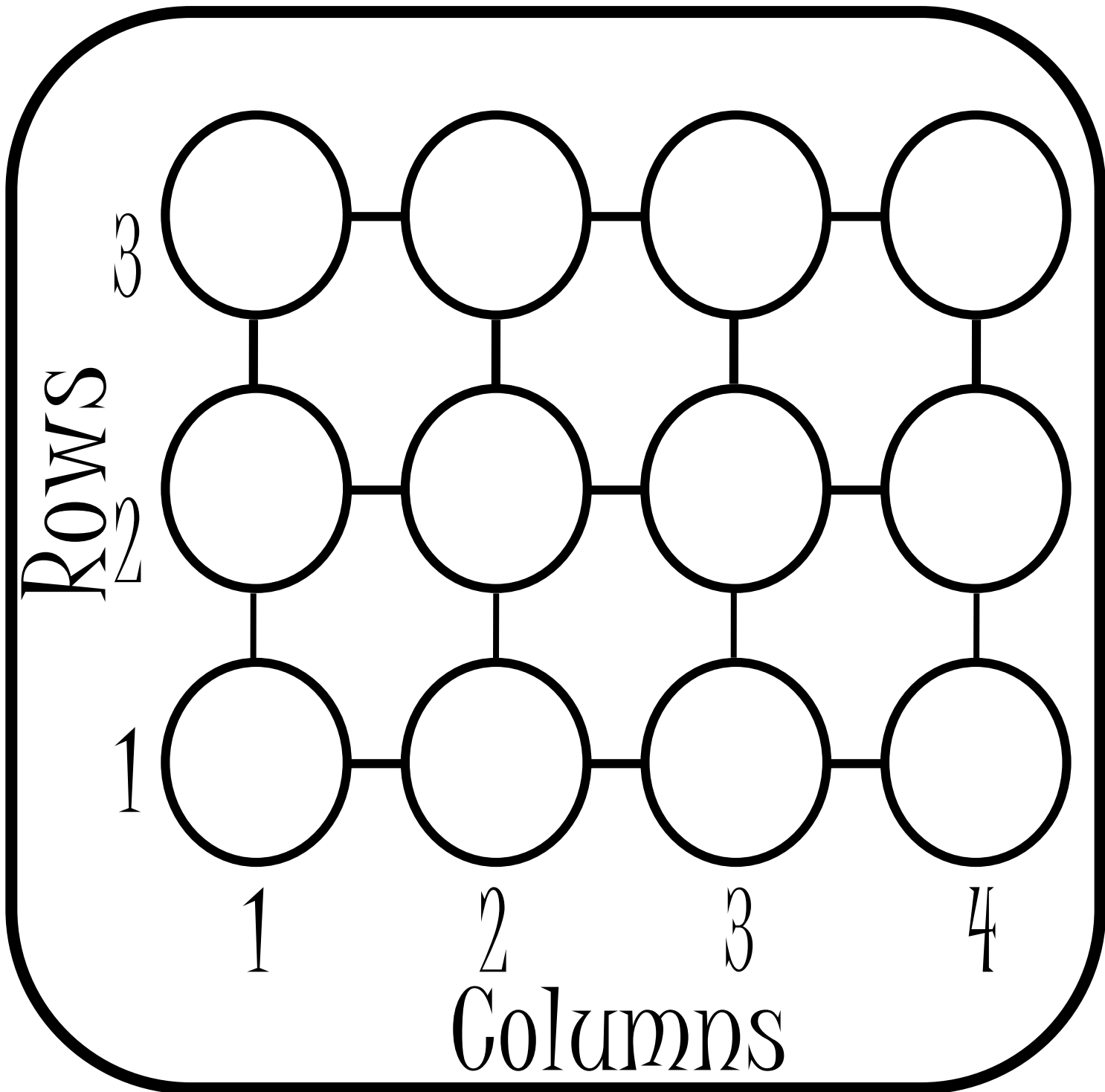
1. Have students play a few games, keeping track on their scorecards. Once again they will put a star by any games they win.



2. Now our concept of symmetry comes into play once again. This scorecard is symmetrical. When you fold it the circles on one side will match up with the other side. That fold marks a line of symmetry, each side is a mirror reflection of the other side of the board. There are two lines of symmetry on the board.

3. When students win a game have them see if they can win the game by using the symmetrical, mirror reflection move of the first move they made in their winning game.

Note: On the scorecard when students write down a column and row, they are using two numbers to identify an exact position. In math class teachers talk about (x,y) coordinates. On our game board the x-coordinate is the column number and the y-coordinate is the row number.



Marker Moved		New Position	
Column	Row	Column	Row

Marker Moved		New Position	
Column	Row	Column	Row

# NOW YOU'RE READY! ADVANCED SOLITAIRE

Madagascar Solitaire can be played on many different game boards and now you can give students a chance to design their own or master the true original.

They may want to try a board with four columns and four rows or a board with six columns and six rows, it just needs to stay symmetrical, what lines of symmetry can they find? Then they can play a game on whatever board they've designed.

For an extra fun challenge have them use the board on the next page, the one used in Madagascar.

The real Madagascar Solitaire game board features seven rows; each row has a set number of round grooves in which marbles are placed. The bottom and top row each have three grooves, the second rows each have five grooves, and the middle three rows each have seven grooves for a total of 37 grooves.



## SETTING UP THE GAME

- Set up the game by placing 36 marbles onto the game board. Every groove except for the center will have a marble on it. Do not fill up every groove or it will be impossible to play the game.

## STARTING MOVE

- Start a game of Madagascar Solitaire by moving one marble over another and into the open groove in the center of the board. For example, jump the second marble from the left of the center row over the marble directly to its right and into the space. Remove from the board the marble that was jumped over.

## EMPTY SPACES

- In order for a marble to move to an empty space, it first must jump exactly one other marble. You cannot jump one marble over two marbles into an empty space or move one marble into an adjacent empty space.

## DIRECTIONAL MOVEMENT

- You cannot jump marbles diagonally--across the board. You may only jump marbles vertically or horizontally. Marbles can be jumped more than once per game as long as they make a legal move.

## WINNING

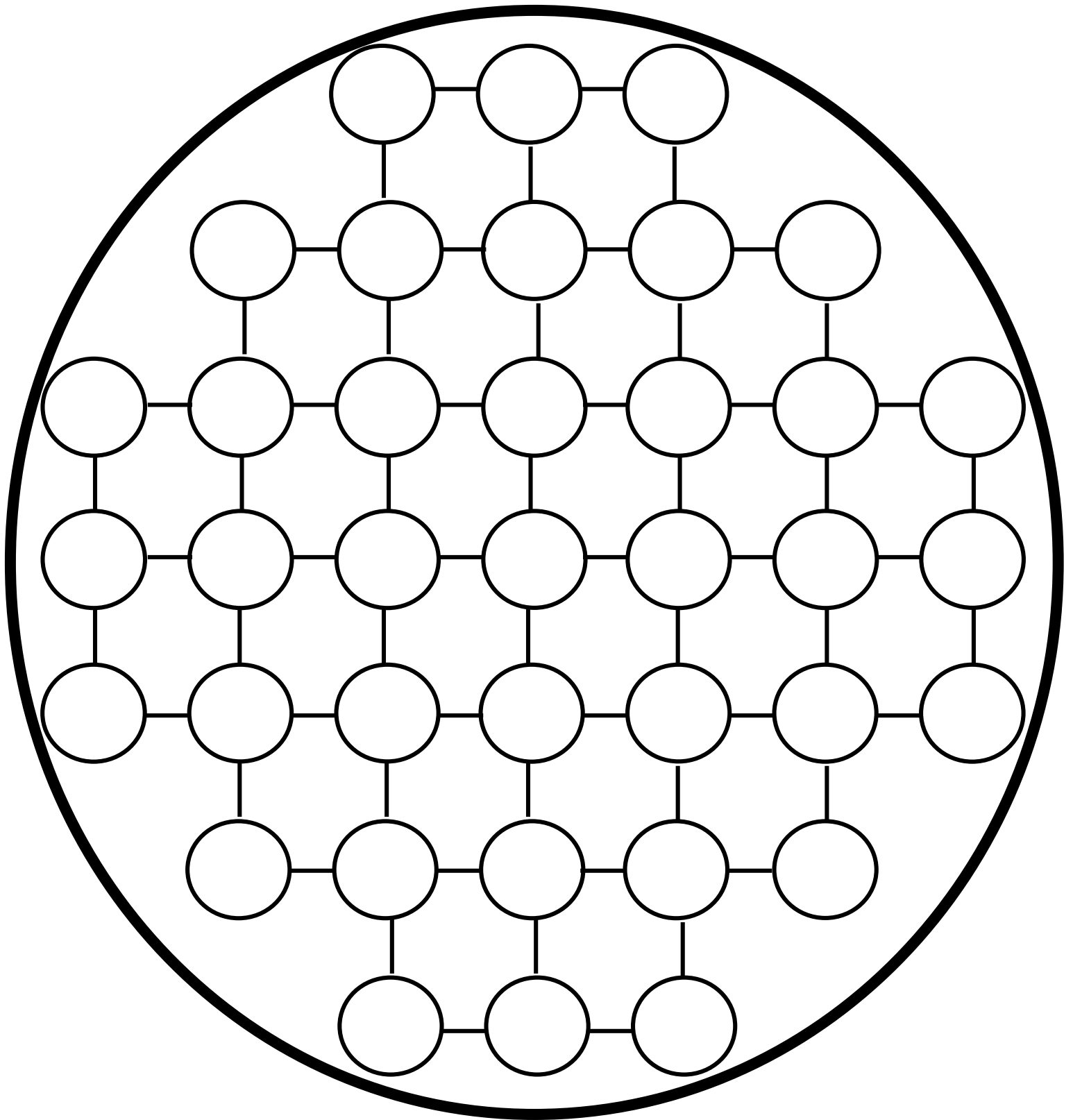
- Game play continues as you jump marbles, taking more and more off of the board. The goal of the game is to be left with only one marble on the Madagascar Solitaire game board.



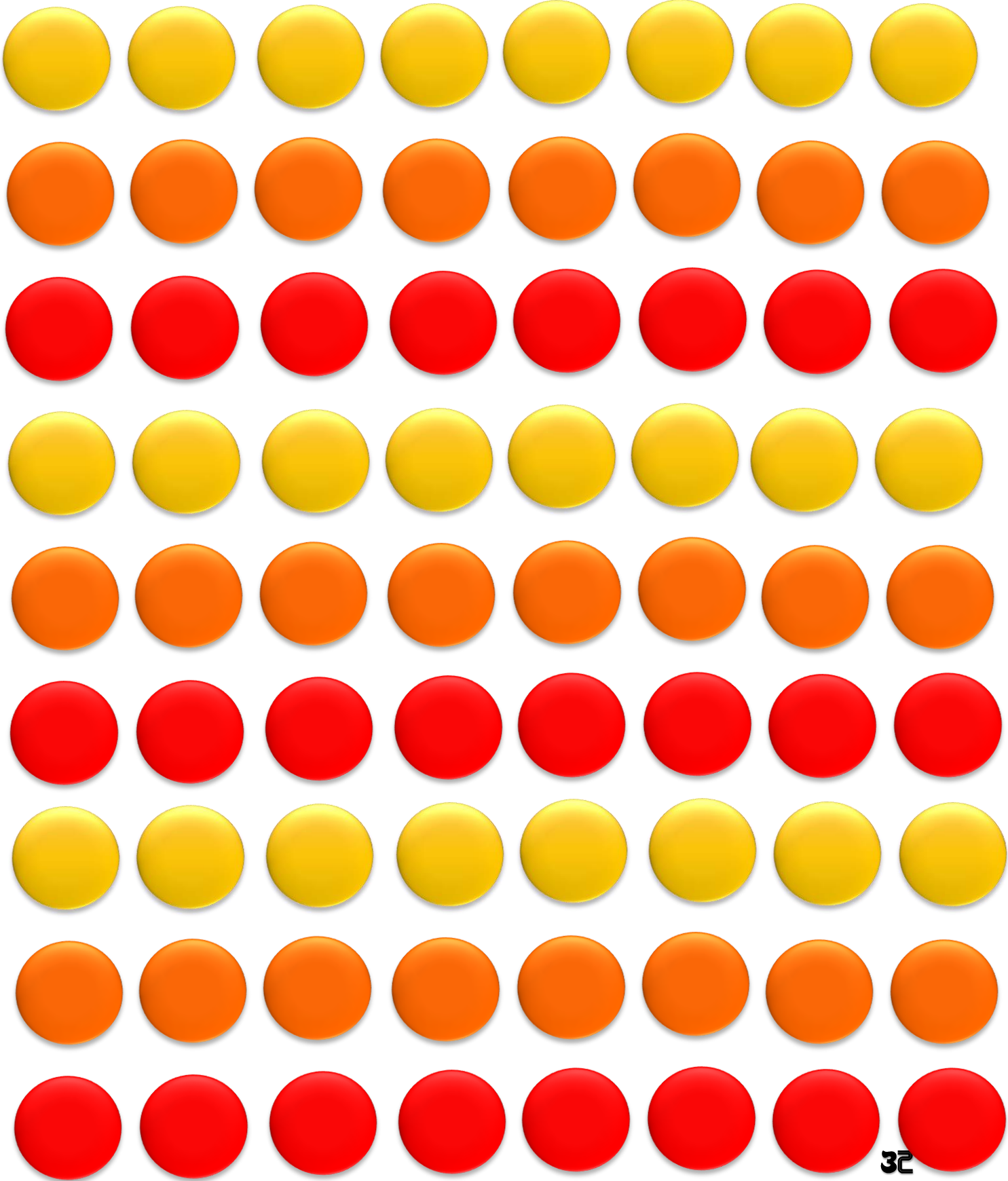
## TIP

- Work your way from one side of the board to the other. By jumping around to different spots, you may leave two or three marbles at complete opposite ends, keeping you from winning the game.

[dreamstime.com](http://dreamstime.com)



# SOLITAIRE 'MARKERS' OR BUTTONS





## DAY 12 K-8 STANDARD ALIGNMENT

K

- SL.K.1. Participate in collaborative conversations with diverse partners with peers and adults in small and larger groups.
- 2.1.1 Demonstrate understanding of concepts, principles, strategies and tactics as they apply to the learning and performance of games and physical activities.

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# SAMPLE WEEK 3 ACADEMIC VOCABULARY TO REINFORCE

K

- Order
- Pattern
- Beginning

- Ending
- Location
- Difference

- Position

1

- Sequence
- Predict
- Location

- Past
- Present
- History

- Data
- Solve
- Total

2

- History
- Custom
- Decision

- Conflict
- Observe
- Depend

- Outcome
- Symmetry
- Discussion

3

- Tools
- Import
- Distribution
- Factor

- Reasonable
- Cause
- Effect
- Line of symmetry

- Conclusion
- Threatened

4

- Ancient civilizations
- Adapt
- Chance

- Relationship
- Remainder
- Pattern

- Rules
- Compare
- Contrast

5

- Point of view
- Prompt
- Justify

- Rational
- Variable
- View

- Model
- Irregular

6

- Cause and effect
- Employ
- Relevant
- Power

- Random
- Simulation
- Similarity
- Control

- Variable
- Ancient

7

- Impact
- Speed
- Property

- Relationships
- Repetition
- Juncture

- Function
- Intercept

8

- Variation
- Debate
- Tension
- Order
- Exchange
- Adjacent
- Alternate

- Reasoning

# WEEK 3 SAMPLE SUPPLY LIST

## DAY 9

Per student

- Partner
- Game board
- Two different-colored sets of 12 game board pieces/markers (24 total)
- Pencils
- Printouts

## DAYS 10 AND 11

- Wiffle balls
- Wiffle bats
- Cones
- Printouts
- Pencils
- Score board flip charts (optional)

## DAY 12

- Printouts
- Markers/game board pieces
- Printouts
- Pencils

## SOURCES& REFERENCES

<http://www.otb-games.com/setting-up-game-tournaments-in-the-classroom/>

[https://www.teachervision.com/tv/printables/TCR/1557346046\\_147-148.pdf](https://www.teachervision.com/tv/printables/TCR/1557346046_147-148.pdf)

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<http://www.kids-sports-activities.com/ultimate-frisbee-rules.html>

<http://www.cyningstan.com/game/113/awithlknannai>

[https://en.wikipedia.org/wiki/Awithlknannai\\_Mosona](https://en.wikipedia.org/wiki/Awithlknannai_Mosona)

<http://mathinspirations.com/2014/06/25/awithlknannai/>

<http://orangejuliusrosenberg.blogspot.com/2009/05/wiffle-ball-pitches.html>

[http://www.ehow.com/list\\_6506689\\_madagascar-solitaire-rules.html](http://www.ehow.com/list_6506689_madagascar-solitaire-rules.html)

<http://orangejuliusrosenberg.blogspot.com/2009/05/wiffle-ball-pitches.html>

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