

SET® Dice Skill Connections

For

Occupational Therapy and Speech-Language Pathology

SET Dice is a game primarily played for fun and entertainment. The fact that it teaches, strengthens and exercises an abundance of skills makes it one of the best possible tools for your classroom. Because it is fundamentally a game people enjoy, SET Dice inspires an intrinsic motivation and desire to “play.” The repetition of playing again and again reinforces the skills that lead to success.



SET Dice Strengthens

- Cognitive Development
- Visual Perception
- Physical Development
- Social Development
- Emotional Development

Ages: 8 to adult
Players: 1 to 6

About SET Dice

SET Dice includes three different games to play with the 42 custom over-sized dice. The three games play very differently but they all including finding and making *SETs*.

A *SET* is 3 dice that are either *all the same* OR *all different* in each individual feature.

The dice have three features: **color** (red, green or purple), **shape** (oval, diamond or squiggle) and **number** (1, 2 or 3).

1) SET Cubed is a casual strategy game. In this turn-taking game, players are challenged to make *SETs* by connecting their dice with the dice already on the board. Strategically place each die to make the most *SETs* and aim for the bonus squares to get the highest score! **2) Scramble SET** is fast-paced fun, all at once, let the 42 dice spill out of the bag and race to find the most *SETs*! **3) Crossword SET** challenges players' speed and skill. The first player to combine all 10 of his or her dice into a crossword grid made of *SETs* wins! Every game is a brain booster that keeps players challenged and excited to play again!

How SET Dice Develops Skills

Cognitive Development:

- **Analytical Skills & Critical Thinking:** In each of the games, players continually analyze the different combinations of dice, considering all three features to find patterns and reveal *SETs*. While playing SET Cubed, players also evaluate and analyze the dice on the board to find the best ways to play their dice to score the most points.
- **Attention:** The excitement and desire to be the first player to see a *SET* or find the best possible *SET* combinations on the board keeps the attention of every player.
- **Cognitive Flexibility:** The ability to quickly transition from one feature to another is improved by playing SET Dice because players must evaluate all three features to find *SETs*. The ability to shift from one concept to another is also improved because players constantly apply different methods and types of thinking to find *SETs*. These are just a few of the many methods of finding *SETs*:
 - looking for a *SET* that is all the same color,
 - sequencing through the dice, two at a time to see if the third die that completes the *SET* is on the table,
 - looking for a *SET* that is all different in all three features.

Playing SET Dice increases the brains' ability to make quick shifts in thinking.

- **Left Brain Right Brain Connectivity:** SET Dice involves learning a rule of logic, and so players must invoke “left brain” logical thinking skills. To find and make *SETs*, players must also examine a spatial array of dice and locate the dice that satisfy the rule – which exercises “right brain” spatial and intuitive thinking skills.

- **Logical Reasoning:** Players practice their logical reasoning skills by applying the rule of SET to identify which dice combinations make a *SET*. For every two dice, there is a third die that creates a *SET*, players must identify what that die is and determine whether it's available. In SET Cubed and Crossword SET, players also need to analyze the best placement of their dice when creating *SETs*. Logical deduction is often used to confirm if there are any *SETs* left on the table or if any *SETs* can be made on the board.
- **Processing Speed:** Players strengthen their processing speeds in all three games. These skills are heightened in Scramble SET and Crossword SET because the first person to find the *SET* or connect all his or her dice wins! Playing SET Dice improves players' processing speeds, which helps with learning, communication and social relationships.
- **Strategy:** In SET Cubed, players can use a maximum of 3 dice each turn. In order to get the highest score, players must strategize which dice to use and where to place them on the board. Players commonly use strategies such as:
 - finding a *SET* to complete with only one die,
 - creating *SETs* in multiple directions with just one die,
 - playing dice on a bonus square and
 - placing dice so the next player can't get to a bonus square.
- **Working Memory:** When playing SET Dice, players must be able to recall which game they are playing, the rules to that game, what constitutes a *SET* and the methods used to find *SETs*. In SET Cubed they also need to be able to remember common strategies and which strategies they are using.

Visual Perception:

- **Visual Perception:** Every time a die is played the visual information changes. The combination of dice is never the same. Players repeatedly exercise their ability to interpret, analyze and give meaning to every new assortment of dice, strengthening their visual perception skills. SET Dice also exercises many building blocks of visual perception.
 - **Form Constancy:** Players exercise form constancy when they find *SETs*. Players learn that a *SET* may be
 - all the same shape, but different in number and color or
 - all the same shape and all the same number but different in color or
 - all the same shape and all the same color but different in number.
 - **Spatial Reasoning:** In Scramble SET, players practice spatial reasoning by mentally re-arranging or grouping the dice on the table to find a *SET* without physically touching the dice. In SET Cubed, players do this as they mentally re-arrange or group their dice in combination with those on the board, before they physically place their dice on the board.
 - **Visual Discrimination:** To find and make *SETs*, players must be able to detect differences in three characteristics — color, shape and number.
 - **Visual-Motor Integration & Speed:** In Scramble SET, players must be able to perceive and process the visual information, say "*SET*" and then physically move their hands to pick up the *SET*. Being able to quickly and efficiently integrate visual and motor skills is key, because the first player to see and say "*SET*" gets the *SET*! In Crossword SET, the player who can perceive, process and then physically place all his or her dice into a crossword-like grid first—wins! Players strengthen their visual-motor integration and visual-motor speed every time they play.

Physical Development:

- **Bilateral Coordination:** Playing SET Dice strengthens bilateral coordination and provides opportunities to improve individual skills like symmetrical integration, asymmetrical integration as well as crossing the midline.
 - **Symmetrical Integration:** Using both hands to hold all the dice prior to rolling, using two hands to move two or more dice, using two hands to hold the bag while other players take additional dice, and using both arms and hands to scoop up the dice at the end of the game are all symmetrical integration exercises completed while playing SET Dice.
 - **Asymmetrical Integration:** There are many opportunities to exercise asymmetrical integration while playing SET Dice: holding the bag with one hand while drawing dice with the other or grabbing one die of a *SET* with one hand and the other two dice with the other hand.
 - **Crossing the Midline:** SET Dice players cross their hand in front of themselves in order to place their *SETs* on the board or pick up *SETs* off the table. If a player doesn't inherently cross the midline have them only use their right hand during the game to help exercise this skill while still having fun.

- **Fine Motor Skills:** Playing SET Dice helps strengthen *finger isolation, in-hand manipulation, hand arches, pincer grasp, hand-eye coordination* and increases overall *dexterity*. These skills are practiced when shaking and rolling dice, drawing new dice, placing dice on the board, pointing out SETs made, picking up SETs and tallying points.
 - **Motor Planning:** Each time any of the three games are played, the visual information and the location of the dice are different. Players need to be able to integrate this information and carry out the proper motor responses. In Scramble SET, players need to see a SET, say “SET”, pick up their SET and place it in front of them without rotating any of the dice. SET Cubed and Crossword SET require different motor responses. The sequence of motor responses can change depending on how each game plays out.

Social Development

- **Social Skills:** Playing SET Dice provides multiple opportunities for learning and exercising proper social skills such as: *verbal and non-verbal communication; following rules; listening; using appropriate vocal volumes, words and touch; and coping with losing and proper behavior when winning.*
- **Social Balance – Self-Control:** SET Dice also helps balance some common social differences like overly introverted people and overly extroverted people. When playing Scramble SET, players must first say “SET” (loud enough that everyone can hear) before they can take the SET, encouraging more timid players to speak up and be heard. But if a player says “SET” and doesn’t have one, they lose a point, this immediate consequence helps players think before acting and strengthens their self-control.

Emotional Development

- **Confidence:** Each time a player finds a SET, his or her confidence grows. As players repeatedly play SET their cognitive, physical, social and emotional skills continually develop increasing their overall self-confidence. This increase in confidence shows while playing the game and extends to all other areas of life.
- **Growth Mindset:** Over time each player’s ability to find SETs increases dramatically. Excelling at something that was once difficult reinforces a growth mindset.
- **Intrinsic Motivation:** SET Dice is enjoyable so players are intrinsically motivated to play again and again. This repetition is key to developing skills. Each time a player finds a SET, he or she feels a sense of accomplishment, which creates an urge to find more.
- **Mood Enhancement:** SET Dice offers children and adults a way to maintain or improve essential skills in a fun and positive way. The enjoyment of playing and the feeling of success every time a SET is found naturally enhance moods. It’s purposeful play that impacts each player’s environment and mindset in a very positive way.
- **Self-Esteem:** Playing SET Dice increases players’ skills and abilities, which builds their confidence, improving their overall self-esteem. A strong, positive self-esteem directly relates to players’ abilities to think and cope with challenges throughout their lives. It is the foundation of success and happiness.