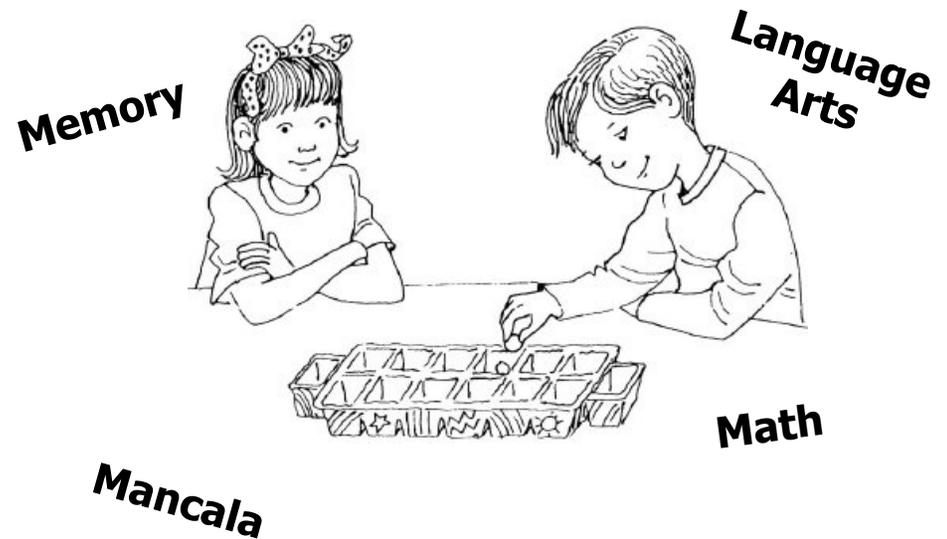


GAMES

**LEARNING GAMES
YOU CAN MAKE FROM
RECYCLED EGG CARTONS**



Before you make your egg-citing games:

Egg cartons with solid lids are best, but you can cover the holes of other cartons. There are many types of cartons — cardboard, foam, clear plastic. Some have tops as well as bottoms with “cups.” Different sizes are also available. Cartons with 18 cups allow you to make games with more options.

When writing the numbers/letters in cartons, put them on both the bottom and the back side of the egg cups so that the number in the cup can be read without removing objects from the cup.

Sticky notes (post-its) or the small colored dots used for filing, can be used to temporarily change what is written in each cup.

You might want to glue a piece of paper on the top of the carton lids to identify the cartons (0-9, 1-10, etc. or the name of a specific game).

Counters/Markers: Many objects can be used as counters/markers—beans, beads, buttons, pebbles, uncooked macaroni, etc. For some games you will need counters that can be written on or marked. If sets of markers are needed you can create the sets by making dots in two colors of paint, nail polish or permanent markers.

A rubberband is helpful for keeping the egg carton closed when not in use and keeping the counters in the carton.

After you have played a few egg-citing games, help your child create a new game.

EGG CARTON NIM

Strategy

To make:

You will need an 18 cup carton and 18 counters.

To play:

Place the carton vertically between two players, so there are 6 rows of 3. Place a counter in each row. Players take turns removing one, two or three counters from any one row. The player who is forced to remove the last counter loses the game.

Variations:

- A player is not allowed to remove the same number of markers as his/her opponent did during their previous turn.
- Players are allowed to remove only one or two markers from any one row during a turn.

NOW YOU SEE IT, NOW YOU DON'T

Memory

To make:

You will need a 12 cup egg carton, or an 18 cup carton for a more challenging game. You will need small objects equal to the number of cups in the carton. Objects could include: paperclip, different types of counters, marble, die, bean, different shape pastas, coins, a bean, etc.

To play:

One player places the items in the carton, one per cup, and closes the lid. The other player opens the lid and studies the contents for a set amount of time*. The first player then removes 1 object and shows the second player the carton (no other objects are moved). The second player tries to name the missing object. If successful, the guesser earns one point. The first player removes two more objects and the guessing process is repeated, with the guesser earning a point for each missing object correctly recalled. The process is continued until a total of 4 items have been removed at once. It is then the other player's turn. The player with the most points wins the round. The first player to win 3 rounds wins the game.

Note: You might want to allow younger players a longer time to study the objects.

EGG-CITING MATH GAMES

Labeling / game instructions:

Most of the math games use cartons labeled with one of these sets of numbers:

0-9 (use the numbers 5 and 9 twice) and write the numbers in the cups in random order.

1-10 (use the number 5 and 9 twice) and write the numbers in the cups in random order.

1-12 written in random order

1-6 using each number twice, written in random order, or use a 6 cup egg carton and write each number once.

If you make one each of the 0-9, 1-10 and 1-6 cartons, and two of the 1-12 cartons, you will be able to play most of the egg-citing games. Some of the games do not require any numbers to be written in the carton—for these games you can use a blank carton, or just ignore the numbers in any of the labeled cartons.

A few of the math games require specially labeled or modified cartons:

- Addition Toss
- Flip the Egg
- Sk-Egg Ball
- Guess That Number
- Bing-Egg-O
- Guarded Treasure

SHAKE & TAKE

Counting

To make:

Use a carton labeled with the numbers 1—10. You will also need about 40 small counters.

To play:

Place the counters in a pile between two players. Two rounds are played. In each round the first player places a counter inside the carton, closes the lid, and shakes it. He/she then opens the lid and checks to see which number the counter landed on. The player takes that number of counters, counting the amount aloud. The next player then takes a turn. After two rounds, players count all their counters. The player with the most counters is the winner.

Variations:

- Use more counters and play more rounds to count higher numbers.
- Change the rules so that the player who has accumulated the least counters is the winner.

THE MEMORY GAME

Memory

To make:

Gather 6 or more matching pairs of small objects (paper clips, shells, marbles, buttons, beans, dice, etc.) You will need two egg cartons. If the cartons are labeled, just ignore the numbers or letters.

To play:

In one egg carton, place 6 different objects in any of the cups, one object per cup. Study the objects carefully, then close the lid. Take the empty egg carton and try to place the objects exactly as they were in the first carton. Open the first carton to see how well you did.

With 2 players, the first player places the items and the second player tries to duplicate the pattern, then they switch for the next game.

Variations:

- Use fewer or more objects to change the difficulty of the game.
- Allow more than one object per cup.
- In a 2-player game, if a player correctly duplicates 6 items, in the next round use 7, then 8, etc. If the items are placed incorrectly, reduce the number of items by one in the player's next round.
- Vary the amount of time a player can study the objects before closing the lid to make the game easier or harder. Or allow younger players longer to study the objects and older players less time.

Setting up the game: Place the carton between players, lengthwise. The 6 cups closest to you are yours. The Mancala (end cup) to your right is also yours. Place 4 counters in each of the cups. The other cups and Mancala belong to your opponent.

To play:

Note: Mancala is played around the world, and there are many variations. If your child is familiar with another variation, you can play using those rules.

- ◆ The first player picks up all the counters in any one of his cups. The player then starts with the first cup to the right and drops one counter in each. If he reaches the end of his side, he drops one counter in his Mancala, then continues around to the other side of the board. He *does not* drop a counter in his opponent's Mancala.
- ◆ If a player places his last counter in his own Mancala, the player gets to take another turn. Example: If you start the game, a good play is to choose the cup 4th from the right. You then pick up 4 counters, dropping one in each cup and ending in your Mancala, giving you an extra turn.
- ◆ If the player drops his last counter on his side in an empty cup, he captures all the counters in his opponent's cup directly across from that cup. All captured counters, plus the capturing counters, get put in the player's Mancala.
- ◆ Players can't touch counters to count them. If you do touch them, you must play that cup.
- ◆ The game ends when one player runs out of counters on his side of the carton. When the game ends, the other player gets to take all his counters from his side of the carton and places them in his own Mancala. This means players need to determine if it is wiser to go out, or play longer, depending on how many stones are in the opposing players cups.

FILL 'ER UP

Counting / number sense

To make:

Use a carton labeled with the numbers 1-12. It may be easier for young children if the numbers are written in order rather than randomly placed. You will also need 78 small counters.

To play:

Give your child 78 small counters. Ask him/her to count them into the sections of the carton, according to the numbers (2 in the 2 cup, 3 in the 3 cup, etc.) If the counting is accurate, your child will use exactly 78 counters.

After the counters have been placed in the cups, take out combinations and show your child that they are equal. For example, empty the cups for 2 and 3, and notice that it is the same amount of items as the cup for 5.

EGG-O

This is the most versatile of the egg-citing games.

Addition, Subtraction or Multiplication Egg-O

To make:

Use either a 0-9, 1-10 or 1-12 carton. You will also need two small counters. *You can use an 18-cup carton to make a game with the numbers 2-19.*

To play:

Egg-O is played in rounds. During a round, each player takes a turn putting two counters in the carton, closing it, shaking it, then opening the carton to see what numbers the counters landed on. In the addition game a player's score is the sum of the two numbers. To play a subtraction or multiplication game, players find either the difference or product of the numbers. The player with the greatest number wins one point. The first player to get 5 points wins.

EGG-O VARIATIONS

- The player with the lowest number wins.
- Instead of acquiring points for each round, players keep track of their scores from each round. The first player to get a total of 50 (addition), 25 (subtraction) or 200 (multiplication) wins the game.
- Play for 10 rounds or 15 minutes. The winner is the player with the highest cumulative score.
- For young children, use one counter. The player with the greatest number wins a point.
- Roll a die labeled +,-,X, +,-,X to determine the operation to be used during that round (or use a standard die— 1 or 2 = add, 3 or 4 = subtract, 5 or 6 = multiply.) Or, have each player roll the die to determine his/her operation on a given round.

MANCALA

Players of all ages enjoy this strategy game.

To make:

You will need an egg carton with a solid top and 48 counters. Remove the top of the egg carton from the bottom by cutting along the hinge. Remove and discard any extra portion used to keep the carton closed when used to store eggs. Set aside the bottom of the carton. Cut the top of the carton in half, crosswise (cut across the short way.)

These pieces will be used as the end cups of the Mancala board. Slide the two halves of the top underneath each end of the bottom, extending beyond the bottom by a couple of inches. Fasten together using tape, staples or glue.

Note: If your child is just learning to play Mancala, it may be easier to begin by playing a game with less cups. Cut off two cups on the end to make a 10-cup beginners' game. (each player will have 5 cups).



Object of the game: Two players compete against each other to collect as many counters as they can before one of the players clears his side of the egg carton of all its counters.

OTHER EGG-CITING GAMES

Mancala
The Memory Game
Now You See It, Now You Don't
Egg Carton NIM

EGG-O VARIATIONS, continued

- For more challenging multiplication, shake 2 counters, multiply the numbers, then shake one counter and multiply the previous product by that number.
- Division—Players take turns shaking 3 counters. Two are chosen to form the dividend and the remaining one is the divisor. The remainder is dropped, and the player with the largest quotient for the round wins a point. You could also use 4 counters, forming a 3-digit dividend.
- Instead of shaking the counters in the carton, place the carton a short distance away from players, with the top up as a “backstop” and have them toss the counters into the carton, or use the counters like tiddlywinks to “shoot” the counters into the carton.

Fractions:

- For a comparing fractions game, use 2 counters to form a proper fraction. The smaller number is the numerator (top) and the larger number the denominator (bottom). The player with the fraction with the greatest value in each round wins a point. Or, form an improper fraction (larger number on top, smaller number on bottom), convert to a mixed number, and compare.
- Designate one player “ $\frac{1}{2}$ or less” and the other player “more than $\frac{1}{2}$.” After a proper fraction is formed the player that matches the fraction value earns a point.
- Use a 1-12 carton. Each player shakes one marker, then names the fractional part ($12 = \frac{1}{12}$, $8 = \frac{1}{8}$, etc.). The largest fraction wins a point.
- Fraction or decimal addition, subtraction or multiplication—write fractions or decimals instead of whole numbers in the cups.

ADDITION TOSS

Consecutive addition

To make:

You will need the bottoms only of three or more cartons. Randomly color the cups in 3 or 4 different colors. You will also need a small foam ball, ping pong ball, or other small object to throw.

To play:

Assign a value to each color cup; for example, green = 5, blue = 10, yellow = 25, red = 50. You can change the values for each game if you wish, but it is helpful to keep the order the same (such as green the least value, red the highest, etc.) Choose a goal number. The higher the cup values, the higher your goal number should be. Place the cartons next to each other. You can tape or staple them together if you wish. Players stand about 4 feet away from the cartons and take turns tossing the object into the cartons. Each player keeps a running total. The first player to reach the total wins the game. If the object lands outside the cartons, the player's score for that round is 0.

Variations:

- Designate one or more cups bonus spaces, If the object lands in one of these cups, the player gets an extra turn.
- Designate one or more cups subtraction spaces. If the object lands in one of these cups, the player must subtract the value from their total.
- Play on stairs, with each carton on a different step.

BEGINNINGS, MIDDLES & ENDS

Vocabulary

To make:

You will need a 12 cup carton for this vocabulary game, along with six markers and a 1-6 die (or put the numbers 1-6 on small cards and turn the cards face down). Write these letters, one per cup, on the back side of the cups—a, e, i, b, c, d, f, g, h, j, k and l. On the bottom of the cups, write these letters, one per cup—o, u, y, m, n, p, r, s, t, v, w and z. .

To play:

- Players alternate taking turns. A turn consists of:
- Stating whether the player will be using the letter on the back or bottom of the cups for that round.
 - Rolling the die (or picking a card)
 - Placing that number of markers in the carton, closing the lid and shaking it.
 - Opening the lid and determining what letters have been generated.
 - The player then attempts to name a word that begins with the letter, a word that ends with the letter, and a word that has the letter in the middle of the word (any position between the first and last letter). For each correct word he/she earns a point. It is possible to earn up to three points with each letter. It is possible more than one marker landed in the same cup. If so, the player treats it as two different letters, and must name different words for each marker.
 - Play 5 rounds. The player who earns the most points is the winner.

B-EGGLE

A “Boggle” variation

To make:

You will need an 18 cup carton and 14 wooden cubes. Label the cubes:

L R Y T T E	V T H R N E	E G H W N B
S E O T I S	A N N E S G	I D S K T T
O A T J X L	M T O I C N	B F P K F S
Q u L D E R A	H C P T A S	M N S Z E U
D E R N R T		

Randomly write vowels in the cups—5 E’s, 4 A’s, 3 each O and I, 2 U’s and one Y.

To play:

Each player will need a piece of paper and pencil. Players take turns rolling a letter cube in their hands then dropping it into any cup, until 14 cups have been filled. 4 cups will contain a written vowel. Set a time limit (this can be longer for younger players and shorter for more skilled players). Players search the carton for hidden words formed from adjoining letters. Letters must join in the proper sequence to spell a word - horizontally, vertically, diagonally, to the left, right, or up and down. No letter cube or vowel written in the carton may be used more than once within a single word.

FLIP THE EGG

Addition

To make:

You will need the bottom only of one 12 cup egg carton, a 12” stick, string, foil and tape. Turn the carton over so it is face down. Tape the stick to the bottom of the carton with at least 6” sticking out—this will be the handle for the game. Make a small hole in the middle of the end of the egg carton opposite the end with the stick. Thread a piece of string through the hole and tie a knot. Make sure the string is long enough to reach all the cups in the carton. Form a foil ball small enough to fit into the cups, but not too small. Tape or tie the ball to the end of the string. Number each cup of the carton 1-12.

To play:

Players take turns holding the carton by the stick handle with the holes facing up and the string with the ball on it hanging down. Flip the ball up into the air and try to get it to fall back down into one of the cups. That number is your score for the round. Play a set number of rounds, or until a number goal is reached.

Variations:

- For a one player game, try to get the highest score possible in 10 flips.

EGGS PLUS

Addition

To make:

Use a carton labeled with 0-9, 1-10 or 1-12 and a counter.

To play:

Players take turns choosing a number from 1-10. They then take turns placing the counter in the carton and shaking it. The carton is opened to reveal what number will be added to the chosen number. For example, if the number for the round is 5 and a player shakes an 8, his/her score for that round is 13. The player with the highest score for each round earns a point. The first player to earn 6 points wins the game.

Variations:

- Use a die to determine the number added during each round.
- Players keep a cumulative total of their number from each round. The first player to reach 100 wins the game.

SCRAMBLED EGGS

Creating words

To make:

You will need an 18 cup carton. Randomly label the cups t, t, n, s, s, r, h, l, d, c, m, f, p, g, w, y, b, k. You will also need 6 counters and 2 wooden cubes. Label the first cube a, e, i, o, u, e and the second a, e, i, o, u. Draw a star on the last side.

To play:

Each player will need a piece of paper and a pencil. The six counters are placed in the carton. With the carton closed, the counters are shaken. The carton is opened and the letters selected read. Each player writes down the letters. The vowel cubes are then rolled and players write down the two vowels. If the star is rolled, the cube is rolled twice more to give a total of 3 vowels for the game. Players then try to form as many words as possible with the eight letters. Words must be at least 3 letters. Letters can only be used once in a word (unless counters land on two t's or s's, or the same vowel is rolled more than once). Players get one point for each word formed. The player with the longest word gets 3 bonus points.

Variations:

- Use fewer or more counters.
- Players only earn a point for words no other player has formed.
- Change the rules to allow words with a minimum of 2 letters.

WORD BUILDER

Building words

To make:

You will need one 12 cup egg carton. You also need four blank wooden cubes. Write one word ending each in the cups: -ack, -ail, -ake, -an, -ap, -at, -ay, -ick, -in, -ing, -ip, and -op. On two dice write 5 letters, one to a side: b, c, f, h, l, m, p, r, s and w. On the remaining sides (one on each cube) write "wild." Using a different color marker, write these combinations, one per side, on the remaining cubes: br, fl, sh, sn, pl, cl, str, tr, th, ch and st. Write "wild" on the one remaining side.

To play:

Decide if you will play with the two single letter dice, the blends dice or all four. Players take turns placing the dice in the carton, shaking it and opening the carton. The player then creates a word out of each beginning and ending and players decide if they are "real" words. Each real word earns a player one point. If a die lands with "wild" up, the player can earn a point by naming any word that ends with that combination. At the end of 6 rounds, the player with the most points wins the game.

Variations:

- Use an 18 cup carton and add the word endings -ain, -ank, -eed, -ight, -ine and -ot.
- Make additional dice with the word beginnings scr, sl, wr, sp, gr, sk, cr, dr, spr, bl, sk and pr.
- Play until one player has created 24 (2 dozen) words.

SK-EGG BALL

Consecutive addition

To make:

You will need the bottom only of any size egg carton and two pieces of cardboard the length of the egg carton. You will also need a small lightweight ball (styrofoam, foam or ping pong). Label each cup with a number (1-12, 0—55 by 5's, 0—22 by 2's or other combination). Attach one piece of cardboard to the back of the carton and the other to the front of the carton to form a ramp.

To play:

Players take turns rolling the ball up the ramp and into a cup. This determines the player's score for the round. The player with the highest cumulative score after 10 rounds wins the game. If the object doesn't go into a cup the score for that player is zero.

Variations:

- Make some game cards from index cards or other small pieces of paper. Write one instruction on each card: 2X, 3X, 4X, +1, +2, +3, -1, -2, -3, extra roll, 2 extra rolls, lose a turn, etc. After a player rolls a number, he/she chooses a card and follows the directions to determine his/her score for the round.

EGG CUP FILL-UP

Addition to 12

To make:

You will need two cartons labeled with the numbers 1-12. You will also need a 1-6 carton and 24 small counters.

To play:

Each player takes a 1—12 carton. Players take turns shaking the 1-6 carton with 2 counters in it and putting a counter in the cup or cups that equal the numbers selected (but not the numbers rolled). For example, if a 6 and 3 are rolled, counters could be put in 9 and 0 or 5 and 4, but not 6 and 3. If a cup already contains a counter, it cannot be used again. It may not be possible to place a counter, or counters, during each turn. The first player to fill all his/her cups wins.

Variation:

- Make cards from index cards or small pieces of paper. On each card write an addition or subtraction problem for which the sum or difference is 0 -12. Make at least 2 cards for each number. During each turn a player chooses a card and can fill any combination of cups which equal the difference or sum, except for the combination on the card.

BUILD A WORD

Word families

To make:

You will need an 18 cup carton. Randomly label the egg cups f, b, l, t, h, m, s, g, r, p, w, n, d, j, c, b, y and f. You will also need 4 wooden cubes. On the cubes write:

at	et	ig	in	ot	ow
ag	an	ap	ay	ug	ut
ack	ail	ave	ine	ink	ore
ake	ame	are	ash	ate	ear

To play:

Players take turns placing the four letter cubes in the carton, closing the lid and shaking it. The player then opens the carton and attempts to form words by combining the beginning letter in the cup with the word ending on the cube. One point is earned for each “real” word. The first player to earn 20 points wins the game.

Variations:

- Instead of placing all four cubes in the carton and shaking it to generate combinations, allow players to shake each cube in their hands, then toss it into any cup.

WORD TARGET

Building words

To make:

You will need two 12 cup cartons and two tiddly-wink type markers. Randomly label the cups of one carton with the letters b, c, d, g, h, r, s, t, l, m, n, and p. Randomly label the cups of the second carton ad, ag, an, at, ay, et, ig, it, og, op, ot and ug.

To play:

Place the two cartons, open, on a flat surface facing the players. Players take turns attempting to flip (or toss) a marker into each carton. Players take as many turns as needed to get a marker in each carton. The player then puts the beginning letter and word chunk together. If it is a real word, he/she earns a point. Players continue to take turns until one player reaches 3 points.

Variations:

- Use one or more 18 cup cartons. Add f, j, v, w, y and k to the letter carton and ut, un, ix, ip, en and ib to the word ending carton.
- Instead of flipping or tossing the marker, put one marker in each carton, close the lids and shake them to generate the word parts.

ADD ON

Consecutive addition

To make:

Use a carton labeled with the numbers 0-9, 1-10 or 1-12. An 18 cup carton can be used to work with larger numbers. You will also need three counters and paper and pencil.

To play:

In each round, players take turns placing three counters in the carton, closing the lid, shaking it, then opening the carton. The player then adds the three numbers the counters landed on and writes down the sum. After five rounds, the players each add their five sums. The player with the greatest total wins the game.

Variations:

- Use four or more counters to work with higher sums.
- Players use the three numbers from each of their shakes to form a three-digit number, using the numbers in any order they choose. After three rounds, each player adds his/her numbers, and the player with the greatest sum is the winner. You could use only two counters and form two-digit numbers for an easier game.

EGG-A-ROUND

Addition to 50

To make:

You will need one carton labeled with the numbers 1-6 (the shake carton) and one carton labeled with the numbers 1-12 (the playing carton). You will also need a different color or shape counter for each player, one additional counter for the shake carton, and paper and pencil.

To play:

Each player takes a counter and puts it on any one of the numbers in the playing carton. The game is played as a series of six rounds. To begin each round, a player places a counter in the shake carton, closes it, shakes it, and opens it to see which number the counter landed on. All players then move their counters that many spaces, clockwise around the carton, from where their counter last rested. The number on which they land is their score for that round. Players add their scores cumulatively from round to round. The player with the highest cumulative score after 6 rounds is the winner.

Variations:

- The winner is the first player to get a score greater than 50.
- Multiplication—a player's score for the round is the number selected on that round times the number on which the player's counter lands.

C-V-C MAKER

Consonant—Vowel—Consonant words

To make:

You will need three 12 cup cartons and three markers. Randomly label the cups of one carton with two each a, e, i, o and u. Label the other two cups with a star. Write "V" on the carton cover. Make two cartons with consonants in the cups— in the first carton (label "C1") use b, c, d, f, g, h, l, m, p, r, s, t; in the second carton ("C2") b, d, g, l, m, n, p, r, s, t, w, y.

To play:

Line up the cartons in C1, V and C order, with one marker in each carton. Players take turns shaking the three cartons and returning them to their position, then opening the cartons and writing down the CVC word formed. If the marker lands on a star in the vowel carton the player can use any vowel to try to make a word. If the word formed is a real word, the player earns a point. The first player to earn 5 points wins the game.

Variations:

- Use one 18 cup carton for the consonants—b, c, d, f, g, h, k, j, l, m, n, p, r, s, t, v, w, y. Put two markers in this carton before shaking it. The player has the choice of which consonant to use in which position.

C-V-C SHAKE

Consonant—Vowel—Consonant words

To make:

You will need a 12 cup carton. Randomly label 11 of the egg cups with vowels: 3 each a and e, 2 each i and o, and 1 u. Put a star in the last cup. You will also need 5 wooden cubes. On the cubes write:

c__t, b__t, d__d, f__n, h__t, p__n,
b__d, n__t, t__n, j__t, f__t, m__d
h__p, l__d, l__p, p__g, w__g, m__t
d__g, m__p, l__g, p__p, p__t, t__p
b__g, c__b, c__p, r__g, l__t, g__t

To play:

Players take turns placing the five word cubes in the carton, closing the lid and shaking it. The player then opens the carton and attempts to form words by adding the vowel in the cup to the word. The star space can be any vowel of the player's choosing. One point is earned for each "real" word. The first player to earn 20 points wins the game.

Variations:

- Instead of placing all five cubes in the carton and shaking it to generate combinations, allow players to shake each cube in their hands, then toss it into any cup.

RACE TO 100

Addition, place value, probability

To make:

Use a carton labeled with the numbers 0-9. You will also need two counters.

To play:

The first player places the two counters in the carton, closes the lid, shakes the carton, then opens it. He/she uses the numbers generated to form a two-digit number. For example, 5 and 2 could be 52 or 25. The same player repeats the process, forming another two-digit number, and adding it to his/her first number. The process continues until the player feels he/she is as close to 100 as they are likely to get. Other players take a turn. The player closest to 100 without going over is the winner of the round. The player who goes first during each round should rotate among players. The first player to win three rounds wins the game.

Variations:

- Use one counter and race to 25.
- Use three counters and race to 1000.

SHAKE, RATTLE & ADD

Addition

To make:

Use a carton labeled with the numbers 0-9 or 1-12. You will also need two counters, and paper and pencil for each player. A kitchen timer or watch/clock with a second hand is also needed.

To play:

This game is a race to add numbers, whose sums are then added to get a grand total. Each player has one minute to generate as many numbers as possible by putting the counters in the carton, shaking the closed carton, opening it and stating a number sentence (such as $5+2=7$). He/she then writes down the sum only, and repeats the process as many times as possible in one minute. At the end of one minute, another player takes a turn. When all players have had a turn, each player adds up his/her numbers, then checks the addition of other players. The player with the greatest sum is the winner.

Variations:

- Play music for this game. When the music stops, the player's turn is over.
- Use more cartons and have all the players shake and record numbers at the same time.
- Multiply the two numbers generated and write the product down. Add the products to get each player's score.

CRACKED UP WORDS

Sight words

To make:

Use a 12 or 18 cup carton for this game. You will also need a counter. In two cups (three for an 18 cup carton) draw a cracked egg—it is best if they are not close together. Label the remaining cups with a sight word. For a more versatile game, write words the small round stickers used for filing so they can be easily changed. ,

To play:

Players take turns placing the object in the carton, closing it, shaking the carton, opening it and reading the word where the object landed. As long as he doesn't get a broken egg, the player can choose to continue to play, getting one point for each word read correctly. However, if the object lands on a broken egg before he decides to end his turn, the player loses all his points for that round. Play until one person gets 12 points.

SHAKE & RHYME

Rhyming words

To make:

You will a 12 cup carton. Label the cups each with the numbers 1,1, 2, 2, 2, 3, 3, 3, 3, 4, 4, 5 (in any order). You will also need 4 wooden cubes. On the cubes, randomly write the words BACK, BAG, CAKE, FAN, TANK, CAP, SAY, CAT, NEW, SEED, YELL, TEST, NEW, SICK, NIGHT, FILL, PIN, NINE, KING, LIP, LOCK, HOP, HOT, MY.

To play:

Players take turns selecting a word cube and placing it in the numbered carton. The player shakes the carton, opens it, and reads the word that is face up and the number of the cup in which it landed. The player then attempts to name that many words which rhyme with the word on the die. A player gets one point for every rhyming word named. The first player to get 25 points wins the game.

EGG RACE

Addition facts to 20 or 24

To make:

Use a 1-10 or 1-12 carton. You will also need one counter and paper and pencil for each player.

To play:

Players take turns shaking the counter in the closed carton, opening it and announcing the number the counter landed on. This is done a total of 20 times. As the numbers are announced, each player writes them down in a straight column. The players then draw a line parallel to the column of numbers. These numbers now form a race track. When all players are ready, a 21st number is generated by shaking the egg carton and is announced. Players then race to see who can be the first to add that number to each of the 20 numbers on their race track. The players write each sum next to the number on the other side of the line. The first player to finish, with all correct answers, is the winner.

	+7
2	9
10	17
3	10
7	14
5	12
8	15
1	8
3	10
6	13
5	12
2	9
7	14
4	11

Variation:

- Multiplication—Instead of adding, players can multiply the 21st number by each of the other numbers.

EQUATION FILL-UP

Addition and subtraction to 12

To make:

You will need two cartons labeled 1-12. You will also need 24 small counters. Make game cards from index cards or small pieces of paper. On each card write an addition or subtraction problem for which the sum or difference is 0-12. Make at least 3 cards for each number.

To play:

Each player takes a 1—12 carton. Players take turns turning over a card, solving the problem, and putting a counter in the cup or cups that equal the sum or difference. If a cup already contains a counter, it can't be used again. It may not be possible to place a counter during each turn. The first player to fill all his/her cups wins.

SYLLABLE EGGS

Identifying & counting syllables

To make:

You will a 12 cup carton. You will also need one counter. Randomly label the cups 1, 2 and 3 (4 of each number). On small pieces of paper, write at least 8 words each with 1, 2 and 3 syllables (for example: 1—the, 2—zip/per, 3—um/brell/a). Write the number of syllables on the back of each card.

To play:

Scatter the word cards between players with the word side up. Players take turns placing the counter in the egg carton, shaking the carton and opening it to reveal the number selected. He/she looks for a word with that number of syllables. If the player picks up a card with the correct number of syllables, he/she keeps the card. If there are no more words with that number of syllables, play passes to the next player. When all the cards have been taken, the player with the most cards wins.

Variations:

- Use a two sided counter. Designate one side single turn and other side double turn. If a player shakes the box and opens it to reveal the “double turn” side, he/she gets to shake again after completing the original turn. (Limit: one extra shake per turn).
- Use the numbers 1-4 in the carton cups and add four syllable words to the cards.

EGG CARTON PHONICS

Phonic sounds

To make:

You will need an 18 cup carton. You will also need one counter. Randomly label the cups b, c, d, f, g, h, j, k, l, m, n, p, r, s, t, v, w and z..

To play:

Players take turns putting the counter in the carton, shaking it and opening the carton to reveal the letter selected. The player then says the sound the letter makes and uses it in a word.

Variations:

- For a competitive game, use a two sided counter. Designate one side single turn and other side double turn. If a player shakes the box and opens it to reveal the “double turn” side, he/she gets to shake again after completing the original turn. (Limit: one extra shake per turn). Players receive a point for each successful turn. If a player cannot sound out the letter and / or name a word, the other player can steal the point by doing so.

MORE OR LESS

Subtraction to 10

To make:

Use an egg carton labeled with the numbers 1-10. You will also need two counters and a 2-sided marker. Label the 2-sided marker + and —.

To play:

Players take turns placing the counters in the carton, then closing and shaking it. The player then opens the carton, reads the numbers the counters landed on, and writes down a subtraction number sentence with the smaller number subtracted from the larger number. After both players have written their number sentence, toss the 2-sided marker. If + comes up the player with the greatest difference wins a point. If — is tossed the player with the smallest difference wins a point.

Variations:

- Do not use the 2-sided marker after each round. Instead, each player’s score for the round is the answer to his/her equation. After 3 rounds, players add their score. The 2-sided marker is then tossed. If it is + the player with the greatest sum wins; — means the player with the smallest sum wins.

BROKEN EGGS

Subtraction to 12

To make:

You need one egg carton for this game, but it does not need to be labeled with numbers. If you use a numbered carton, just ignore the numbers in the cups. You will also need 12 counters which are either two-sided, with different colors on each side, or can be marked on one side. Decide which color, or side, will be “broken” eggs and which are “whole” eggs.

To play:

Players take turns placing all twelve counters in the carton with the “whole” side up, then closing the carton and shaking it. The player then opens the carton and looks inside to see how many eggs “broke” (have counters with the broken side up). He/she then figures out how many whole eggs are left, saying the number sentence aloud, such as “ $12 - 5 = 7$. *I have 7 unbroken eggs.*” This is the player’s score for the round. During each round, the player with the most unbroken eggs wins a point. The first player to earn 6 points wins the game.

Variations:

- A player’s score for each round is the number of unbroken eggs. A running total is kept for each player. The first player to get two dozen (24) unbroken eggs is the winner.

EGG-CITING LITERACY GAMES

Most of the literacy games use egg cartons customized to that particular game. If you have a limited number of cartons, consider using the sticky portion of post-it notes to label them—they can then be easily removed and replaced. The adhesive colored dots used for filing also work well. If you place the old dots on wax paper, they can be reapplied and reused. As with the math games, if there is a game you use often you might want to label the back of the cup as well as the bottom to make reading them easier.

If you do not have the 18 cup carton required for many of the games, tape together two 12 cup cartons and add more letters to the additional cups.

To make a two sided counter simply mark one side of a counter or apply a sticker to one side.

GUARDED TREASURE

Ordering decimals

To make:

You will need two blank cartons (or ignore the numbers in numbered cartons) and sticky notes or cardstock strips about 1" X 2". Using the sticky notes/cardstock make two identical sets of 12 cards: one with "crown jewels" and the rest with decimals such as : .05 .10 .15 .250 .40 .50 .5, .600, 0.75 0.8 0.95.

To play:

Each player takes a carton and a set of cards and puts all 12 cards ("knights") in different sections of their carton. After you play the game a few times you will develop a strategy for card placement. Players should place the long sides of their cartons together so neither player can see the other's cards. Player 1 may move one of his/her knights into the opponent's court. If the section is empty, the knight may freely occupy the section. If the cup is occupied, the players must compare the value of the two knights. The knight with the greater value occupies the section and the other knight is taken from the game. If the knights are equal in value, both knights are removed. Any knight can overtake the crown jewels. All the knights may move freely about the board, but the crown jewels must remain in one spot throughout the game. For each turn, every player must make a move. A player may make only one move per turn. The first player to uncover the opponent's crown jewels wins the game.

EGG BUMP

Simple addition and subtraction

To make:

You will need 2 egg cartons. Use a carton labeled with the numbers 1-6 as the "shake" carton and another labeled with the numbers 1-12 for the "score" carton. You also need 26 counters that can be divided into two sets (by color, shape or type).

To play:

Give each player a set of 12 counters. Put the two remaining counters in the Shake carton. To begin a turn, a player shakes the closed Shake carton, and opens it to see where the counters landed. The player calculates the sum (addition) and the difference (subtraction) of the two numbers. Then the player puts his/her counters in the Score carton: one on the number corresponding to the sum, the other on the number equal to the difference. If one of the player's own counters is already on one of these numbers, the player leaves the original counter in place and does not place another one. If the space is occupied by an opponent's counter, the player removes it, and replaces it with his/her own counter. After 10 rounds, the player with the most counters in the Score carton wins.

Variation:

- Players find the sum of all the numbers on which their counters are on in the score carton. The player with the largest sum wins.

TARGET 20

Addition, subtraction

To make:

Use a carton labeled with the numbers 1-6 for this game, and one counter.

To play:

The goal of the game is to be the player who reaches a total of exactly 20. The first player puts a counter in the carton, closes the lid, shakes it and opens the carton. He/she calls out the number the counter landed on. The other player repeats the process, but adds his/her number to the previous one. Players take turns in this way, adding their number to the previous total. However, if by adding their number the total would be over 20, they must subtract their number instead. The first player to reach exactly 20 wins the game.

Variations:

- Play with three players with a target of 30.
- Use two counters for each shake and add the numbers together before adding/subtracting it from the running total. Play to a target of 100.
- Use a 1-10 or 1-12 carton and play to 50.
- Start with a target number and play in reverse, counting down to zero. If the result of subtracting a number would result in a number less than zero, the number is added to the previous total.

FRACTIONED EGGS

Addition & subtraction of fractions or decimals

To make:

You will need a 0-9 cartons and a blank carton (or you can use a numbered carton and cover up the existing numbers). You will also need small sticky notes and 3 counters. Write a decimal with tenths, hundredths and thousandths (for example, 4.673 or .927) on each of 12 small sticky notes and place one in each of the cups of the blank carton.

To play:

Players take turns shaking the 0-9 carton with one counter in it before each round. If an odd number is selected, players will add during the round. If an even number is selected they will subtract. Players then take turns shaking the decimal number carton with two counters in it and performing the operation for the round. If subtraction was performed, the player with the smallest number wins the round. If addition was performed, the player with the greatest number wins the round. After 12 rounds, the player who has won the most rounds wins the game.

Variation:

- To practice fraction skills, write a fraction on the sticky note for each cup.

EGGS-ACT FRACTIONS

Forming and comparing fractions

To make:

You will need two egg cartons for this game, but they do not need to be labeled with numbers. If you use a numbered carton, just ignore the numbers in the cups. You can use a carton with other than 12 cups, but use the same size for each player. You will need 24 small counters (this will vary with the size carton used).

To play:

Divide the counters evenly between two players and give each player a carton. Each player drops one counter into each section of his/her egg carton, closes the carton, and shakes it. Players then open their carton and count the number of sections that now contain a counter, and write that number as a fraction. The number of sections containing a counter is the numerator, and the total number of sections is the denominator. For example, if a 12 cup carton is used and there are counters in 7 cups, the fraction would be $7/12$. Players compare the fractions. The player with the greater fraction scores a point. Play continues until one player gets 5 points.

200

Addition, subtraction, odd/even

To make:

Use a carton labeled with the numbers 1-10, 1-12 or 0-9 for this game. You will also need one counter and paper and pencil.

To play:

Each player starts with 50 points. Player one places the counter in the carton, closes the lid, shakes it, and opens it to reveal the number selected. If the number is even, this number is added to that player's 50 points. If the number rolled is odd, it is subtracted from their 50 points. Players continue to take turns selecting a number and adding it to, or subtracting it from, their points until one player reaches or exceeds 200. If a player goes below zero, their accumulated score becomes zero.

Variations:

- Use two counters and subtract the smaller number from the larger number before adding it to your cumulative total.

NUMBERS UP

Addition, subtraction, problem solving

To make:

You will need a carton labeled with the numbers 1 – 6 and three counters for this game. You will also need a paper and pencil.

To play:

The goal of the game is to be the first player to reach a total of exactly 100. Each player keeps a separate running total of their score for each round. Players take turns putting the three counters in the carton, closing the lid, shaking it, and opening the lid to see the three numbers selected. He/she must add any two of the numbers and subtract the third. It is the player's choice which numbers to add and which to subtract. This number is their score for the round. The first player to reach exactly 100, or the last player not eliminated by being forced to go over 100 is the winner.

Variations:

- Use a 0-9, 1-10 or 1-12 carton.

EGG CARTON COIN TOSS

Coin values and combinations

To make:

Use a carton labeled with the numbers 1-6. You will also need a penny, a nickel and a dime.

To play:

Players take turns putting the coins in the carton, closing the lid and shaking the objects inside the closed carton. They then figure out the total value of their toss (the number in the cup X value of coin). The player with the greatest value in each round wins a point. The first player to earn 5 points wins the game.

Variations:

- Easier variations—Use only one or two of the coins, (nickels/pennies, nickels/dimes)
- Harder variation—Add a quarter to the numbers tossed.
- Keep a cumulative score of the value of each player's toss. At the end of 5 rounds, the player with the highest value wins the game.

LINE-UP

Ordering numbers, strategy, logical thinking

To make:

You need one blank carton for this game (or ignore the numbers in a marked carton). You will need also need 20 counters that can be written on. For an easy game, label the counters 1-20. For more of a challenge, chose random numbers between 1 -100 . A paper cup or small bag is also needed.

To play:

Place the carton between the players. Each player will work in the row of cups closest to them. Players take turns drawing one counter and placing it number side up in the empty cup closest to the left on their side of the carton. This continues until both players have six numbers in their cups. Select one more counter and place it number side up next to the cup. This is the discard counter. The goal of the game is to be the first player to order their numbers from least to greatest, left to right. To accomplish this, during each turn a player may:

Switch the positions of any two numbers or
Take the discard counter or draw a counter from the cup, using it to replace any one counter in his/her carton. If a new counter is chosen, the player replaces it with the removed counter. The first player to put his/her counters in order wins the game.

Variations:

- Label counters with 3-digit numbers.
- Fractions—Label the counters with fractions
- Decimals —Label the counters with decimal numbers.
- Put a different number on each side of the marker. Toss them to determine which numbers will be used.

BACK & FORTH

Subtraction with numbers to 99

To make:

Use a carton labeled with the numbers 0-9. You will also need a empty, unmarked egg carton (or ignore the numbers in a labeled carton) and 4 counters.

To play:

Place the unmarked carton between players. Put a marker for each player in the cover. In this game players move from the lid to the upper left cup, then clockwise until they return to the lid. Players take turns putting two markers in the numbered carton, closing it and shaking the carton. When the carton is opened, the player uses the digits the counters landed on to form two numbers—for example, 5 and 8 would form 85 and 58. The player then subtracts the smaller number from the larger number. If the difference is an even number, the player moves ahead 2 spaces. If the difference is odd, the counter is moved ahead 1 space. If the difference is zero the player does not move. Two players may occupy the same space. The first player to move around the carton and return to the lid is the winner.

Variations:

- Use 3 or 4 counters in the shake box to create larger numbers.

AN EGG-CELLENT GAME

Addition and subtraction

To make:

You will need a carton for each player, but it does not need to be labeled with numbers. If you use a labeled carton, just ignore the numbers. A carton labeled with the numbers 0-9 or 1-6 is needed for the shake carton. You will also need three counters for each player, and two 2-sided counters for the shake carton. (Regular counters can be marked on one side with a dot of white-out or a piece of tape)

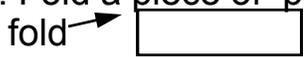
To play:

Each player places his/her 3 counters in the lid of their unmarked carton. The lid is "START" and will also be "FINISH." Players will move their counters around their egg carton in a clockwise direction—left to right along the top row, then right to left along the bottom row, then back up to the first cup, and to the lid. Players take turns putting the counters in the shake carton and shaking the closed carton. When it is opened, the player must read the numbers the counters landed on. If both counters landed with the same side up, he/she adds the two numbers and moves one marker clockwise around the board that number of spaces. If the sides of the counters do not match, he/she subtracts the smaller number from the larger number and moves one marker forward that number of spaces. When a player brings a counter back to the lid, he/she gets an extra turn. A player may have one, two or three counters in play at any time, and which one is moved on any particular turn is up to the player. The first player to get all three markers back to the lid is the winner.

GUESS THAT NUMBER

Place value, properties of numbers

To make:

Remove the lid from a carton. Fold a piece of paper and make a "tent." 

Glue or tape it on the carton between the rows of cups (or cut a strip from the removed cover and glue it between the rows) to block each player's view of their opponent's cups. Or, use blank cartons, with the lids up so they block an opponent's view. In this case, you will use only one row of each carton. Players will need paper and pencil. You will need 20 counters that can be written on. Make 2 sets of counters numbered 0—9.

To play:

Give each player a set of counters. Players face each other with the carton between them. Each player forms a 6 digit secret number in his/her cups. Players take turns asking yes/no questions, such as:

Is there an odd number in the ones place?

Is the number in the tenths place greater than 5?

Are any of the numbers a 9?

A player can't ask the same question (odd, even, less than, a specific number, etc.) twice. If a player thinks he knows his opponent's secret number, he can ask "*Is your secret number 123456?*" instead of asking a clue question. The first player to guess their opponent's secret number wins the round.

Variations:

- For an easier game, form numbers with less digits.
- Decimal variation—place a small object between cups on each side as a decimal point and form a decimal or mixed number (.4562 or 234.567).

WHAT'S SHAKING?

Place value

To make:

You can use either a 6 or 12 cup carton for this game. Label two cup ones, two cups tens and one cup hundreds. The last hole has a value of 0. If using 12 cups, double these amounts. You will also need nine counters, labeled 1-9.

To play:

The first player puts all nine counters in the top of the carton and closes it. The player shakes the carton upside down to mix the counters and flips it right side up. When the carton is opened, the position of the counters in the spaces determine the player's score for that round. Empty spaces are assigned a zero and the total value of the counters that are in the labeled sections are added. For example, if a 2 falls into the hundreds section, one tens section contains a 5 and 7, the other tens contains a 9, one ones sections contains an 8 and 3 and the other one is empty, the total for that round is $2 \times 100 + 12 \times 10 + 9 \times 10 + 11$, or 421. Players take turns for four rounds. The cumulative total determines the winner.

Variations:

- Label one cup "thousands".

THREE HUNDRED

Two-digit addition & subtraction to 300.

To make:

You will need a carton labeled with the numbers 0-9. You will also need two counters and paper and pencil for each player.

To play:

The game is played for up to 11 rounds. Players try to create a number as close as possible to 300 by the eleventh round. One player shakes the counters in the closed carton and announces the two numbers. Each player writes down the digits, in either order, to make a 2-digit number. During the second round players record their second 2-digit number directly under the first number and either add or subtract. The result is written under the two numbers. In succeeding rounds, players continue to record the number and add or subtract. During the game players may add no more than eight times and subtract no more than two times. Each player decides when to add or subtract. At any time during the game a player can hold their score and stay with that result for the remainder of the game. Players do this if they feel their cumulative result is as close to 300 as they are likely to get. The player who creates the number closest to 300 (either above or below) wins.

$$\begin{array}{r} + \begin{array}{|c|c|} \hline 2 & 5 \\ \hline 6 & 3 \\ \hline 8 & 8 \\ \hline \end{array} \\ + \begin{array}{|c|c|} \hline 4 & 2 \\ \hline 1 & 3 & 0 \\ \hline \end{array} \\ + \begin{array}{|c|c|} \hline 5 & 6 \\ \hline 1 & 8 & 6 \\ \hline \end{array} \\ + \begin{array}{|c|c|} \hline 4 & 9 \\ \hline 2 & 3 & 5 \\ \hline \end{array} \\ + \begin{array}{|c|c|} \hline 2 & 7 \\ \hline 2 & 6 & 2 \\ \hline \end{array} \\ + \begin{array}{|c|c|} \hline 7 & 7 \\ \hline 3 & 3 & 9 \\ \hline \end{array} \\ - \begin{array}{|c|c|} \hline 8 & 9 \\ \hline 2 & 5 & 0 \\ \hline \end{array} \\ + \begin{array}{|c|c|} \hline 8 & 2 \\ \hline 3 & 3 & 2 \\ \hline \end{array} \\ - \begin{array}{|c|c|} \hline 5 & 5 \\ \hline 2 & 7 & 7 \\ \hline \end{array} \\ + \begin{array}{|c|c|} \hline 2 & 5 \\ \hline 3 & 0 & 2 \\ \hline \end{array} \end{array}$$

MULTIPLICATION BINGO

Multiplication facts

To make:

Use a carton labeled with the numbers 1-10. You will also need two counters. Each player will need a blank piece of paper and pencil.

To play:

Each player makes a multiplication grid on paper:
(This is great multiplication practice, also!)

	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Players take turns putting the counters in the carton, closing it, shaking it, then opening it and announcing the numbers the marker landed on. That player multiplies the two numbers and colors in the product on his/her grid. The next player then takes a turn. The first player to color in a row—up and down, across, or diagonally, wins the game.

Variation:

- Use a 1-12 carton and make a multiplication grid up to 12.

PLACE AN EGG VALUE

Place value

To make:

Use a carton labeled with the numbers 0-9. Mark three counters 100, 10 and 1.

To play:

During each round, each player takes a turn shaking the three counters in the closed carton and creating a number—for example, a 100 in the 4 cup would be 400, a 10 in the 7 cup would be 70, and a 1 in the 5 cup would be 5, forming the number 475. The player with the largest number receives one point.

Variations:

- Add a 1000 counter to make the game harder.
- Make a decimal game with counters labeled 1, .1, .01 and .001
- Use more than one counter with each place value. Add all the values together to get the total for each round.

PLACE VALUE TOSS

Place value,

To make:

You will need a 12 cup carton, small beads (at least 12) and a 2-sided marker.

Label the inside back edge the carton, left to right:

Hundred thousand, ten thousand, thousand, hundred, ten, one.

Label one side of the 2-sided marker + and the other side -.



To play:

Player One has the top row in the carton and Player Two has the bottom row. Put a random number of beads in the carton, close the lid and shake it. Open the carton, see where the beads land, and write down the number created. For example, if in the top row 3 beads land in the hundred thousand column, 1 in ten thousand, 3 in thousand, none in hundred, 3 in ten and 1 in one, Player One has generated the number 313,031. After each player has written down his/her number, the 2-sided marker is tossed. If the result is + the player with the greatest number wins a point. If — is on top the player with the least number wins a point. The first player to earn 6 points wins the game.

Variations:

- Make a decimal game by labeling the cups (left to right) One, Ten, Hundred, large decimal point (between cups 3 & 4), tenths, hundredths, thousandths.

BING-EGG-O

Multiplication facts

To make:

You will need 4 cartons. Label three of the cartons (in any order) to use as bingo “cards” :

1 6 7 12 16 24 25 30 40 45 63 81

2 5 8 10 15 21 27 35 42 48 56 72

3 4 9 14 18 20 28 32 36 49 54 64

Use a carton labeled with the numbers 1-9 as the shake carton. You will also need 10 counters for each player and 2 extra counters.

To play:

Give each player a player’s carton and 10 counters. Players take turns putting the two extra counters in the numbers carton, shaking the closed carton and announcing the numbers the counters land on. Players multiply the two numbers and look to see if the product is written in their carton. If it is, they place a counter on the number. This continues until a player has counters in either in a straight line of six or in two adjacent rows of three. The player then calls out “Bing-Egg-O.”

Variations:

- Use 18 cup cartons as player cartons and write 18 of the numbers in each.
- Addition version—Label three player cartons
2 5 6 9 10 12 13 14 15 17 18 20
3 4 5 7 8 10 11 12 15 16 19 20
2 4 5 7 9 10 12 13 14 16 18 19
Use a carton labeled 1-10 as the shake carton.

TWO EGGS SCRAMBLED

Multiplication and division

To make:

You will need a 0-9 carton and 2 blank cartons (or you can use numbered cartons and cover up the existing numbers). You will also need small sticky notes and 3 counters.

To play:

Write three digit numbers on the small pieces of sticky notes and attach one number inside each cup in the blank cartons. Give each player a three-digit number carton. Players take turns shaking a 0-9 carton before each round. If an odd number is selected, players will multiply during the round. If an even number is selected they will divide. Players then take turns shaking the 0-9 carton and their three-digit number carton, and performing the operation for the round. If division was performed, the player with the smallest number wins the round. If multiplication was performed, the player with the greatest number wins the round. After 12 rounds, the player who has won the most rounds wins the game.

EGG CARTON DIGITS

Place value

To make:

You will need a carton labeled with the numbers 0-9. You will also need 2 counters. Increase the number of counters to create larger numbers and make the game more challenging.

To play:

Players take turns shaking the counters inside the closed carton. Then they open the carton and write down the digits where the counters landed. Next they use these digits to make both the smallest number possible and the largest number possible. For example, if you are using three counters and get 5, 0 and 1, the smallest number is 105 (or 015 if all players agree that is acceptable). The largest possible number would be 510. The player in each round with the largest number wins a point, as does the player with the smallest number. The first player to acquire 10 points wins the game.

Variations:

- Subtraction—Each round, players subtract their smaller number from their larger number. The player with the greatest difference wins a point.

ODDS & EVENS

Odd and even numbers

To make:

You need one egg carton for this game, but it does not need to be labeled with numbers. If you use a numbered carton, just ignore the numbers in the cups. You will need about 30 small counters.

To play:

One player is “Even” and the other player is “Odd.” Players take turns shaking the counters inside the closed carton. Then they open the carton and count the number of counters in each cup. If the player is Even, he/she removes the counters from any cup containing an odd number of counters. He/she then counts the number of cups remaining (cups with an even number of counters) and gets one point for each even cup. The total number of counters remaining in the carton are then counted. If it is an even number, Even gets one more point. Odd then takes a turn, earning points for odd numbers. After three rounds, the player with the most points is the winner.

Variations:

- Vary the number of counters used.
- Multiplication—Use a carton labeled with the numbers 1-12. Players take turns shaking the counters inside the closed carton. They then multiply the number of counters in each cup by the number written in the cup. Points are earned for odd/even numbers as above.

DIVIDE AND MOVE

Division with remainders

To make:

Use a carton labeled with the numbers 1-10. You will also need one counter, and paper and pencils for each player.

To play:

Have each player write the numbers from 10—90 on lined paper, leaving about 2” between columns. To begin the game, players circle the number 10 on their paper. Players take turns with play rotating clockwise. A turn involves three steps. First, a player puts the counter in the egg carton, closes it, shakes it, and opens it to see which number the counter landed on. Next, the player divides that number into the largest number circled on his or her paper and finds the remainder for this division problem. The remainder determines how many more numbers can be circled on the player’s paper. The player circles numbers successively, beginning with the one after the previously circled number. For example, if on the first turn the remainder is 2, then the player circles 11 and 12 (10 is already circled). A remainder of 0 means that no numbers get circled that turn. If a player catches another player making a mistake, he/she gets to take that player’s turn. The first player to circle all the numbers up to 90 wins.

Variation:

- For a quicker game, use the numbers 10—50.

NUMBER SENTENCE

Mental math—
addition, subtraction, multiplication, division

To make:

Use a carton labeled with the numbers 0-9. You will also need two counters.

To play:

The first player puts two counters in the carton, closes the lid, shakes the carton, then opens it. He/she then forms a two-digit number using the numbers the counters landed on. For example, if your counters land on 5 and 7, you could choose 57 or 75. The player must quickly (a 5 second time limit is suggested) form a number sentence that has an answer of that two-digit number. For example, using the number 75, a player might say 25×3 or $100 - 25$. If successful, the player earns one point. He/she then turns to the next player and names an operation not yet used in the round. The other player must quickly say a number sentence using that operation. Player 2 then names a third operation which player one must use. The round ends, and in the next round player two shakes the carton, forms a number and states the first number sentence of the round, using his/her choice of operations.

EVENS VS. ODDS

Odd / even numbers, addition or multiplication

To make:

Use a carton labeled with the numbers 1-10 or 1-12 for this game and three counters. You will also need 10 counters for each player.

To play:

Each player gets 10 counters. Decide who will be the even player and who will be the odd player. Players take turns placing the three counters in the carton, closing the lid, shaking it and opening the lid. The player who shakes adds the numbers the counters landed on. If the sum is an odd number, the odd player puts a counter in a pile between the players. If the sum is even, the even player puts a counter in the center pile. The first player to get rid of his/her counters is the winner.

Variations:

- Use two counters and multiply the numbers the counters land on.
- Use two counters that are the same and one that is different. Add the numbers the two identical counters land on, and subtract the number the third counter lands on. If the number is 0 or less, no markers are discarded on that turn.