

# Technology for Young Learners

## Hatch iStartSmart® Classroom Solution for 2 and 3-year-olds

*This whitepaper provides the research basis for Hatch Early Childhood® and the iStartSmart® classroom solution for two- and three-year-olds.*

Sarah Sweney, M.A.

Research Advisor, Hatch Early Childhood



## **Whitepaper – Hatch iStartSmart® Two and Three-Year-Old Product**

**February 2017**

**Sarah Sweney, M.A.**

Technology for early learners is currently undergoing a rapid transition, and its use in both early childhood programs and homes is shifting dramatically. Teachers, parents, and researchers recognize the important influence that technology is having on young children, and many industry leaders are changing their tune when it comes to advocating for technology use in early childhood. Hatch's *iStartSmart*® classroom solution is an important part of establishing an effective early childhood program by allowing teachers to implement essential lessons through new technology experiences. For many children who do not have access to media as a learning tool, high quality technology experiences are essential in closing the gap of the digital divide. Programs using solutions such as *iStartSmart*® can ensure their young learners head to kindergarten ready to learn on an even playing field, with their peers. Hatch has made new advances in early educational research and has developed a robust touchscreen-based classroom learning solution with specific skill recommendations for varying age groups, including two-and three-year-olds. With the introduction of the *iStartSmart*® classifications for two-and three-year-olds, Hatch pays heed to the updated recommendations of researchers and leading educators to make technology work for all children, across various ages and abilities.

Guided by a child's developmental trajectory, the offering for two- and three-year-olds ensures our youngest learners are on track for essential learning opportunities. The most influential new research shedding light on the change in acceptance of media use comes from

the **American Academy of Pediatrics**. Previously, the AAP has stood by their recommendation of no screen time for any child under two years, no exceptions. These guidelines have been a part of the AAP's media recommendations since 1999, and until now, they have not wavered. A report released in October 2016 provides updated recommendations that more accurately reflect the daily lives of young children both at home and in school. While it is important to know *what* children are engaged with when it comes to technology, it is also important to consider *who* else is engaged with them. Children aged 28- months and younger still have difficulty learning from two-dimensional experiences, which makes the case for co-viewing an essential component of technology with these young learners. **Adult interaction remains crucial for young children to learn effectively from technology.** According to the new report, children 12 to 24- months of age can begin to learn novel words from commercially available *word learning* videos, but only if their parents watch with them and reteach the words, essentially using the videos as a learning scaffold to build the language skills (AAP 2015). Touchscreens and tablets now make up the bulk of the media devices that children of all ages are interacting with and **according to the AAP, these media devices may increase educational potential by providing scaffolding to build necessary skills.** Effective technology enters at an intersection of what children already know, and what they are capable of learning. Passive involvement will not indoctrinate these skills during lessons, so adult interactions are as vital as the technology.

Hatch has long been grounded in developmental research and the new research and information makes it clear that the experience of two- and three-year-olds is somewhat different from that of a preschooler or pre-kindergartner. For this reason, Hatch has developed

a technology solution specifically designed to reach the two and three-year-old classroom population. The *iStartSmart*® solution delivers developmentally appropriate skills by way of either a Tablet or a touchscreen computer. In order to remain aligned to research and leading educators, Hatch devised specific age groups and determined which of the skill games are most appropriate for each group (within *Shell Squad Games*). These age breakdowns make it easier for teachers and parents to understand which games are appropriate for which ages:

**Hatch Age Breakdown**

*Early Toddler: 28 – 36 months*

*Toddler: 36 – 41 months*

*Preschool and Pre-K: 41 months and above*

The below table outlines specific skills, where they fall within the Skill Families, and at which point they are appropriate for our youngest learners.

<b>FAMILY</b>	<b>SKILL</b>	<b>AGE GROUP</b>
Phonological Awareness	Blending Sounds in Words	Toddler*
Numeric Operations	Counting Foundations	Early Toddler*
Numeric Operations	Numeral Recognition	Early Toddler/Toddler+
Numeric Operations	Objects in a Set	Toddler^
Numeric Operations	Addition	Toddler*
Numeric Operations	Subtraction	Toddler*
Numeric Operations	Addition up to Ten	Toddler#
Language Development	Language Vocabulary	Early Toddler/Toddler+
Language Development	Spatial Skills	Toddler^

Language Development	Measurement	Toddler^
Alphabet Knowledge	Letter Recognition	Early Toddler/Toddler+
Logic and Reasoning	Common Shapes	Early Toddler/Toddler+

\*all levels of this game are appropriate for this age group

+ Levels 1-3 are appropriate for Early Toddler; levels 4-5 are appropriate for Toddler

^Levels 1-3 are appropriate for Toddler

#Levels 1-2 are appropriate for Toddler

A child's developmental continuum is designed to encompass the entire early learning span. **Introducing the *iStartSmart*® classroom solution to younger learners aids them in moving along the continuum sooner, not necessarily faster. Introducing children to skills earlier will strengthen the foundation upon which to build the development of more enhanced skills. Even though a child may not be physiologically ready for the advanced skills being practiced, as his or her brain develops, he or she will be in a better position to grasp concepts once brain development catches up to experience.** For this reason, Hatch indicates that not all levels of a specific game are appropriate for Early Toddlers or Toddlers. Basic numerical and language recognition are appropriate for children ages 28- months and above. This is because these skills form the foundations for more advanced skills such as spatial reasoning, measurement, and sentence structure. The window of opportunity for most domains of development remains open far beyond age three (Developing Child 2016).

**Careful consideration of leading research has been given to the exact age for which these games are appropriate, and children 28- months and older align with developmental pedagogy behind very specific gameplay guidelines. Hatch does not recommend children younger than 28- months interact with the *iStartSmart*® Shell Squad Adventures, as doing so**

contradicts current research and pedagogy for media-based learning. Teachers are able to enter children under 28- months into *iStartSmart*® so that they can enjoy co-viewing and joint engagement through carefully selected (age-appropriate) third party applications (such as eBooks, word learning, etc.). In addition, the solution will remind teachers that *iStartSmart*® games are not developmentally appropriate until a child reaches 28- months of age. Hatch provides technical updates and reminders so teachers are aware when a child reaches the 28-month age mark. At 28- months and above, children have access to the *iStartSmart*® games and teachers have access to the progress monitoring data gathered as children play (the *iStartSmart*® games).

When utilized correctly, as a part of a solid curriculum plan, the *iStartSmart*® solution is a tool that can be used for skill introduction and acquisition. Hatch’s own recommendations mirror those of a variety of organizations that advocate for early childhood opportunities. Below are key recommendations to consider when utilizing *iStartSmart*® [for two and three year olds]:

**Media Utilization Recommendation:**

1. *Co-viewing and joint engagement:* Technology is more effective for young learners when adults and peers co-view and enjoy joint engagement with them. Hatch’s professional development, as well as the *Beyond the Technology* (an *iStartSmart*® feature) provides ways for teachers to effectively co-view and engage with the children; asking questions, continuing conversations, and so on.
2. *Designate technology free times and areas of the classroom or home.*

3. *Actively seek out research from trusted sources to understand benefits of media learning and games, apps, and learning solutions appropriate for children.* Resources such as NAEYC, AAP, the Fred Rogers Center, the Joan Ganz Cooney Center, and Common Sense Media constantly update research and databases for age-appropriate use.
4. *Limit media use to no more than 1 hour per day.* Hatch's *iStartSmart*® classroom solution was designed to be used for 30 minutes per week, giving ample time for other learning opportunities to take place.
5. *Ensure that programs and educators engage in quality preparation and undergo ongoing education and training.* Professional development and proper utilization are essential in making media an effective tool for learning.

Media recommendations have changed to match the rapidly changing landscape. Apart from the *iStartSmart*® technology solution, influxes of third party apps are being developed and released daily (Vaala, Ly & Levine 2015). The *iStartSmart*® solution is an optimal curriculum tool to help build a foundation of essential skills for early learners. Although many third party apps are also developed with young children in mind, many of those found (in places such as Google Play or the Apple App Store) have not been properly vetted to ensure they teach appropriate skills. Hatch has done its own robust research to offer third-party apps that closely align with the skills introduced through *iStartSmart*®. Taking the new offerings for this younger age group into account, several apps have been specifically chosen for children aged 24- months and above.

The vast array of media that is already a part of a child's environment is not going away and it is up to parents and teachers to find ways to appropriately utilize the digital objects that

permeate young children's lives. Many public preschool administrators view technology use as a way to give their young learners a leg up in the educational landscape. Children obtain a greater understanding of proper device use and skill development when the adults in their lives have their own strong knowledge in technology use. Technology can help bridge the gap between schools and their communities, providing real-world connections to what children are learning, and how this learning transfers to continual skill development in the absence of formal education. To align and integrate technology and media with other core experiences and opportunities, young children need tools that help them explore their world, develop problem-solving skills, make decisions, and learn with and from one another. Hatch has long been a champion of early childhood, consistently adapting as the market shifts. Now, weighing new research and insights, Hatch is thrilled to bring an *iStartSmart*® solution that introduces differentiated learning experiences to two-and-three-year-olds, while continuing to support preschool and pre-kindergarten learners.



## Works Cited

Chassiakos R.Y, Radesky J, Christakis D, et al. (2016), AAP COUNCIL ON COMMUNICATIONS AND MEDIA. Children and Adolescents and Digital Media. Pediatrics. 138(5): e20162593

Center on the Developing Child at Harvard University (2016). From Best Practices to Breakthrough Impacts: A Science-Based Approach to Building a More Promising Future for Young Children and Families. <http://www.developingchild.harvard.edu>

National Association for the Education of Young Children & Fred Rogers Center. (2012). Technology Tools and Interactive Media in Early Childhood Programs Serving Children from Birth through Age 8. Washington, DC: National Association for the Education of Young Children. <http://www.naeyc.org/content/technology-and-young-children>

Vaala, S., Ly, A., & Levine, M.H. (2015) Getting a read on the app stores: A market scan and analysis of children's literacy apps. New York, NY: The Joan Ganz Cooney Center at Sesame Workshop.