GRADE
K

Building Conceptual Understanding and Fluency Through Games

FOR THE NORTH CAROLINA STANDARD COURSE OF STUDY IN MATHEMATICS

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Building Conceptual Understanding and Fluency Through Games

Developing fluency requires a balance and connection between conceptual understanding and computational proficiency. Computational methods that are over-practiced without understanding are forgotten or remembered incorrectly. Conceptual understanding without fluency can inhibit the problem solving process. – NCTM, *Principles and Standards for School Mathematics*, pg. 35

WHY PLAY GAMES?

People of all ages love to play games. They are fun and motivating. Games provide students with opportunities to explore fundamental number concepts, such as the counting sequence, one-to-one correspondence, and computation strategies. Engaging mathematical games can also encourage students to explore number combinations, place value, patterns, and other important mathematical concepts. Further, they provide opportunities for students to deepen their mathematical understanding and reasoning. Teachers should provide repeated opportunities for students to play games, and let the mathematical ideas emerge as they notice new patterns, relationships, and strategies. Games are an important tool for learning. Here are some advantages for integrating games into elementary mathematics classrooms:

- Playing games encourages strategic mathematical thinking as students find different strategies for solving problems and it deepens their understanding of numbers.
- Games, when played repeatedly, support students' development of computational fluency.
- Games provide opportunities for practice, often without the need for teachers to provide the problems. Teachers can then observe or assess students, or work with individual or small groups of students.
- Games have the potential to develop familiarity with the number system and with "benchmark numbers" – such as 10s, 100s, and 1000s and provide engaging opportunities to practice computation, building a deeper understanding of operations.
- Games provide a school to home connection. Parents can learn about their children's mathematical thinking by playing games with them at home.

BUILDING FLUENCY

Developing computational fluency is an expectation of the North Carolina Standard Course of Study. Games provide opportunity for meaningful practice. The research about how students develop fact mastery indicates that drill techniques and timed tests do not have the power that mathematical games and other experiences have. Appropriate mathematical activities are essential building blocks to develop mathematically proficient students who demonstrate computational fluency (Van de Walle & Lovin, *Teaching Student-Centered Mathematics Grades K-3,* pg. 94). Remember, computational fluency includes efficiency, accuracy, and flexibility with strategies (Russell, 2000).

The kinds of experiences teachers provide to their students clearly play a major role in determining the extent and quality of students' learning. Students' understanding can be built by actively engaging in tasks and experiences designed to deepen and connect their knowledge. Procedural fluency and conceptual understanding can be developed through problem solving, reasoning, and argumentation (NCTM, P*rinciples and Standards for School Mathematics,* pg. 21). Meaningful practice is necessary to develop fluency with basic number combinations and strategies with multi-digit numbers. Practice should be purposeful and should focus on developing thinking strategies and a knowledge of number relationships rather than drill isolated facts (NCTM, *Principles and Standards for School Mathematics,* pg. 87). Do *not* subject any student to computation drills unless the student has developed an efficient strategy for the facts included in the drill (Van de Walle & Lovin, *Teaching Student-Centered Mathematics Grades K-3,* pg. 117). Drill can strengthen strategies with which students feel comfortable – ones they "own" – and will help to make these strategies increasingly automatic. Therefore, drill of strategies will allow students to use them with increased efficiency, even to the point of recalling the fact without being conscious of using a strategy. Drill without an efficient strategy present offers no assistance (Van de Walle & Lovin, *Teaching Student-Centered Mathematics Grades K-3,* pg. 117).

CAUTIONS

Sometimes teachers use games solely to practice number facts. These games usually do not engage children for long because they are based on students' recall or memorization of facts. Some students are quick to memorize, while others need a few moments to use a related fact to compute. When students are placed in situations in which recall speed determines success, they may infer that being "smart" in mathematics means getting the correct answer quickly instead of valuing the process of thinking. Consequently, students may feel incompetent when they use number patterns or related facts to arrive at a solution and may begin to dislike mathematics because they are not fast enough.

For students to become fluent in arithmetic computation, they must have efficient and accurate methods that are supported by an understanding of numbers and operations. "Standard" algorithms for arithmetic computation are one means of achieving this fluency.

– NCTM, *Principles and Standards for School Mathematics,* pg. 35

Overemphasizing fast fact recall at the expense of problem solving and conceptual experiences gives students a distorted idea of the nature of mathematics and of their ability to do mathematics.

– Seeley, *Faster Isn't Smarter: Messages about Math, Teaching, and Learning in the 21st Century,* pg. 95

Computational fluency refers to having efficient and accurate methods for computing. Students exhibit computational fluency when they demonstrate flexibility in the computational methods they choose, understand and can explain these methods, and produce accurate answers efficiently.

– NCTM, *Principles and Standards for School Mathematics,* pg. 152

Fluency refers to having efficient, accurate, and generalizable methods (algorithms) for computing that are based on well-understood properties and number relationships.

– NCTM, *Principles and Standards for School Mathematics,* pg. 144

INTRODUCE A GAME

A good way to introduce a game to the class is for the teacher to play the game against the class. After briefly explaining the rules, ask students to make the class's next move. Teachers may also want to model their strategy by talking aloud for students to hear his/her thinking. "I placed my game marker on 6 because that would give me the largest number."

Games are fun and can create a context for developing students' mathematical reasoning. Through playing and analyzing games, students also develop their computational fluency by examining more efficient strategies and discussing relationships among numbers. Teachers can create opportunities for students to explore mathematical ideas by planning questions that prompt students to reflect about their reasoning and make predictions. Remember to always vary or modify the game to meet the needs of your leaners. Encourage the use of the Standards for Mathematical Practice.

HOLDING STUDENTS ACCOUNTABLE

While playing games, have students record mathematical equations or representations of the mathematical tasks. This provides data for students and teachers to revisit to examine their mathematical understanding.

After playing a game, have students reflect on the game by asking them to discuss questions orally or write about them in a mathematics notebook or journal:

1. What skill did you review and practice?
2. What strategies did you use while playing the game?
3. If you were to play the game a second time, what different strategies would you use to be more successful?
4. How could you tweak or modify the game to make it more challenging?

A Special Thank-You

The development of the NC Department of Public Instruction Document, *Building Conceptual Understanding and Fluency Through Games* was a collaborative effort with a diverse group of dynamic teachers, coaches, administrators, and NCDPI staff. We are very appreciative of all of the time, support, ideas, and suggestions made in an effort to provide North Carolina with quality support materials for elementary level students and teachers. The North Carolina Department of Public Instruction appreciates any suggestions and feedback, which will help improve upon this resource. Please send all correspondence to **Denise Schulz** (denise.schulz@dpi.nc.gov)

GAME DESIGN TEAM

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STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

COUNTING AND CARDINALITY

Know number names and the count sequence.

NC.K.CC.1 Know number names and recognize patterns in the counting sequence by:
- Counting to 100 by ones.
- Counting to 100 by tens.

NC.K.CC.2 Count forward beginning from a given number within the known sequence, instead of having to begin at 1.

NC.K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20, with 0 representing a count of no objects.

Count to tell the number of objects.

NC.K.CC.4 Understand the relationship between numbers and quantities.
- When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object (one-to-one correspondence).
- Recognize that the last number named tells the number of objects counted regardless of their arrangement (cardinality).
- State the number of objects in a group, of up to 5 objects, without counting the objects (perceptual subitizing).

NC.K.CC.5 Count to answer "How many?" in the following situations:
- Given a number from 1–20, count out that many objects.
- Given up to 20 objects, name the next successive number when an object is added, recognizing the quantity is one more/greater.
- Given 20 objects arranged in a line, a rectangular array, and a circle, identify how many.
- Given 10 objects in a scattered arrangement, identify how many.

Compare numbers.

NC.K.CC.6 Identify whether the number of objects, within 10, in one group is greater than, less than, or equal to the number of objects in another group, by using matching and counting strategies.

NC.K.CC.7 Compare two numbers, within 10, presented as written numerals.

OPERATIONS AND ALGEBRAIC THINKING

Understand addition and subtraction.

NC.K.OA.1 Represent addition and subtraction, within 10:
- Use a variety of representations such as objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, or expressions.
- Demonstrate understanding of addition and subtraction by making connections among representations.

NC.K.OA.2 Solve addition and subtraction word problems, within 10, using objects or drawings to represent the problem, when solving:
- Add to/Take From-Result Unknown
- Put Together/ Take Apart (Total Unknown and Two Addends Unknown)

NC.K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way using objects or drawings, and record each decomposition by a drawing or expression.

NC.K.OA.4 For any number from 0 to 10, find the number that makes 10 when added to the given number using objects or drawings, and record the answer with a drawing or expression.

NC.K.OA.5 Demonstrate fluency with addition and subtraction within 5.

NUMBER AND OPERATIONS IN BASE TEN

Build foundation for place value.

NC.K.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones by:
- Using objects or drawings.
- Recording each composition or decomposition by a drawing or expression.
- Understanding that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

MEASUREMENT AND DATA

Describe and compare measurable attributes.

NC.K.MD.1 Describe measurable attributes of objects; and describe several different measurable attributes of a single object.

NC.K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference.

Classify objects and count the number of objects in each category.

NC.K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

GEOMETRY

Identify and describe shapes.

NC.K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of objects using positional terms.

NC.K.G.2 Correctly name squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres regardless of their orientations or overall size.

NC.K.G.3 Identify squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres as two-dimensional or three-dimensional.

Analyze, compare, create, and compose shapes.

NC.K.G.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, attributes and other properties.

NC.K.G.5 Model shapes in the world by:
- Building and drawing triangles, rectangles, squares, hexagons, circles.
- Building cubes, cones, spheres, and cylinders.

NC.K.G.6 Compose larger shapes from simple shapes.

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Building Fluency: counting to 20

Materials: gameboard, die, beans or other small objects

Number of Players: 2

Directions:

1. Players take turns rolling the die and covering the corresponding amount of squares on their path.
2. At the end of each turn, each player should count aloud the covered squares on their path.
3. The player that reaches the water first is the winner.

Variation/Extension: Students can move a game marker up the board instead of covering. Students can write the numerals in the squares instead of covering the squares.

Going Buttons NC.K.CC.1, NC.K.CC.6 | Page 8

Building Fluency: counting and comparing numbers to 10

Materials: set of button cards for each player

Number of Players: 2

Directions:

1. Each player shuffles their cards.
2. Each player turns over the top card from their deck.
3. The player with the button card that has the most dots on it wins the round and gets the cards. If there is a tie, players keep their own cards.
4. Play continues until there are no remaining cards in the stack.
5. Players count the total number of dots on the button cards they have at the end of the game, and the player with the largest number wins.

Variation/Extension: Players could compare and the player with the least amount of buttons wins the round. Players could use alternate types of cards: 10 frames (without number), 10 frames (with numbers), Deck of cards (face cards removed), Digit Cards

Domino Dots NC.K.CC.5 | Page 12

Building Fluency: Count to answer “how many?”

Materials: gameboard, dominoes

Number of Players: 2

Directions:

1. Choose a target number between 12 and 20. Record the target number in the blank in the top right corner of the gameboard.
2. Students should work together to choose dominoes that equal the target number and place them on the game board so that each row has the target number of dots.

Variation/Extension: At the beginning of the year, the target number could be between 12 and 20, and could target bigger numbers toward the end of the year. Students could write numerals to represent the combinations to make the target number.

Buzzing Numbers NC.K.CC.7 | Page 14

Building Fluency: comparing numbers

Materials: gameboard, 2 sets of buzzing number cards 0-10, 25 beans or other small objects

Number of Players: 2

Directions:
1. Shuffle the two sets of cards together.
2. Place the digit cards in a pile face down.
3. Player 1 draws a card and puts that card in the "Target Number" bee.
4. Player 2 draws a card, compares it to the target number and places it in the correct column.
5. If the number on the card is less than the target number, Player 1 gets a bean.
6. If the number is greater than the target number, Player 2 gets a bean.
7. If the number is equal to the target number, both players get a bean.
8. Play continues until all of the digit cards have been drawn.
9. The winner is the player with the most beans.

Variation/Extension: Students can use larger numbers.

Three in a Row NC.K.OA.1, NC.K.OA.5 | Page 15

Building Fluency: adding and subtracting using objects or drawings

Materials: gameboards, beans or other small objects, problem cards

Number of Players: small groups up to 5

Directions:
1. The teacher reads a story problem to the group.
2. Students use beans or drawings and the workspace to represent the problem.
3. Students use a bean to cover up the answer for each problem on their gameboard.
4. When a student has three in a row (horizontally, vertically, or diagonally) the teacher verifies that the correct numbers are covered.
5. The winner is the player that gets three in a row first.

Variation/Extension: Cards can be separated into addition problems and subtraction problems and could be used separately. More word problems can be created to use.

Drop and Add NC.K.OA.1 | Page 21

Building Fluency: adding using objects to represent the problem

Materials: gameboard, two pom poms or other manipulative, 10 beans or other small objects for each student, 5 cubes

Number of Players: 2

Directions:
1. Player 1 drops two pom poms on the gameboard and uses counters to add the numbers together.
2. Once Player 1 has completed their representation with beans, Player 2 drops two pom poms on the gameboard and uses beans to add the numbers together.
3. The player with the largest sum receives a cube.
4. At the end of 5 rounds, the winner is the player with the most cubes.

Variation/Extension: Players could subtract the numbers and represent the problem, with the additional gameboard.

On and Off NC.K.OA.3 | Page 23

Building Fluency: decomposing numbers less than 10 into pairs

Materials: 10 beans or other small objects or other manipulative, piece of paper, recording sheet, cubes

Number of Players: 2

Directions:

1. Players determine which player is "on" and which player is "off".
2. Player 1 takes 10 beans, drops them over a piece of paper, and records how many beans land on the paper and how many land off of the paper.
3. If more beans land on the paper, Player 1 gets a cube. If more beans land off the paper, Player 2 gets a cube.
4. Player 2 takes 10 beans, drops them over a piece of paper, and records how many beans land on the paper and how many beans land off the paper.
5. Play continues for 10 rounds. The winner is the player with the most cubes at the end of the rounds.

Variation/Extension: If using two color beans or other small objects, players could count how many red, how many yellow. Students could use sentence frames if they find the recording sheet confusing: There are ____ beans on the paper. There are ____ beans off the paper. Students could also use different sizes of paper.

Jumping Frogs NC.K.CC.1 | Page 24

Building Fluency: counting by ones

Materials: gameboard, die labeled 1,1,2,2,3,3, four frog manipulatives (cubes), 10 counters

Number of Players: 2

Directions:

1. Players place a frog (cube) at the beginning of each of the four tracks and place a counter on the smiley face at the end of each track.
2. Player 1 rolls the die and moves any frog that many spaces.
3. Player 2 rolls the die and moves any frog that many spaces.
4. The goal is to land on a counter so that it can be collected. If a player rolls and lands on the counter, they should collect the counter. A new counter is put on the smiley face and the frog returns to the beginning of the track.
5. The game is over when the players have collected all 10 counters, and the winner is the player with the most counters.

Variation/Extension: Players can decompose a roll and move more than one frog in a turn. For example: if a player rolls a 3, one frog could be moved 2 spaces and another frog moved 1 space

Let's Make Ten! NC.K.OA.4 | Page 25

Building Fluency: decomposing numbers to 10

Materials: number cards 0-10, two types of coins, such as pennies and nickels, tens frame

Number of Players: 2

Directions:

1. Player 1 draws a number card and places that number of pennies or nickels on the ten frame.
2. Player 2 tells how many more pennies or nickels are needed to make ten and fills the ten frame with the other coin to check his answer.
3. Clear the frame.
4. Player 2 draws a number card and places that number of pennies or nickels on the ten frame.
5. Player 1 tells how many more pennies or nickels are needed to make ten and fills the ten frame with the other coin to check his answer.
6. Play continues until all of the number cards are used.

Variation/Extension: Students can draw pictures in their math notebooks.

How Many More Buttons? NC.K.OA.5 | Page 27

Building Fluency: add and subtract within 5

Materials: gameboard, 5 buttons or other manipulative

Number of Players: 2

Directions:

1. Place 5 buttons on the shirt.
2. Player 1 closes their eyes and Player 2 takes some of the buttons off the shirt.
3. Player 1 looks at the shirt and determines how many buttons Player 2 took off.
4. To check, players count the buttons removed together.
5. Players take turns removing buttons and determining how many were removed.

Variation/Extension: Player 1 places counters on the shirt. Player 2 determines how many need to be added to the shirt to make five (says "add ____"), and places that number of buttons on the shirt.

Lady Bug Spots NC.K.OA.5 | Page 28

Building Fluency: add and subtract within 5

Materials: gameboard, 5 small objects or other manipulative

Number of Players: 2

Directions:

1. Place 5 small objects on the ladybug.
2. Player 1 closes their eyes and Player 2 takes some of the small objects off the ladybug.
3. Player 1 looks at the ladybug and determines how many small objects Player 2 took off.
4. To check, players count the small objects removed together.
5. Players take turns removing small objects and determining how many were removed.

Variation/Extension: Player 1 places small objects on the ladybug. Player 2 determines how many need to be added to the ladybug to make five (says "add ____"), and places that number of small objects on the ladybug.

Building Towers NC.K.MD.2, NC.K.CC.6, NC.K.CC.7 | Page 29

Building Fluency: comparing heights/comparing numbers

Materials: spinner numbered 1-10, cubes or same-sized building blocks, 10 counters

Number of Players: 2

Directions:

1. Player 1 spins the spinner to determine how many cubes are in their tower and builds the tower with cubes.
2. Player 2 spins the spinner to determine how many cubes are in their tower and builds the tower with cubes.
3. Players compare the height of their tower and determines which tower is taller. The player with the tallest tower gets a counter.
4. Play continues until all of the counters are used. The winner is the player with the most counters.

Variation/Extension: Students can record the numeral that represents their tower and compare numerals.

Wormy Measurement NC.K.MD.2 | Page 30

Building Fluency: comparing length

Materials: worm cards

Number of Players: 2

Directions:
1. Place the worm cards face down.
2. Each player draws a card.
3. Players compare the cards and determine which card has the longest worm. The player with the longest worm takes both cards.
4. Play continues until all of the cards are used.
5. The winner is the player with the most cards.

Variation/Extension: The player with the shortest worm takes both cards. Students could write/discuss other attributes, they could measure worm weight, length, and/or width. Students could put worms in order of shortest to longest. Students could find something in the room the same length as a worm.

Shape Land NC.K.G.1 | Page 34

Building Fluency: describe objects in the environment using names of shapes

Materials: gameboard, game cards, game markers

Number of Players: 2-3

Directions:
1. Place the cards face down on the table.
2. Player 1 chooses a card from the deck, says the name of the shape of the object, and puts his/her marker on the first corresponding shape on the gameboard.
3. Players take turns.
4. If a player draws a card and there is not a corresponding shape ahead on the board, they lose a turn.
5. The winner is the first person to reach the finish line.

The Shape Path NC.K.G.2 | Page 37

Building Fluency: correctly name shapes

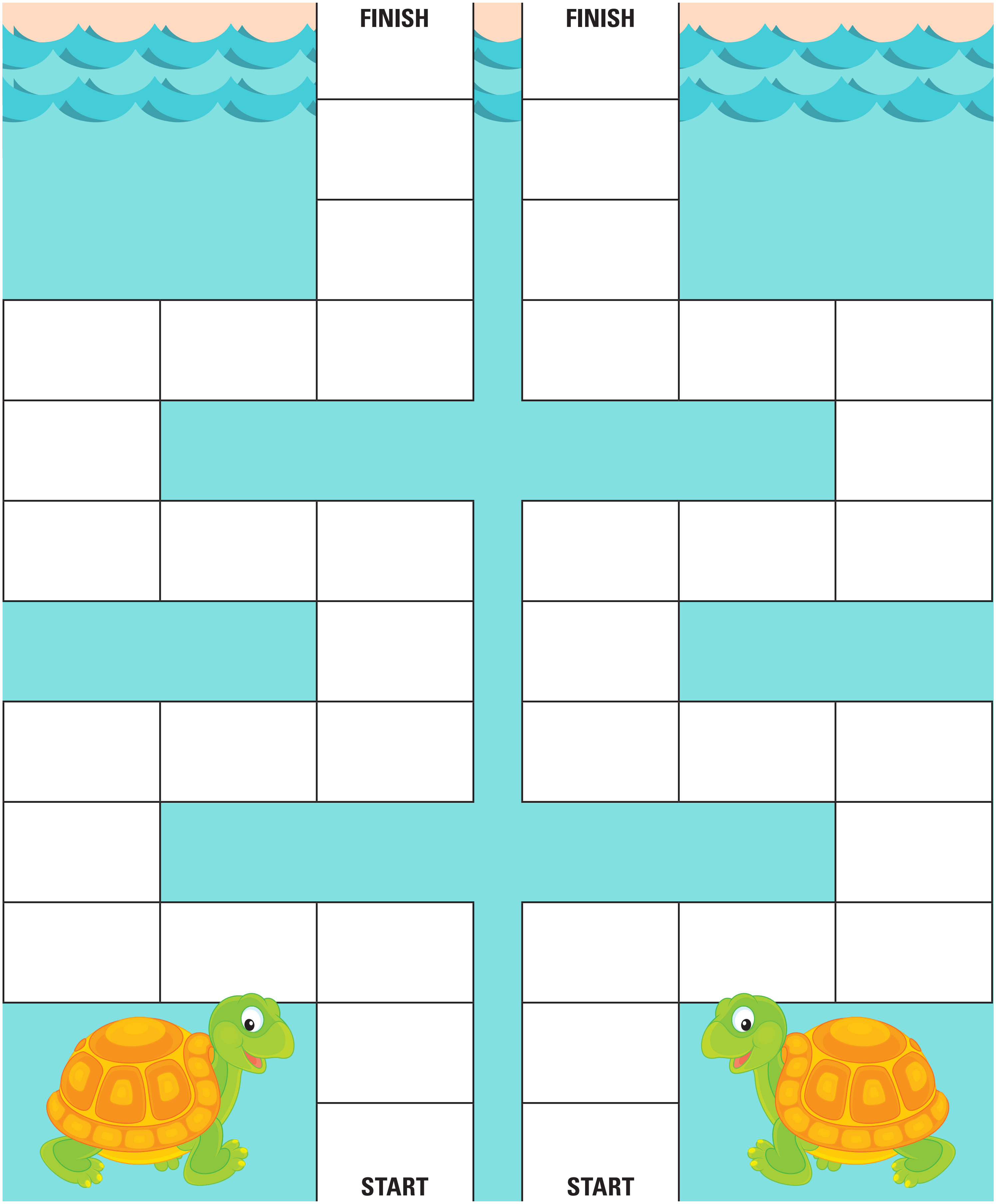
Materials: gameboard, spinner, game markers

Number of Players: 2-3

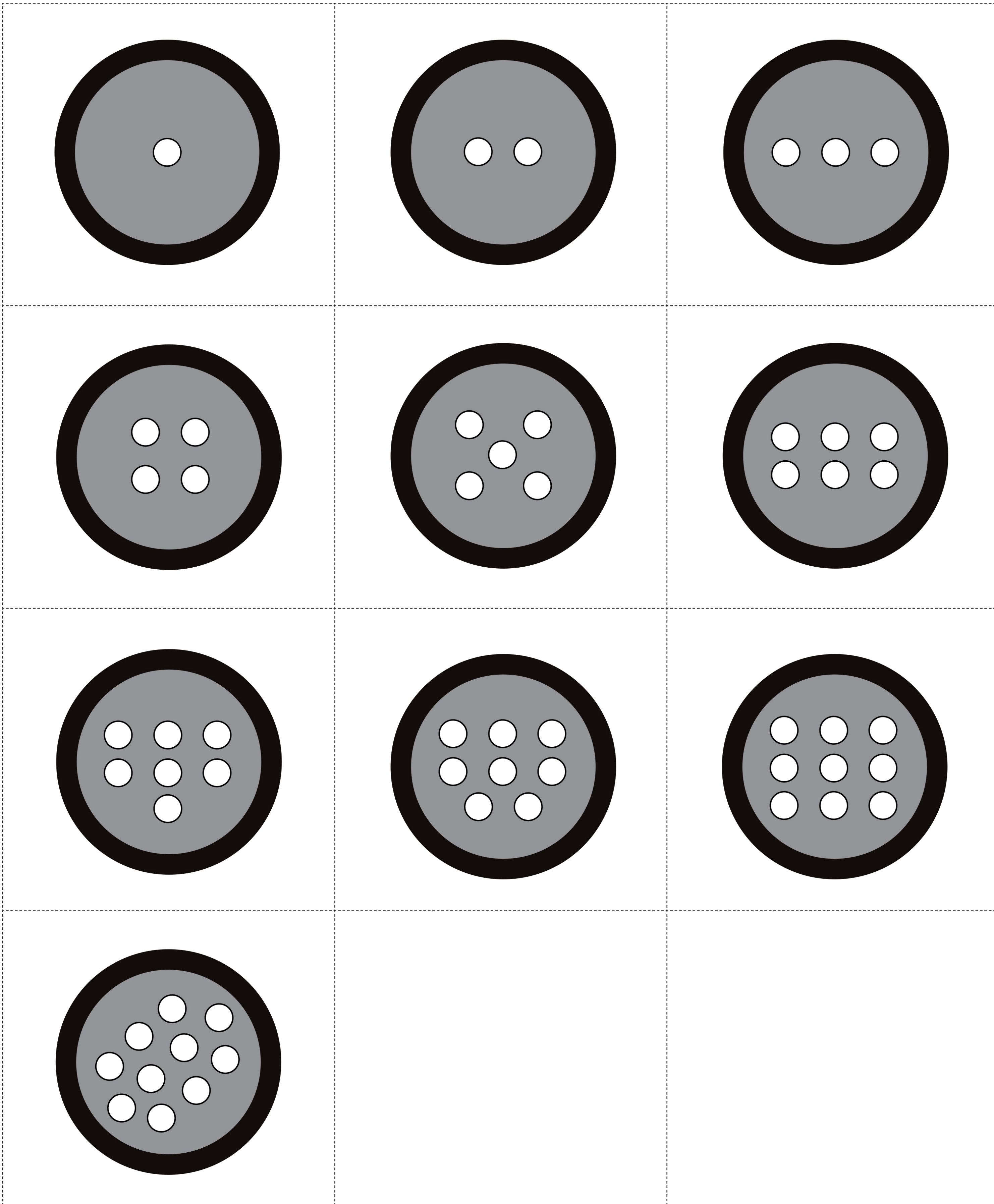
Directions:
1. Player 1 spins the spinner, names the shape, and puts their marker on the first corresponding shape on the gameboard.
2. Players take turns.
3. If a player spins and there is not a corresponding shape on the board, their loses a turn.
4. The winner is the first person to reach the finish line.

Variation/Extension: Students can describe the relative position of the shape using terms such as above, below, beside, next to, etc.

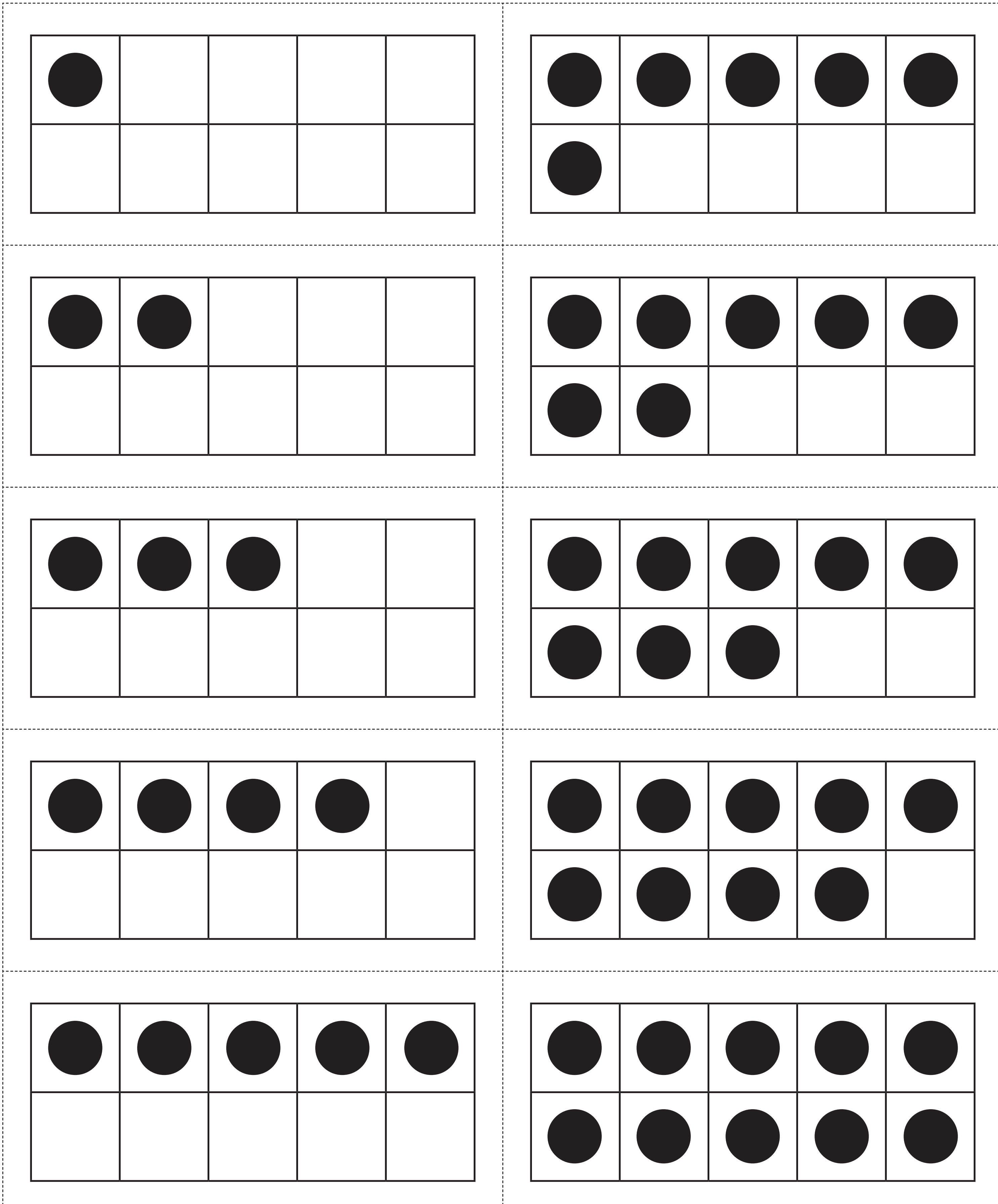
Turtle Number Walk



Going Buttons



Going Buttons (Variation)



Going Buttons (Variation)

1	2	3	4
5	6	7	8
9	10	1	2
3	4	5	6
7	8	9	10

Going Buttons (Variation)

1

●				

6

●	●	●	●	●
●				

2

●	●			

7

●	●	●	●	●
●	●			

3

●	●	●		

8

●	●	●	●	●
●	●	●		

4

●	●	●	●	

9

●	●	●	●	●
●	●	●	●	

5

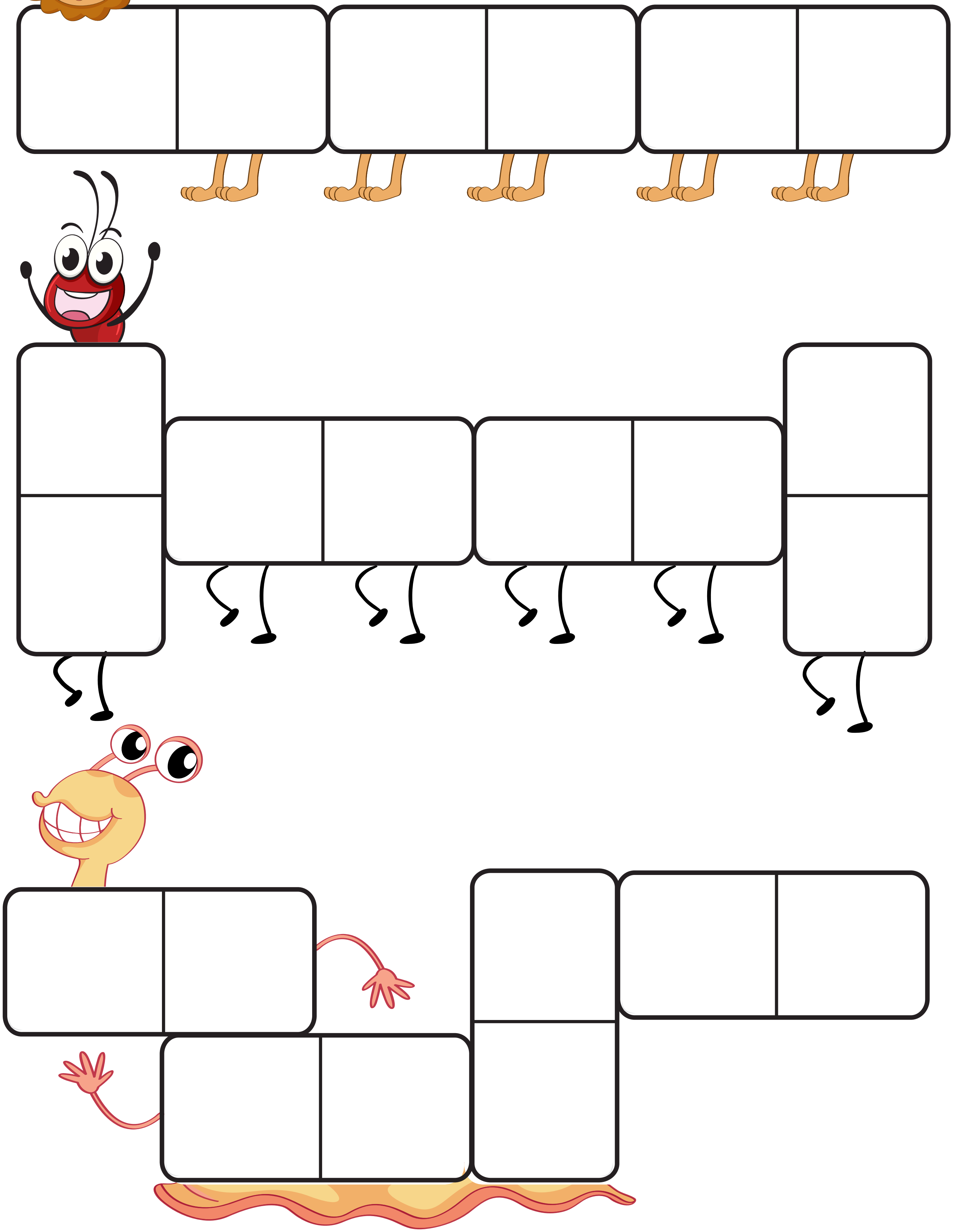
●	●	●	●	●

10

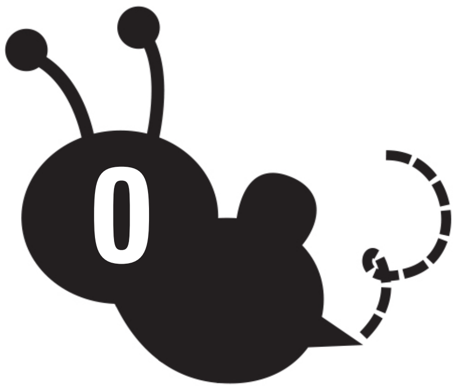
●	●	●	●	●
●	●	●	●	●

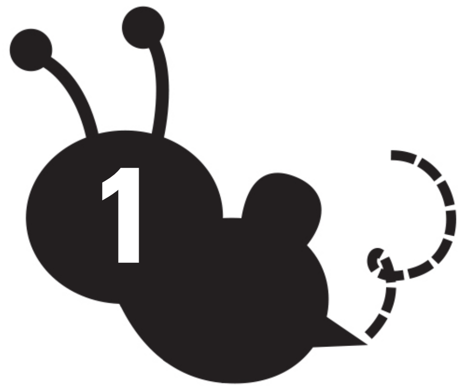
Domino Dots

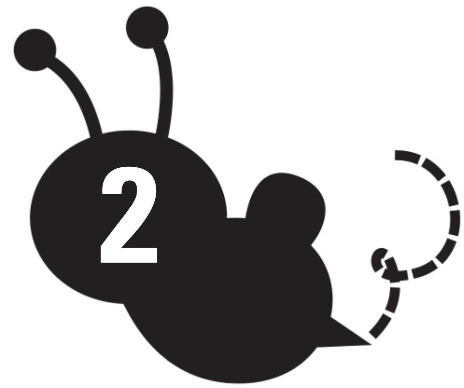
TARGET # ________

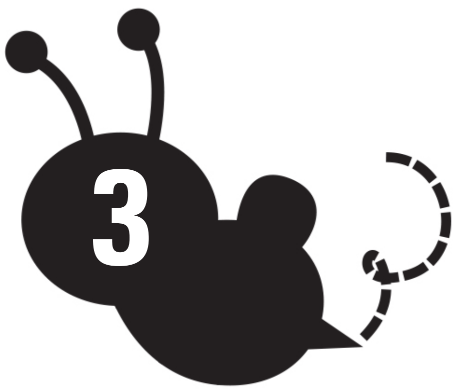


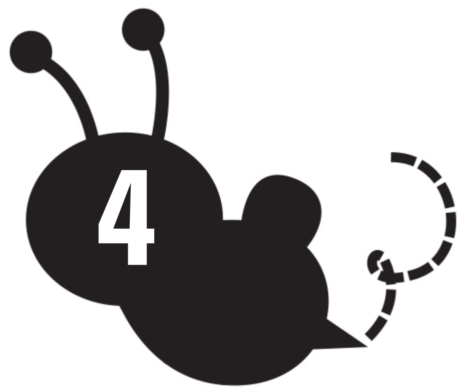
Buzzing Numbers

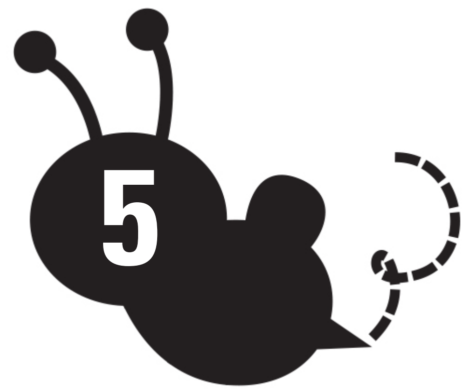


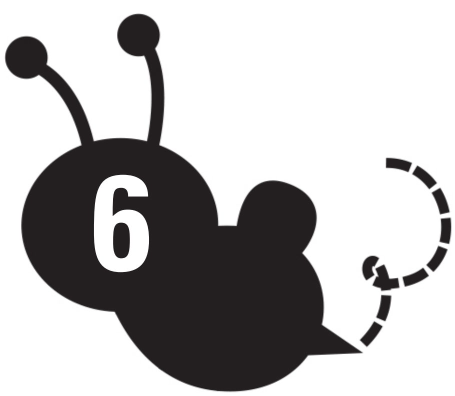


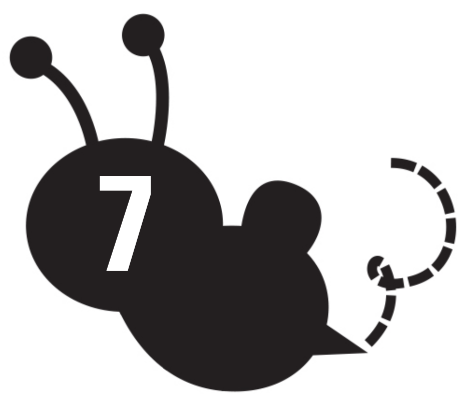


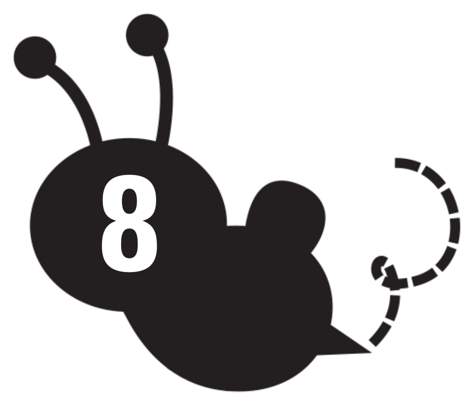


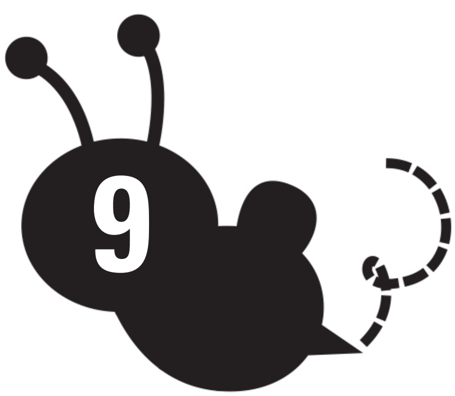


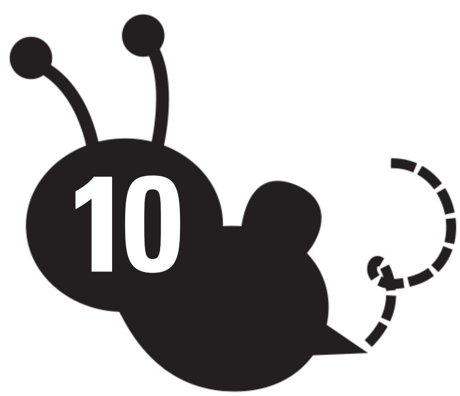






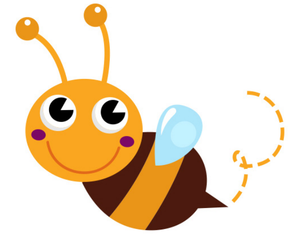




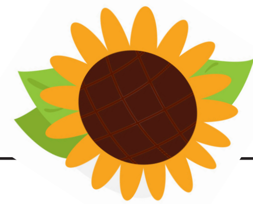
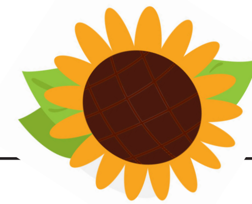


Buzzing Numbers

TARGET # ______



LESS THAN	EQUAL TO	GREATER THAN

Three in a Row

WORKSPACE

7	3	10
9	2	6
8	1	5

Three in a Row

3	6	1
8	10	2
4	7	5

WORKSPACE

Three in a Row

WORKSPACE

1	2	9
8	6	4
3	7	10

Three in a Row

WORKSPACE

8	2	3
1	9	7
5	4	6

Three in a Row

WORKSPACE

1	5	10
2	7	4
3	6	9

Three students stood in line for the water fountain. Two more students joined them. How many students are in line now? 3 + 2 = ? ANSWER: 5	Paul had two library books. He returned one of the books to the library. How many books does he have now? 2 – 1 = ? ANSWER: 1	Luke had 6 pieces of gum. He gave his brother three pieces of gum. How many pieces of gum did Luke keep? 6 – 3 = ? ANSWER: 3	There are three children swinging. Two of them leave and go to slide. How many children are still swinging? 3 – 2 = ? ANSWER: 1
Five pencils were on the floor. The teacher picked up 1 pencil. How many pencils are on the floor now? 5 – 1 = ? ANSWER: 4	Robert collects rocks. He has two grey rocks and 6 black rocks. How many rocks does he have? 2 + 6 =? ANSWER: 8	Russ has 5 red shirts and 5 blue shirts. How many shirts does Russ have? 5 + 5 = ? ANSWER: 10	Five children are in the art center. Two children join them. How many children are in the art center now? 5 + 2 = ? ANSWER: 7
There are 5 red apples and 2 green apples in a basket. How many apples are in the basket? 5 + 2 = ? ANSWER: 7	Mom has three red flowers and six pink flowers a vase. How many flowers are in mom's vase? 3 + 6 = ? ANSWER: 9	Kevin has 2 cats and 1 dog. How many pets does Kevin have? 2 + 1 = ? ANSWER: 3	Miss Jones had four pictures on her desk. A student brought her four more pictures. How many pictures does Miss Jones have now? 4 + 4 = ? ANSWER: 8
Jennifer had three stickers. Her friend gave her three more stickers. How many stickers does she have now? 3 + 3 = ? ANSWER: 6	There were 5 lady bugs on a leaf. Three flew away. How many lady bugs are still on the leaf? 5 – 3 = ? ANSWER: 2	Ashley's cat had kittens. Four of the kittens are white. One of the kittens is black. How many kittens does Ashley's cat have? 4 + 1 = ? ANSWER: 5	Julie drew two red circles red and two yellow circles. How many circles did Julie draw? 2 + 2 = ? ANSWER: 4

Drop and Add

1	4	3	5	2
3	5	2	1	4

Drop and Add (Variation)

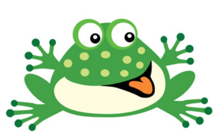
9	5	7	4	2
6	3	0	1	8

On and Off

ON	OFF

ON	OFF

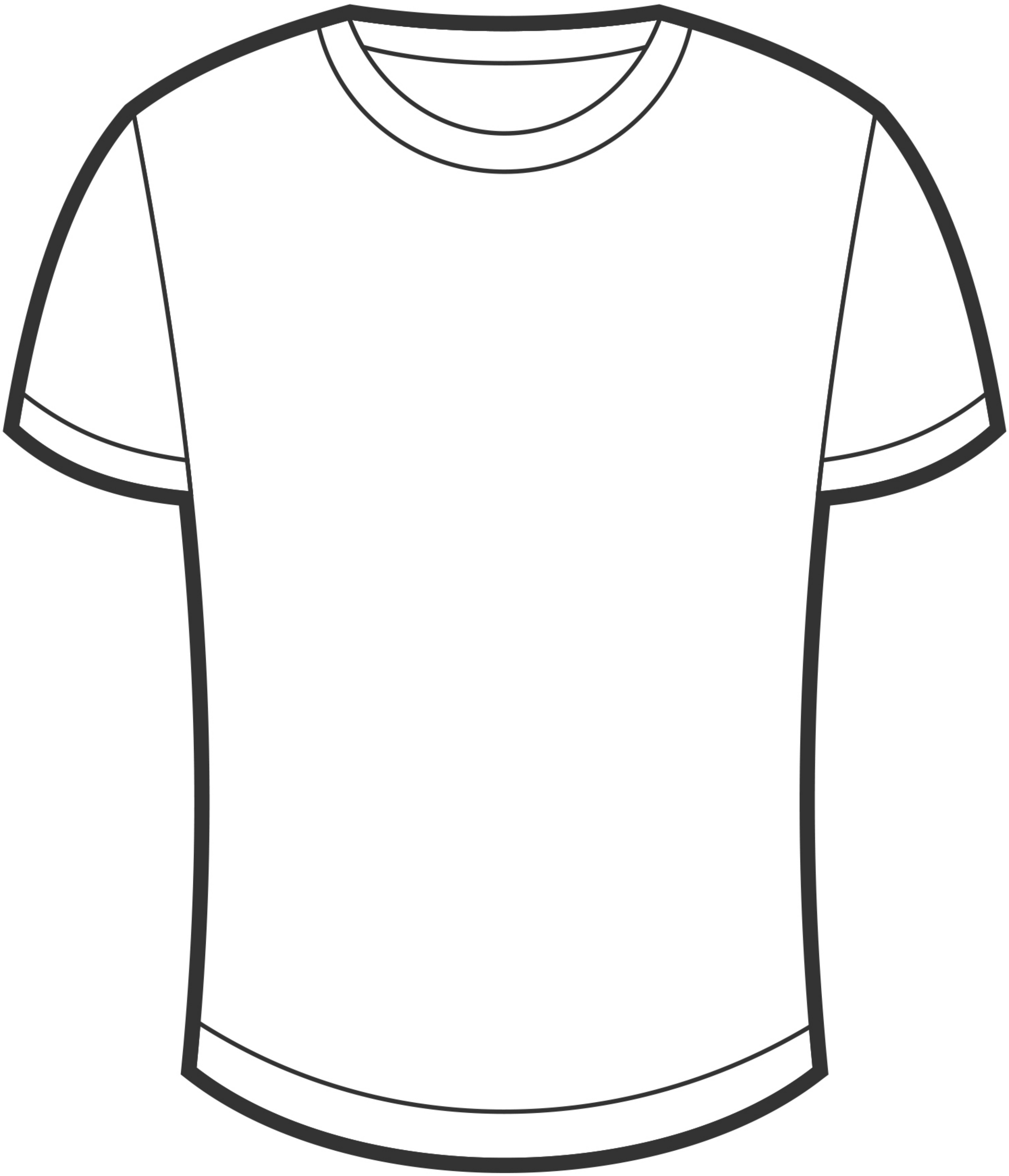
Jumping Frogs

10				
9				
8				
7				
6				
5				
4				
3				
2				
1				
				

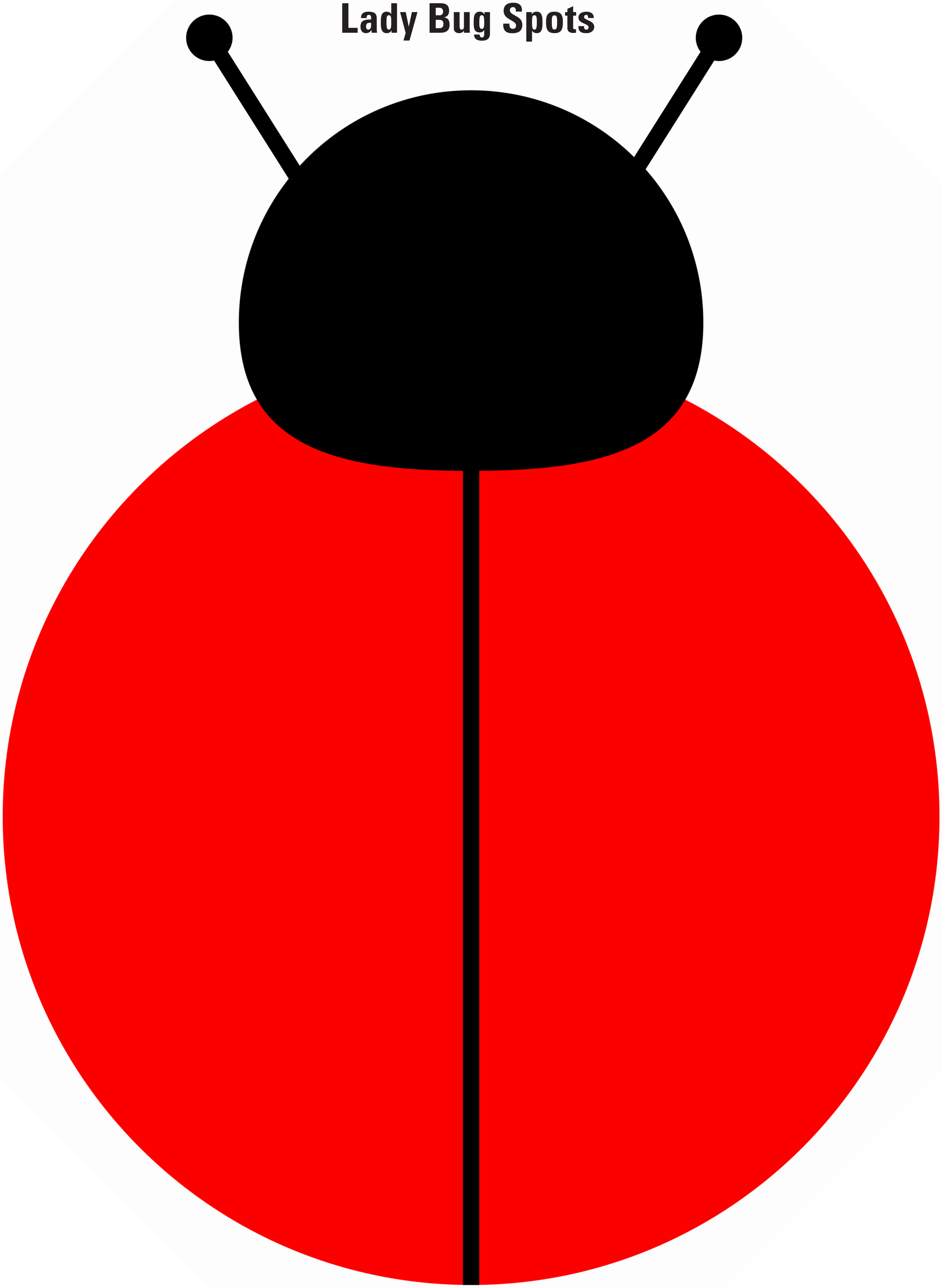
Let's Make Ten!

0	1	2	3
4	5	6	7
8	9	10	0
1	2	3	4
5	6	7	8
9	10		

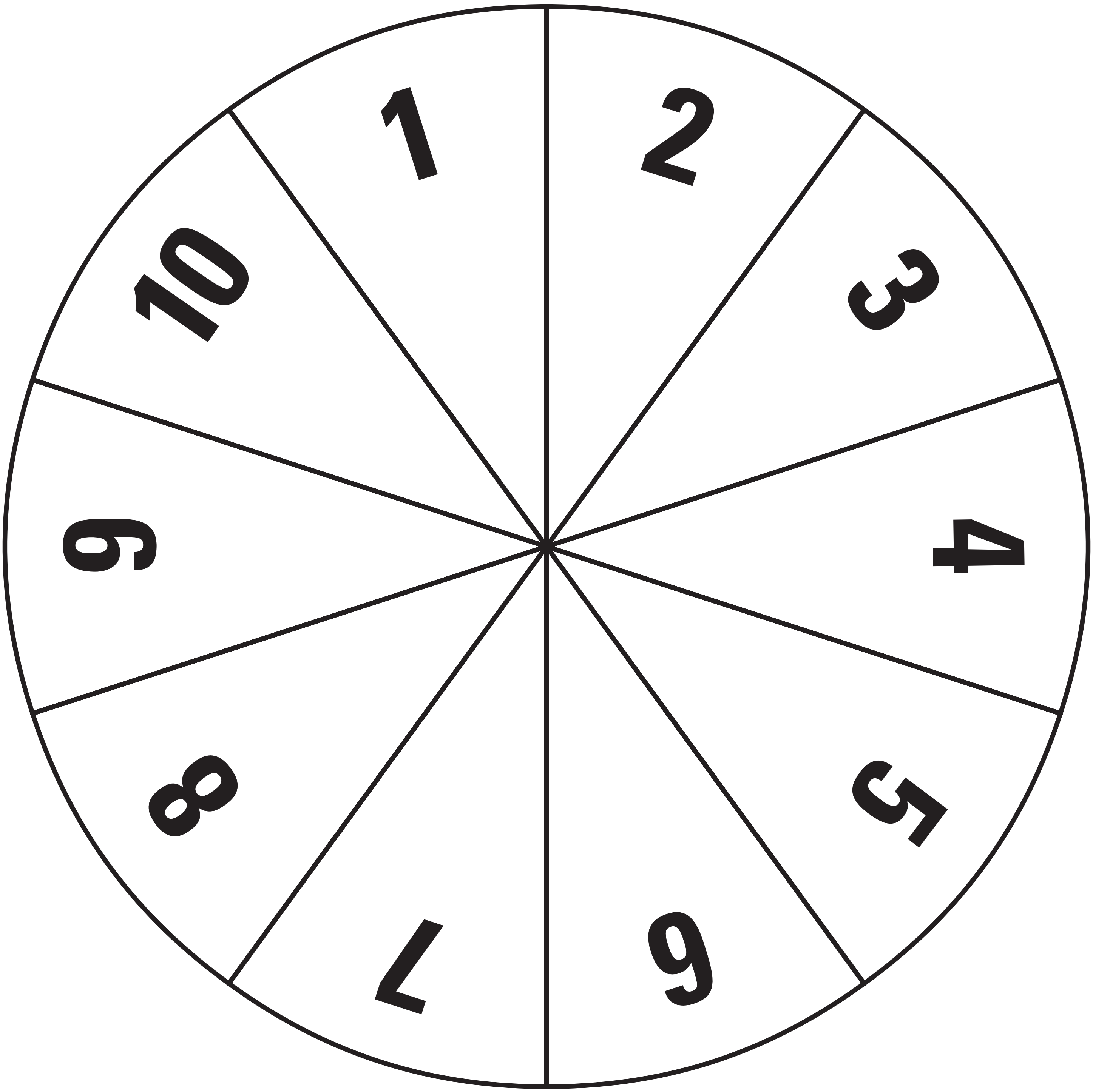
How Many More Buttons?



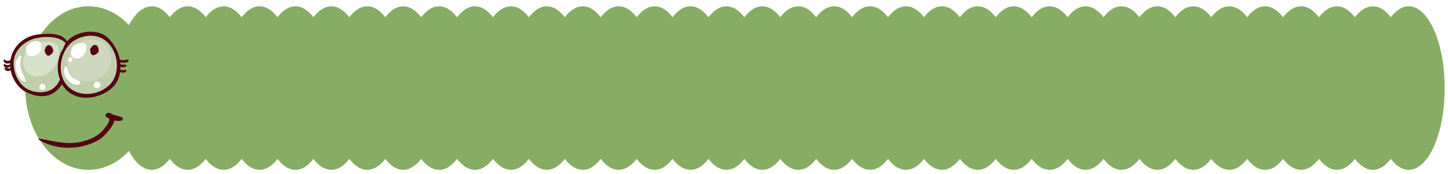
Lady Bug Spots

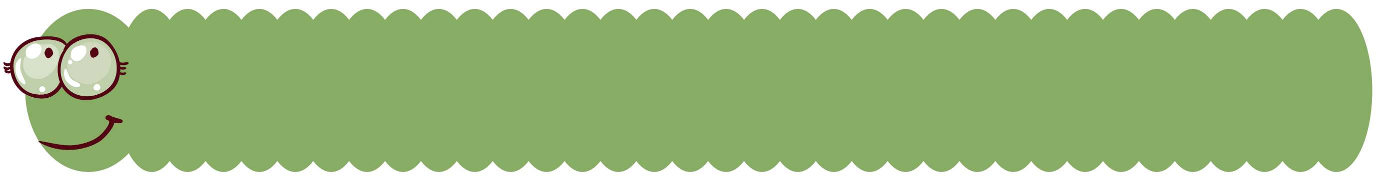


Building Towers



Wormy Measurement





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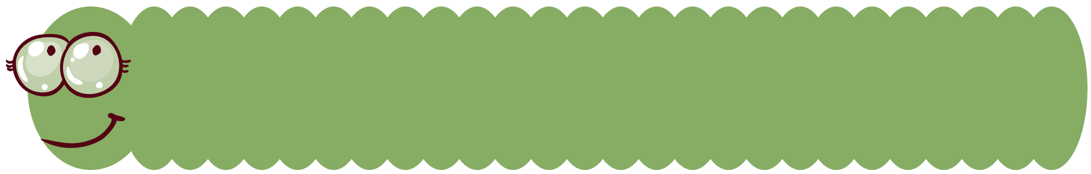

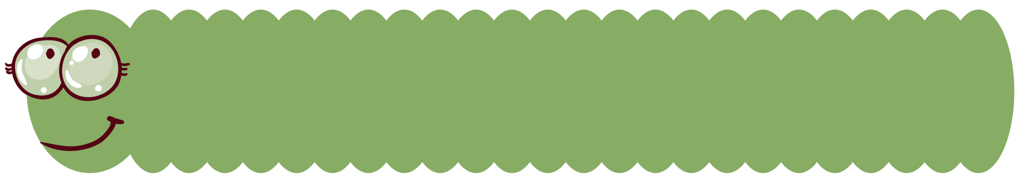

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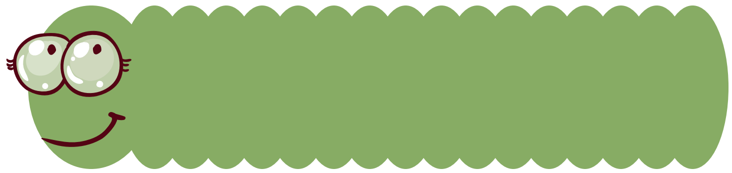
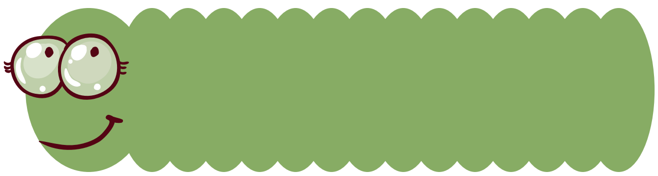
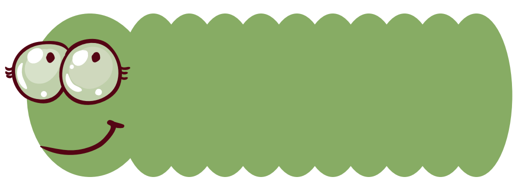
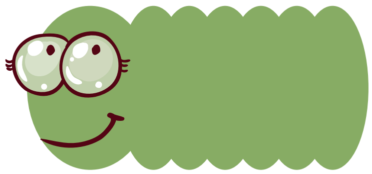
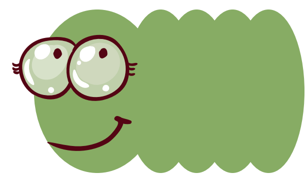


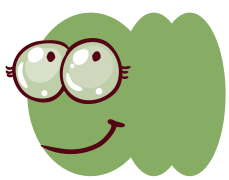


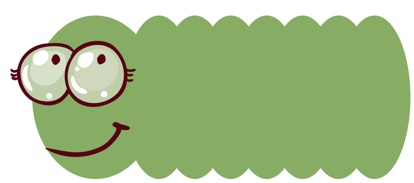


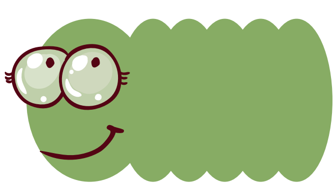
Wormy Measurement



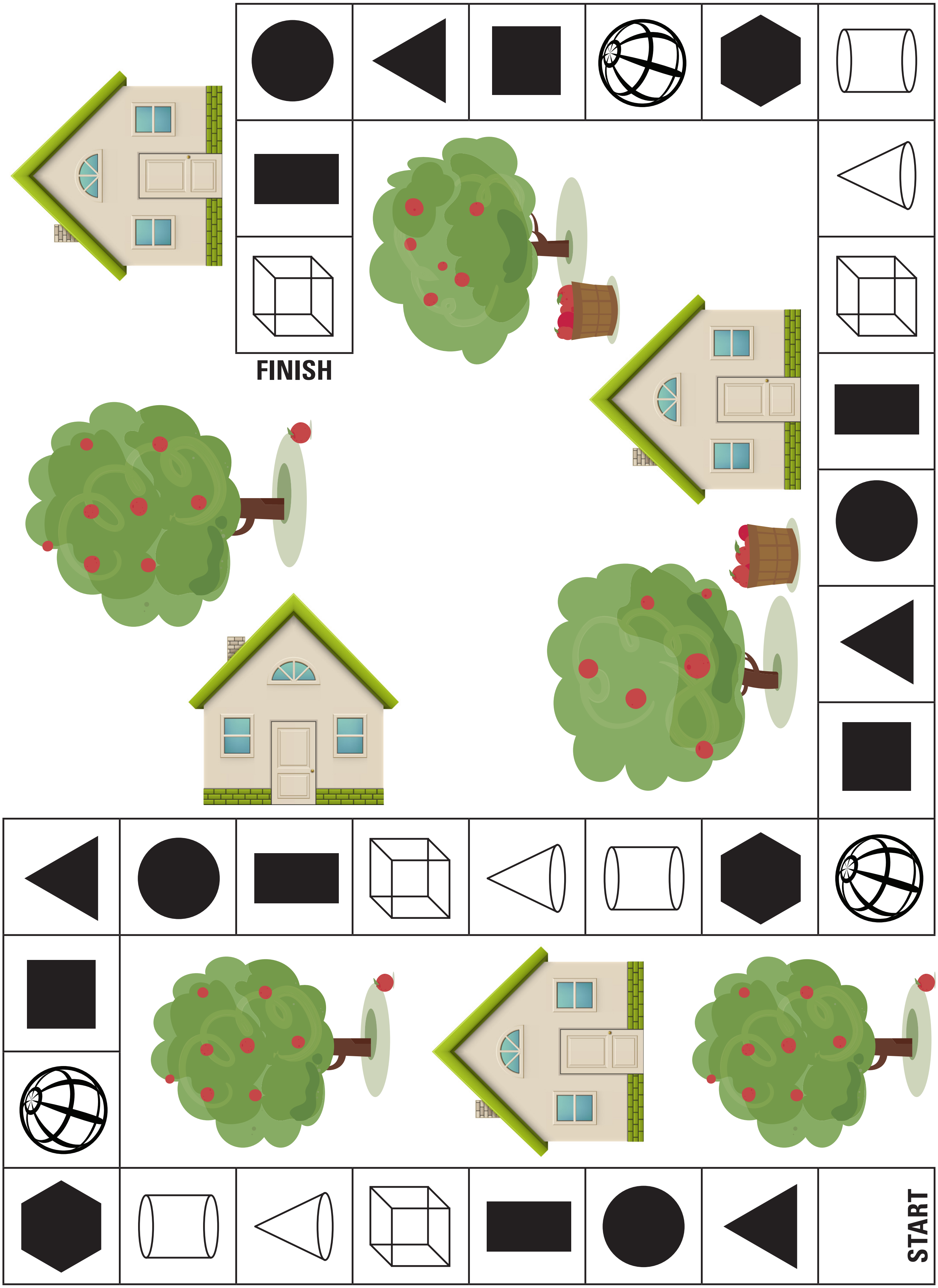




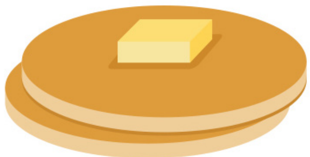




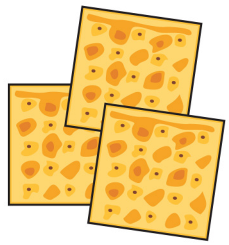
Shape Land



Shape Land









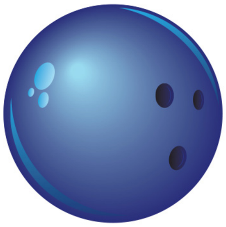






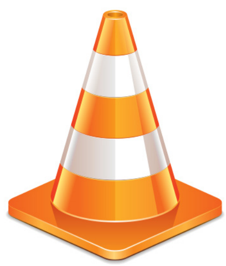
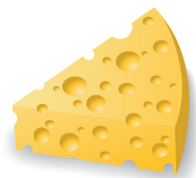


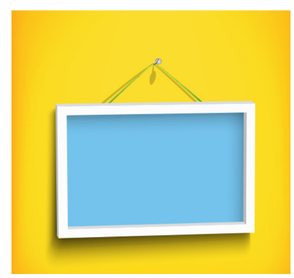
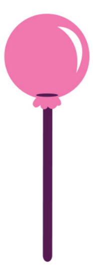
Shape Land

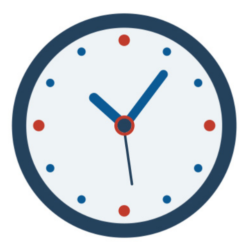




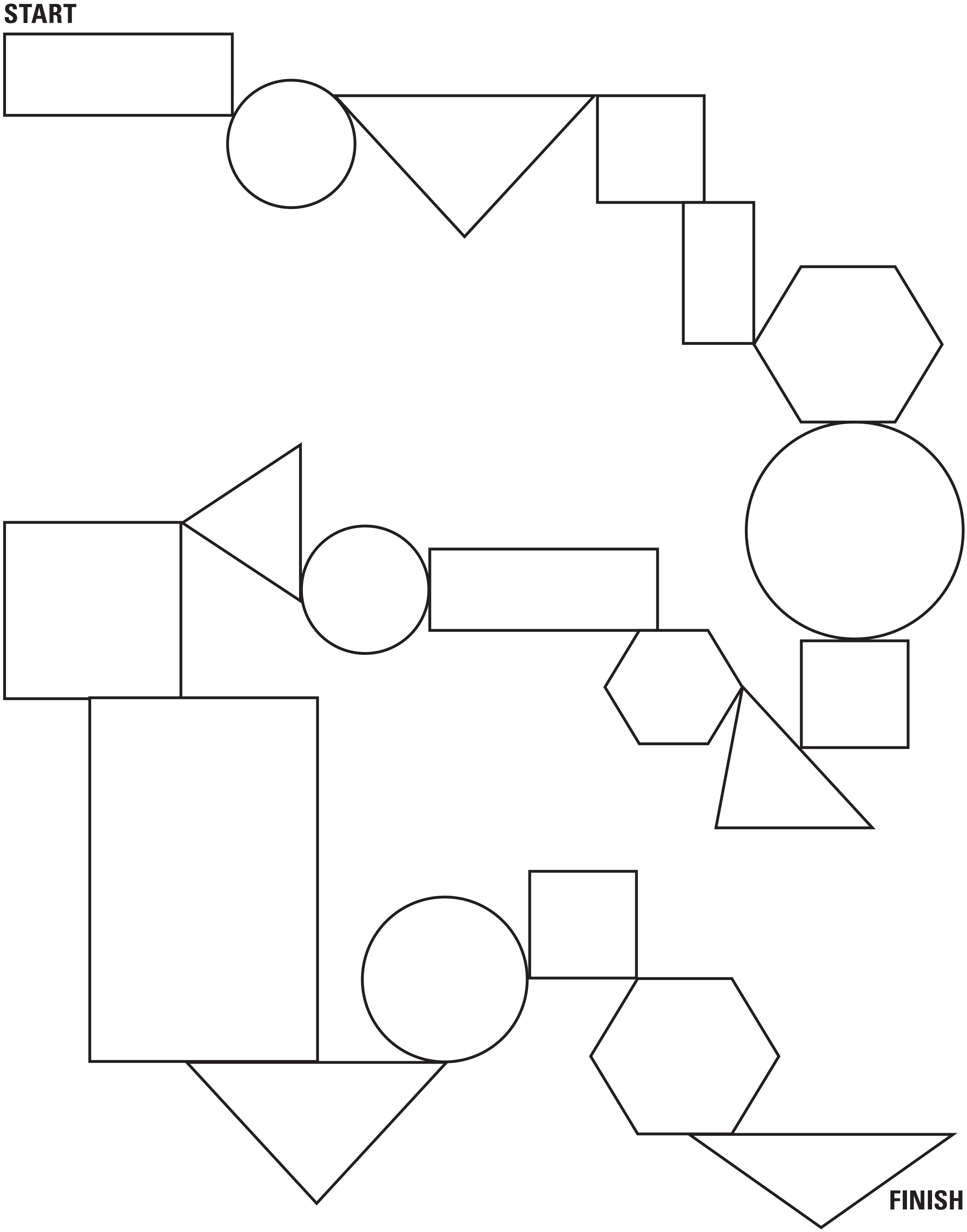




The Shape Path



The Shape Path