

# Benefits of Technology for Early Childhood Learning

With technology and interactive media, learning becomes a multisensory and interactive experience! They promote learning and development when used intentionally and within the framework of developmentally-appropriate practice to support learning goals and expand educational opportunities for all children.

## What qualifies as technology?

According to the [National Association for the Education of Young Children \(NAEYC\)](#), technology includes computer programs and applications, television, movies and DVDs, e-books, cell phones, tablets, and broadcast media.

The [Early Learning team at the Children's Museum of Pittsburgh](#) adopts a broader understanding of technology, considering it to be any application of scientific principles to facilitate learning and problem-solving.



## Physical Development

**Fine Motor Skills & Dexterity:** Interaction with technology supports the development of fine motor skills. Pressing buttons and letters, dragging and swiping items on a tablet, moving around objects on a light table and inserting batteries into a circuit block help children to improve their precision and dexterity.

**Coordination & Reaction Time:** Each time young children visually track and manipulate objects on a screen, they strengthen their hand-eye coordination. The sensory richness and cause-and-effect interactions in educational games and applications can also improve a child's reaction time to different stimuli as well as their peripheral vision and their ability to multitask.

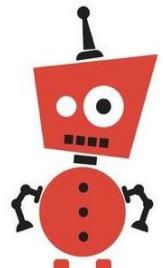


## Cognitive Development

**Language Development:** Technology and digital media offer engaging opportunities to support language acquisition. Ebooks and educational software can help young children with letter recognition, expand their vocabulary, or even help them learn words in a different language, while recording and playback technology can aid in pronunciation.

**Digital Literacy:** Technology is embedded in our rapidly changing world. Interactive media are therefore powerful and important tools to equip children with the functional skills and confidence to innovate and thrive in diverse learning environments.

**Information Processing:** Research has shown that children learn information more effectively from animated and narrated content instead of viewing images or reading text alone. Therefore, technology offers engaging pathways for children to process information, make new connections and find new ways to observe and interact with the world.





## Social-Emotional Learning

**Problem Solving & Growth Mindset:** Technology presents young children with many opportunities to problem-solve and build self-efficacy. Troubleshooting allows children to experience frustration with mistakes and celebrate persistence and success and makes them more likely to take risks and set more ambitious goals as they grow.

**Collaboration & Relationships:** Activities that involve technology are wonderful ways to encourage communication and collaboration with others, such as parents, peers and teachers. Establishing an early foundation of collaborative problem solving promotes social skill development, self-regulation and positive relationship-building that will extend beyond the early childhood years.

**Cultural Awareness:** Digital media allows the entire world to be at a child's fingertips, allowing them to explore faraway places and cultures that they might otherwise be unable to experience.

### Try This!

- **Do it together!** Learning for young children primarily happens through human interactions. Co-viewing and shared experiences between adults and children optimize the potential for a child's learning and development and strengthen parent-child relationships.
- **Strengthen relationships and build language skills** by using video software like Skype or FaceTime to talk to friends and family members or read the ebook version of one of your child's favorite stories - most are available at local libraries!
- Use of technology in early childhood should be **active, hands-on, and engaging**. Try adding some technology to catalyze dramatic play with a green screen on the free Veescope Live app, help your child use a phone or tablet to document new objects and places found on a walk, or explore stop motion animation with clay or household objects.
- **Content is Key:** For children under age five, technology and media should primarily be used to support learning. Ensure that the content is educational: does it increase school readiness? Does it promote critical thinking and problem-solving? How does it encourage exploration or collaborative social interactions? Does it align with the child's personal interests and needs?
- **Monitor Screen Time:** For children under age five, it is recommended that screen time is limited to a maximum of one hour per day. Consider setting and discussing some technology and media guidelines for a child and make sure they still participate in physical activity and engage in outdoor play!

### Resources:

American Academy of Pediatrics Media and Children Communication Toolkit

Common Sense Media

PBS Kids & [ScratchJr](#) Coding for Young Children

Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College, *Technology and Interactive Media for Young Children: A Whole Child Approach Connecting the Vision of Fred Rogers with Research and Practice*

NAEYC and the Fred Rogers Center for Early Learning And Children's Media at Saint Vincent College, *Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth Through Age 8*