StickTogether: Product Benefits from a Psychological Perspective
Analysis & Summary Report prepared by Kristen Lyons, PhD

I have reviewed the StickTogether product line and have identified a number of psychological benefits spanning the physical, cognitive, and social-emotional domains. On the following pages are specialized reports for the benefits of the product for different populations/settings. A full list of all benefits is on the final page of this report. If you have any questions about this report, please contact:

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StickTogether Product Uses & Benefits for Schools & Youth Organizations

Analysis & summary report prepared by:
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We know that supporting a child's development means much more than just focusing on academics. Supporting our children requires that we the whole child - including their physical, cognitive, and social/emotional development. We also know that it's critical that we adjust our supports for the individual child's needs – providing activities that meet them where they are and challenge them to push beyond their current limits. StickTogether activity kits meet both of these goals.

StickTogether combines art-making and logical thinking in a fun, low-stress collaborative activity. The kits can be used by individuals from a wide age-range (from childhood through late adulthood) and with a range of ability levels. From a psychological perspective, the activity provides benefits for the whole person. That is to say, using the product provides benefits in terms of:

- The physical domain: movement of the body, sensations, and brain function
- The cognitive domain: perception, memory, problem-solving, language, attention, and other processes related to thinking
- The social/emotional domain: how we feel about ourselves and others, relationships, social interactions, how we feel and control our emotions, and how we control our impulses

Below is a list of specific uses/psychological benefits for schools and youth organizations:

Physical
- Because the activity is designed to be used collaboratively, work can be divided so that each person can contribute with their physical ability level, allowing for the product to be used by people of a wide range of ages and ability levels
- The activity develops fine-motor skills (in removing the stickers and placing them on the grid)
- For individuals who have a need to move, the product provides an activity that gives enough low-level stimulation that individuals may be willing to sit still longer (akin to a fidget spinner) when needed
- The activity requires integrated use of multiple brain regions, including the visual cortex, temporal lobes (involved in language processing), and motor cortex (involved in movement); participants also engage their frontal lobe when planning and using working memory to strategize about how to complete the task. Using these brain regions individually and in concert improves their functioning and physically changes the structure of the brain to be able to better support the associated mental functions.

Cognitive
- Practicing a variety of self-control/executive function skills, which are important for success academically and in general in everyday life. This includes:
  - Learning to follow directions (not just placing boxes randomly, but using the grid)
  - Practicing sustained attention skills
  - Practicing working memory skills (in looking at the grid and using the color key to place the colored sticker on the appropriate box)
  - Encourages persistence (as the task may take a long period to complete but a reward is gained by the work and dedication to the activity)
  - Practicing impulse control (not placing the stickers inappropriately on the grid)
- Additional cognitive benefits may be gained by engaging in discussions about what the picture will show. Discussing predictions provides an opportunity for practicing identifying evidence, and articulating rationale for one's thinking. By checking back to see if their predictions were correct, the activity gives a chance to see that one's initial assumptions may not be correct and that ideas can evolve
- Learning of color names
- Developing pattern recognition skills (in color-letter matching)
- Developing logical thinking skills (if A then put sticker that is Blue…)
- Content learning related to computer science (about pixels) and perception (how parts make up the whole)
- Could also be used as a preview activity to prime for learning about a particular topic (e.g., how hot air balloons float)

Social/Emotional
- Creating an opportunity for social connections (combating loneliness and isolation)
  - Can be used as a way to gradually foster new relationships (e.g. if a new adult/child joins a group), by creating a purpose for socially interacting and generating reasons to talk to others (which may feel safer for more introverted or shy individuals)
  - Working together towards a shared goal promotes a sense of connectedness
  - Since the activity doesn't require advanced language skills it can be used when working with individuals who are unable or do not desire to engage in conversation but want to spend time together
  - Provides an opportunity for multi-age interaction
  - Providing an opportunity for equalizing relationships (e.g., between adults/children) as members of the different groups aren't necessarily better at the activity than others
- Learning to work collaboratively with others, including:
  - Strategizing about how to divide up the work
  - Learning to share materials/take turns
  - Learning to manage conflicts
- Provides and opportunity to practice managing emotions (e.g., frustration if making mistakes or anger at others working together with the child on the project)

- Provides users with a sense of accomplishment and pride at their work
- Promotes relaxation, as it is not especially stimulating but does provide something to focus on
- Can be used to try to combat stereotypes about gender (e.g., by having girls use blue and boys use pink)

Additional potential uses/benefits (across domains):
- Can be used as a reward system (i.e., you get to place a sticker when you do X)
- Can be used as a competition between teams to see who can complete it more quickly (encouraging team members to work together)
- Creates a piece of art that can be used as a memento (e.g., building a picture with a relative that one is visiting, that can then stay on the wall as a reminder of the event)
- Provides an off-line activity that is likely to keep people's minds engaged (and off technology)