

Equipping Minds with Games



Dr. Carol T. Brown Ed.D

Meet the Author

Dr. Carol Brown, Executive Director and Educational Specialist of Equipping Minds, has been working with children and families who have struggled academically and psychologically since 1981. She received her BA in Rehabilitation Counseling from Marshall University, MA in Social Services from Southwestern Baptist Theological Seminary, and Doctor of Education (Ed.D) in Educational Leadership from the Southern Baptist Theological Seminary. She sought additional training in cognitive development therapy, primitive reflex therapy, sound therapy, vision therapy, nutritional therapy, and vestibular therapy and combines these in her multi-disciplinary therapy program. Carol is licensed and certified as an FIE Mediator by the Feuerstein Institute for the Enhancement of Learning Potential.

She has seen personally how the brain can be changed. In 1992 her son, Clayton, would need all of these interventions. Clayton and her students were, and continue to be, her greatest teachers. In 2009, Carol and her husband, Kyle, stepped out of private school administration and teaching to form Equipping Minds, formerly The Academic Success Center of Kentucky, which provides individualized programs for students and adults. Their primary mission is to work with children and adults to help them overcome learning, emotional, and social challenges by equipping their minds to reach the full potential God has for them. Equipping Minds now serves individuals of all ages with a broad range of abilities, from the gifted, to those with Down syndrome, Autism spectrum disorders, traumatic brain injuries, anxiety, memory loss, and developmental delays in school and in the workplace. Equipping Minds Cognitive Development Curriculum is being used across the United States and internationally. It is also being used in research studies with individuals with neurodevelopmental disorders.

Since 1981, Carol has experience as a head of school, principal, teacher, cognitive developmental therapist, social worker, reading and learning specialist, speaker, and consultant. She has served schools in North Carolina, Georgia, Northern Virginia, and Lyon, France. She is a contributing author in the book, *Neuroscience and Christian Formation*, and *Human Development: Equipping Minds with Cognitive Development (2018)*. Carol trains public, private, and homeschool educators and has conducted professional development workshops for Kentucky Association of School Councils (KASC), Toyota, University of Kentucky College of Medicine, Kentucky Parks and Recreation, Kentucky Department of Vocational Rehabilitation, Society of Professors in Christian Education (SPCE), National Alliance on Mental Illness (NAMI), SHARE an international educational conference, and civic organizations.

Carol and Kyle live in Frankfort, Kentucky and have three adult children.

Please contact Carol at cbrown@equippingminds.com for training workshops and online cognitive therapy for you and/or your children.

Our Son's Story

Many of you have read my credentials or have heard that over the last 37 years my journey has expanded from being a therapist working with children and their families to serving as a teacher and administrator in classical Christian schools, as well as a few years in homeschooling. Since 2009, I've had the privilege of working with students, families, and schools through Equipping Minds to provide hope.

However, what you may not know is that I have sat where you may be sitting now, desperately wanting to hear hope for my son, Clayton, who was struggling. That journey began abruptly when his entrance into this world was traumatic. We watched God breathe for him for the first 13 hours before the trauma team arrived and transported him to the neonatal unit—an hour and a half down the mountain. We were in rehabilitation therapy from the beginning, and the next 10 years would be filled with evaluations, speech therapy, and many tears. He was diagnosed with a language processing disorder in receptive and expressive language. He also had symptoms of dyslexia, dyscalculia, and dysgraphia. His testing revealed weaknesses in all areas with an overall composite of below average intellect. With my education and experience, I began reading every book I could get my hands on and could never seem to find “Clayton” in any of those books. He did not say his first sentence until he was almost 4, but then ... started talking up a storm. However, we couldn't understand half of what he said. When he was 5, the private school of our choice would not accept him and even told me that he had scored lower than any other student.

Then God placed an educator in our path who came to our home for an assessment and said, “There is so much in there that wants to get out. I think our school would be perfect for Clayton.” This was a classical Christian school in Fletcher, NC, Veritas Christian Academy. He had an exceptional kindergarten year and scored a 99% on his phonemic awareness test. However, at the end of the 2nd grade, his reading and spelling were still laborious. That's when I was sitting at the Georgia Dyslexia Conference and heard Clayton's struggles described perfectly. I heard on that day that there was hope. He would spend the summer at a learning center for 4 hours a day, 5 days a week for 8 weeks and then return for more therapy a few years later. Amazingly, at the end of that time, he was reading, he was spelling, he was getting jokes, and able to follow multi-step directions. He was comprehending and telling stories in detail and in sequence. He was happy and confident.

He went on to thrive in the classical Christian schools where I served. He was in the drama productions and excelled at impromptu's and was on the Mock Trial team. However, as he progressed, there were two areas which remained a struggle, processing speed and working memory. As his classes became more intense, he told me that he could not process some of the information as quickly as it was coming. I was in the position to have the best teachers and had trained them in the latest brain-based instructional methods. However, I couldn't ask the teachers to slow down the pace for one student. This led me to further my research and

training in the area of neuroscience and cognitive developmental therapy. My husband, who is also an educator, and I went through cognitive development training which focuses on developing the underlying cognitive functions necessary to read, comprehend, remember, and process information. Clayton went through an additional 60 hours of cognitive development therapy which increased his processing speed and his working memory. For the first time, he was reading for pleasure!

In August of 2011, Clayton began his studies at Boyce College in Louisville to pursue a degree in biblical counseling. While he had to work harder than many students to simply pass his classes, we were amazed that he had a 3.65 for the spring semester of 2013 – 4 A's and a B+. He graduated in December of 2014 with a 3.2 overall GPA! He interned for our center during the summers of 2012-2014 and now works for us full-time bringing hope to students who are struggling as he had struggled. On July 28th, 2013 he was the guest preacher at Grace Presbyterian Church in Danville, KY. Yes, language processing disorders in receptive and expressive language, dyslexia, dyscalculia, and dysgraphia can be overcome!

Take My Hand and Run with Me!

When people look at me,
A great student they see,
Spoken well of by the faculty,
Who constantly excels academically,
Who will go into vocational ministry,
This path has been far from easy,
For me, nothing ever came naturally,
Since a child I worked more rigorously,
Than all my fellow classmates,
Always falling behind in my classes,
No matter how much effort,
It never looked well on my report,
Despite my failures, I pressed forward,
Discouragement was constant, yet I endured,
The hope and love my parents showed,
And the Lord's hand of providence,
Brought me from shame and disgrace,
To a place filled with faith and grace,
Fellow student, have hope and rejoice,
For you also can be set free,
From all these struggles and miseries,
For nineteen years it haunted me,
But now I can run with ease,
See and learn from me, oh please!
I wish to see you at peace,
So take my hand during this race,
We will run a steady pace,
Confident with hope and success,
Until we unlock your gifts.

*By Clayton Brown
2014 Graduate of Boyce College
B.S. Biblical Counseling*

BLINK



Example of step #10 sorting by the number in the first row, color in the middle row, and shape in the top row.

Cognitive Skill: visual processing, working memory, attention, long-term memory, logic and reasoning

Challenges: The student needs to say what they are seeing and doing. Play each game as quickly as possible to increase processing speed and expressive language. Begin by taking turns on each step. Progress to more difficult levels when the levels become easy.

Modification: Place the cards face up one at a time and ask them to say the number, color, and shape they see on the card. If they cannot identify some of the items, do not use this card initially but add later when they are ready. You can time how quickly they can do the entire deck. * Always model the correct language and play with the student initially.

S 1	Place the cards face up one at a time and ask them to say the number they see on the card. If they cannot identify five items, do not use this card initially but add later when they are ready. You can time how quickly they can do the entire deck.
S 2	Sort the deck by number. Place a card with 1 item, 2 items, 3 items, 4 items, & 5 items. Take a card and say “Two on two.” Take turns playing with the student.
S 3	Place the cards face up one at a time and ask them to say the color they see on the card. If they cannot identify some colors, do not use this card initially but add later when they are ready.
S 4	Sort the deck by colors. Place six cards with one of each color face up and say “Red on Red.”
S 5	Place the cards face up one at a time and ask them to say the shape they see on the card. Most students will name the triangle and star. However, the “moon” may be a moon, crescent, smile, banana... The “drop” may be a rain or tear drop, a balloon, light bulb.... The “lightening” may be storm, bolt, thunder, zig zag.... The “flower” may be a clover, cloud, cookie, popcorn...
S 6	Next, sort the deck by shapes. Place a card with one of each shape and say “Star on Star.”
S 7	Working Memory: Place the cards down one at a time, and alternate by saying the number of the first card, the color of the second card, and the shape of the third card. Continue this pattern with the entire deck.

S 8	Play the game by placing 2 cards in the discard pile. Each player begins with 3 cards. Take turns matching either the same number, color, or shape. You will say, "red on red" or "three on three" or "star on star." You can begin by taking turns and give a prompt to "check your shapes, check your numbers, check your colors."
S 9	Take one card and say all 3 qualities "two red stars"
S 10	Sort by number (row 1), color (row 2), and shape (row 3). The student will place the number in row 1 & say "two on two," place the color in row 2 & say "blue on blue," and place the shape in row 3 & say "moon on moon." Always use language.
S 11	Place the cards down one at a time and alternate by saying the number of the first card, number and color of the second card, number, color, and shape of the third. Continue pattern.
S 12	Sort the deck by number. Place a card with 1 item, 2 items, 3 items, 4 items, & 5 items. Take a card and say "Two on two same number. " Take turns playing with the student.
S 13	Sort the deck by colors. Place six cards with one of each color and say "Red on red same color. "
S 14	Sort the deck by shapes. Place six cards with one of each shape and say "Star on star same shape. "
S 15	Play the game by placing 2 cards in the discard pile. Each player begins with 3 cards. Take turns matching either the same number, color, or shape. You will say, "same number" or "same color" or "same shape." You can begin by taking turns and give a prompt to "check you shapes, check your numbers, check your colors."
S 16	Play the game with no words
S 17	Memorize one card, say "two green stars"
S 18	Memorize two cards, review the first and add a second
S 19	Memorize three cards
S 20	Memorize four cards
S 21	Memorize five cards
S 22	Memorize six cards
S 23	Continue to add cards with a goal of 20 cards. Students have been able to memorize all 60 cards.
S 24	Play SET using 12 Blink cards. To make a SET, the qualities have to be all the same or all different in number, color, and shape. The numbers must be 1,2,3 or 2,3,4 or 3,4,5, or all the same. The color must be all different or all the same. The shapes must be all the same or all different.

QWITCH



Example for step #14

Cognitive Skill: visual processing, working memory, attention, long-term memory,

Challenges: Play each game as quickly as possible. Progress to more difficult levels when the levels become easy. The student needs to say what they are seeing and doing.

Classroom Connection: Reading: You can also have the student say the sound of the letters. Math: Continue to add and subtract the numbers beyond **S 18** to +3, + 4... and then multiplication.

S 1	Say the letter you see on each card.
S 2	Say the number you see on each card.
S 3	Sort the cards by letter "B on B."
S 4	Sort by number and say "1 on 1"
S 5	Alternate saying the number on the first card then letter on the next card.
S 6	Place 6 cards face up, draw one card and find the matching (=) letter or number. Say the match you see, "C on C" or "3 on 3." Also, Place 6 cards face up and see if you can find two cards on the board with a matching letter or number.
S 7	Shuffle the deck and divide the cards equally. Place 2 cards in the center pile. Each player has 5 cards. Begin by playing the game = (equal) and match the same number or letter. Say what you are matching, "8 on 8," or "C on C."
S 8	Place 6 cards face up, draw one card and find the letter or number which would be + (plus 1). Say the pair that you see such as "3 to 4" or "C to D." You could also say "D on C" "4 on 3" 8 does move up to 1 (compare to a clock) and H move up to A Also, Place 6 cards face up and see if you can find two cards which would be +1 such as B to C or 4 to 5.
S 9	Shuffle the deck and divide the cards equally. Place 2 cards in the center pile. Each player has 5 cards. Play = by matching the same letter and + 1 playing one number higher.
S 10	Continue by placing 2 cards in the center and play game by matching + for the letter and + for the number. 8 does move up to 1 (compare to a clock) and H move up to A
S 11	Place 6 cards face up and find letter or number which would be - 1. Say the pair that you see such as "4 to 3" or "D to C." You could also say "C on D" "3 on 4" 1 does move 8 (compare to a clock) and A moves to H.
S 12	Continue by placing 2 cards in the center and play game by matching = for the letter and - for the number
S 13	Continue by placing 2 cards in the center and play game by matching - for the letter and - for the number

S 14	Place the cards down into 3 piles, alternate saying = on the first pile (B2 is B or 2), the second pile+ (A3 is B or 4), the third pile -(E8 is D or 7).
S 15	Place 2 cards down and draw from one pile with =, +, or -
S 16	Alternate saying = of one card and + of the next card
S 17	Alternate saying = of one card, + of the next card, and – of the third card
S 18	Alternate saying = of one card and +2 of the next card

SET



Example for #14

Cognitive Skill: visual processing, working memory, attention, logic and reasoning

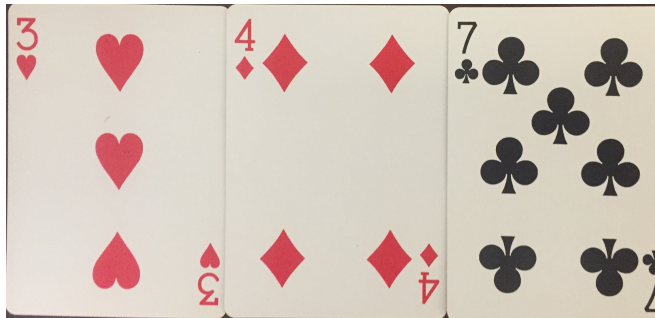
Challenges: Progress to more difficult levels when the levels become easy. The student needs to say what they are seeing and doing. To make a SET, the qualities have to be all the same or all different in number, color, shape, and pattern.

Classroom Connection: Phonemic awareness and inferential reasoning

	Solid	Striped	Open	All
Ask what number they see and sort by number. Then sort by color. Say “one on one” & “red or red.” Use language.	S 1			
Ask what shape they see & sort by shape: oval, diamond, squiggle. Say “oval on oval.”	S 2			
Show examples of “sets” and explain why it’s a set.	S 3			
Show & say the 2 solid cards, find 3rd. Student says what they see (one green solid diamond, one red solid oval) and then you will ask what number, color, and shape is needed. (one, purple, solid, squiggle)	S 4	S 12	S 14	S 16
Chose the correct card to complete the SET. Show the student 2 cards and have 3 options below. The student will choose the correct card to complete the SET.	S 5			S 17
Is this a SET? Yes or No? Show 3 cards and ask if it is a SET. The student will answer yes or no.	S 6			S 18
Put 9 cards down. Model how to play. Talk through how you will be looking for a SET. This mediation is crucial. “I am	S 7			

looking at my colors.” What number do you see a lot of? What shape do you see a lot of?				
Put 9 cards down giving prompts. Identify 2 cards and have them think about the next card.	S 8			
Put 9 cards down. Verbalize what they are checking.	S 9	S 13	S 15	S 19
Sort by pattern (solid, striped, open) “solid on solid”				S 10
Alternate saying number, color, pattern, shape	S 11	S 11	S 11	S 11
Play with full deck (what are you checking?) Use language.				S 19
Play with full deck – 5 minutes *Use BLINK cards and play as SET. You can have 1,2,3, or 2,3,4, or 3,4,5 for numbers, different or same colors, and different or same shapes				S 20
Play with full deck – 10 minutes- count number of SETS				S 21
Show a card, says what you see, turn the card face down, Show the second card, say what you see, turn the card face down, Ask what the 3rd card will be to complete the SET.				S 22
NY Times Basic 1 & 2				S 23,24
NY Times Advanced 1 & 2				S 25,26
Play full deck competitively				S 27

Deck of Cards



Example for Step #35

Cognitive Skill: visual processing, working memory, attention, long-term memory, logic and reasoning

Challenges: Play each game as quickly as possible. Progress to more difficult levels when the levels become easy. The student needs to say what they are seeing and doing.

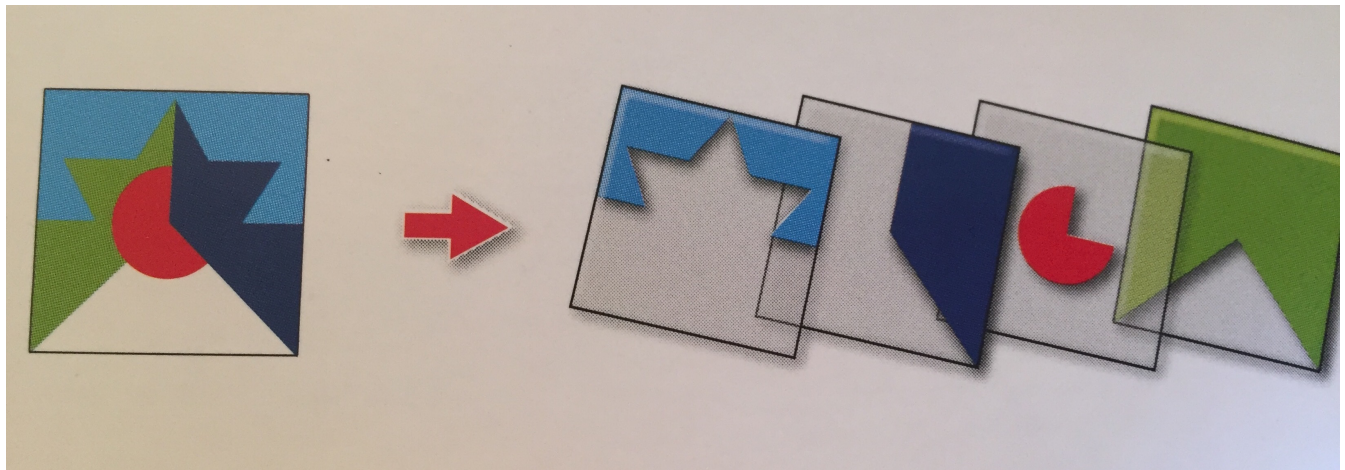
Classroom Connection: Math facts * Jumbo playing cards are excellent for a group.

S 1	Begin by using the number cards only. Place the cards face up one at a time and ask them to say the number they see on the card. You can time how quickly they can do the entire deck.
S 2	Place the cards face up one at a time and ask them to say the color they see on the card. Next, Place the cards face up one at a time and ask them to say the suit they see on the card. Most students will name the heart and diamond. It is important to label the “club” and “spade” by their correct name.
S 3	Place the cards down one at a time, and alternate by saying the number of the first card, the color of the second card, and the suit of the third card. Continue this pattern with the entire deck.
S 4	Say the number on the card if you added + 1.
S 5	Alternate saying the number (=) of the first card and then say plus (+) 1 on the second card. Continue this pattern for the entire deck.
S 6	Alternate saying the number (=) of the first card and then say plus (+) 1 on the second card and color on the third. Continue this pattern for the entire deck.
S 7	Alternate saying the number (=) of the first card and then say plus (+) 1 on the second card, color on the third, and suit on the fourth. Continue this pattern for the entire deck.
S 8	Say the number on the card if you subtracted (-) 1.

S 9	Alternate saying the number plus (+) 1 of the first card and then say minus (-) 1 on the second card. Continue this pattern for the entire deck.
S 10	Alternate saying the number (=) of the first card, then say plus (+) 1 on the second card, and subtract (-) 1 of the third card. Continue this pattern for the entire deck.
S 11	Alternate saying the number (=) of the first card, then say plus (+) 1 on the second card, subtract (-) 1 of the third card and color of the fourth card. Continue this pattern for the entire deck.
S 12	Alternate saying the number (=) of the first card, then say plus (+) 1 on the second card, subtract (-) 1 of the third card, color of the fourth card and suit of the fifth card. Continue this pattern for the entire deck.
S 13	Say the number on the card if you added + 2.
S 14	Say the number on the card if you minus - 1.
S 15	Alternate saying +2, then color, and then suit.
S 16	Alternate saying - 2, then color, and then suit
S 17	Say the number on the card if you added + 3
S 18	Alternate saying +3, then color, and then suit.
S 19	Say the number on the card if you added + 4.
S 20	Alternate saying +4, then color, and then suit.
S 21	Say the number on the card if you added + 5.
S 22	Alternate saying +5, then color, and then suit.
S 23	Say the number on the card if you added + 6.
S 24	Alternate saying =, then color, then suit, and then + 6
S 25	Say the number on the card if you added + 7.
S 26	Alternate saying =, then color, then suit, and then + 7
S 27	Say the number on the card if you added + 8.
S 28	Alternate saying =, then color, then suit, and then + 8
S 29	Say the number on the card if you added + 9.

S 30	Alternate saying =, then color, then suit, and then + 9
S 31	Say the number on the card if you added + 10.
S 32	Alternate saying =, then color, then suit, and then + 10
S 33	Say the number on the card if you multiply X 2
S 34	Say the number, color, suit, and president
S 35	Place the cards out one at a time and say only the cards you see after a red card. If there is a 3 red heart and the next card is a 4 red diamond you would say "4" and then you would also say the next card which is "7" as seen in the example for #15.

Color Code



Example for challenge Step #3

Cognitive Skill: logic and visual spatial reasoning

Challenge and Questions to ask: Begin with number 1 and move through in order. It is important to do all of the puzzles in order. Play for 5-10 minutes.

S 1 Lay out all of the puzzle pieces and group them with the matching color.

S 2 Looking at the puzzle, “What colors do you see?” Get the colored tiles which match the puzzle. The student may notice that they see white. Ask the student, “Will we ever need to put a white piece down first?” Why not? Lay the pieces on the table without touching each other.

S 3 Determine the order in which the tiles need to be placed in the display holder before you place them. “Which piece will be on top?” Notice that it will be the one where the entire piece can be seen. Place the tile that will be placed first to the left and the last tile to be put into the display on your right. Arrange the pieces in order on the table. **Do NOT place pieces on top of each other in your hands or in the display** rather, you will visualize this in your mind. Ask, “Do you see it going together in your mind?” Now, place the pieces down and describe what you are doing.

S 4 Take the puzzle apart.

S 5 Once you have completed a level, you can go back and remake the puzzle from memory. **No trial and error:** Don’t alter the tiles in the display if you don’t match the design. Pull the tiles out of the display and start again.

Starter	1-5	6-10	11-15	16-20	21-25
Junior	26-30	31-35	36-40	41-45	46-50
Expert	51-55	56-60	61-65	66-70	71-75
Master	76-80	81-85	86-90	91-95	96-100

SPOT IT - Any Version



Constant Card

Cognitive Skill: visual processing, working memory, attention, long-term memory, logic and reasoning, systematic search, categorization, comparison

Challenges: Progress to more difficult levels when the levels become easy. You will choose **one** card which will be the **constant** card that you will compare every other card. You should model the correct language by going first. You will describe what you see on the card by using number, color, & object (“I see a blue dolphin”). Always begin at 12’oclock and move around the card systematically or clockwise ending with the center object. Play the game with the student and always model correct language and searching. There is ALWAYS one match when you have any two Spot It cards. You will notice that on some versions the objects will be small, medium, and large. For example, there may be a small snake on one card and a large on the other, these are still a match. Take turns when playing initially before playing competitively. **Modification:** If you student is non-verbal, you will be their voice and model. They may initially point or sign to the match or say one word.

S 1	Select one constant card and describe what you see on the constant card in a full sentence. The mediator should model by going first. “I see two green frogs.” There will be 6-8 items on each card depending on the Spot it version. Each player then draws a card, finds the match on the constant card and says, “I see two green snakes.” Begin by taking turns. You will play competitively in S 6.
S 2	Continue to play as described in S 1 but now have the student recall the items on the constant card. If they cannot remember an item, give a color prompt, “What did you see that was black.” You could also say, “What did you see the swims.”
S 3	Recall items on card. Write full sentences on a dry erase board. Have student read.
S 4	Place 9 cards on the table. Starting at the top left card and move left to right systematically. Classify or group the objects into categories. Categorize items by color, animals, food, or usage. Chose one category. See classroom connection for categorizing animals.

S 5	Continue playing and now recall category.
S 6	Play competitively. Show constant card & now show 2 cards and see who can find the match, & use sentences.
S 7	Continue to add another group to categorize.
S 8	Recall category
S 9	Time yourself playing with 2 cards and find matches. This can be done with 1 or 2 people taking turns or competitively.
S 10	Show & describe the constant card. Now, turn the card over and find matches.
S 11	Continue turning the card over and then recall items at the end of the game.
S 12	Say what is on the constant card – DO NOT show the student the card. Find matches and recall, then categorize.
S 13	Place 9 cards down and find at least 3 matches. Search from top left to bottom right.
S 14	Place 9 cards down, place 8 cards face down leaving the center card face up. Turn cards over one at a time trying to find matches of 3. Keep cards face down until the matches are found.
S 15	Place 12 cards down and find 4 matches. Search from top left to bottom right.

Spot It Classroom Connection

Comparison When you find the items that match, compare the sizes. They will be either the same size, smaller or larger.

Reading, Writing, and Grammar

Have students tell you what they see. The parent and/or teacher can write it on a dry erase board. The student can then read it. Have the students write what they see. "I see two red balloons."

Categorization/Classification

The ability to categorize concepts and objects is a prerequisite to logical reasoning. For our purposes, we will use the Spot It Jr. Animals to teach students the concept of categorizing through the exercise of animal classification. Animal Classification 1 is in the form of a Venn diagram. It categorizes the Spot It Animals based on the environment(s) in which they primarily live. This exercise is ideal for younger students, though it is also beneficial for students of any age. It is a good warm up for students before they are introduced to more difficult types of classification diagrams. Animal Classification 2 categorizes the SPOT IT Animals in a hierarchal manner, beginning with the two largest categories of all animals and progressing to further detailed subcategories. This diagram is more advanced than the Venn diagram and requires a greater amount of in-depth thinking (and possible research) for students. The answers to Animal Classification 2 are provided in the table below:

Vertebrates					Invertebrates
<u>Mammals:</u> Bear Skunk Camel Squirrel Pig Bat Zebra Seal Dog Hippopotamus Elephant Cow Cat Horse Dolphin Rabbit Lion	<u>Reptiles:</u> Snake Turtle Crocodile	<u>Birds:</u> Parrot Duck Owl Chicken Penguin Flamingo	<u>Amphibians:</u> Frog	<u>Fish:</u> Fish Octopus Shark	Spider Crab Bee Grasshopper Octopus Starfish