

Developmentally Appropriate Use of Technology in Early Childhood

According to the Early Childhood Environmental Rating Scale, Third Edition (ECERS-3), the use of technology (often referred to as “screen time”), such as computers, cell phones, tablets, SMART Boards, or computer toys (e.g., LeapFrog or Vtech tablets/computers), is not considered necessary in preschool programs. However, if used intentionally and in a developmentally appropriate manner, technology or screen time can supplement children’s regular hands-on experiences, adding information to what children are learning and providing a different type of experience for children.¹ When programs choose to use technological materials in a preschool environment, staff should ensure the content is developmentally appropriate, time is limited, and staff-child interactions are supportive.

Technology and Developmentally Appropriate Content

The ECERS-3 defines developmentally appropriate content as materials that are right for the ages and abilities of the children and do not send negative messages, promote stereotypes or compromise the emotional security of any child in the group. Materials that contain graphic violence, frightening or sexually explicit content are not considered appropriate for young children. Therefore staff should carefully select materials that enhance children’s learning.

The following are some things to consider when choosing technology/screen time content for an Early Childhood classroom:

- Meet the developmental level of the children (e.g., not too easy or too difficult for children’s ages and abilities). This may include activities where children are required to match images to words, spell, or solve difficult math problems.*
- Show graphic violence or sexually explicit content (e.g., musical lyrics and/or videos, solving problems with aggression). This may include instances when staff play radio versions of songs during movement activities which include sexually explicit/violent lyrics or profanity.*.
- Conveys stereotypes/negative social messages (e.g., promotes bias on race, culture, gender, ability, age). This may include teaching software where only dress and skirt options are available for girls in a dress up game/activity or a video/activity where Native Americans are only shown in traditional cultural attire.*

*This list of considerations is not exhaustive and examples provided are based on observations made during classroom/program assessments.

If content is identified as being inappropriate, ensure young children do not have access to it.

¹ Cryer, D Riley, C. Link, T. All About the ECERS-3. Lewisville, North Carolina, Gryphon House, Inc, 2019

Technology and Time Limits

Studies conducted by the American Academy of Pediatrics show associations between excessive screen time in early childhood and cognitive, language, and social emotional delays². Therefore exposure to technology should have time limits to ensure that children participate in active play where they can be creative and imaginative, move around, and have hands-on experiences with real materials rather than spending inordinate amounts of time watching TV, videos, or playing digital games. In early child care settings, *passive* screen time use should be limited to 10 minutes per day and *active* screen time use should be limited to 15 minutes per day.

To ensure screen time does not exceed recommended limits, consider:

- All technology/screen time exposure throughout the day (e.g., large group gatherings, cluster/specials activities, free play, watching peers use technology, etc.)
- Limiting *passive* screen time to no more than 10 minutes per day
- Limiting *active* screen time to no more than 15 minutes per day

<p>Passive Screen Time: occurs when children passively sit and watch the screen encouraging sedentary behavior (no movement, no questions, children are just sitting and staring).</p> <p>Examples of passive screen time use include:</p> <ul style="list-style-type: none"> ● Watching a video of someone reading a book ● Watching Sesame Street or other children's show ● Watching staff review content on SMART board 	<p>Active Screen Time occurs when children are actively engaged in media use; dancing along to a video, moving images on screen, playing a game that prompts a question and requires a response.</p> <p>Examples of active screen time use include:</p> <ul style="list-style-type: none"> ● Dancing or moving along to an exercise video ● Playing a math game on a website or using a program ● Children moving images and adding to discussion while using the SMART board
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Based on [Caring for Our Children](#) guidance, the time recommendations above should not limit digital media use for children with special health care needs who require and consistently use assistive and adaptive computer technology.

² American Academy of Pediatrics Policy Statement, "Media and Young Minds," <https://pediatrics.aappublications.org/content/138/5/e20162591>

Screen Time and Staff-child Interactions

Research has shown that adults [co-viewing](#) educational media with children can be a good way to support early literacy skills, reinforce previous learning, and bond. Staff should join activities, talk through content with children and make it relatable. These interactions help children understand what they are seeing and apply what they are learning to the real world around them.

As children use technology, consider engaging with them by:

- Providing positive interactions (e.g., joining in by dancing and pointing to lyrics as children move along to a dance video)
- Supporting learning experiences as with other classroom materials (e.g., talking about content, explaining how to play a game/asking children to explain how to play, offering comments about a video, etc.)
- Interacting with children as with a print book while engaging in e-book reading, (e.g., asking questions, discussing pictures, etc.)
- Connecting content with relatable experiences (e.g., pointing out the class plant and/or a book on plants while watching a video on plants)

Checklist for maximizing media in Early Childhood settings

The checklist below contains recommendations from [NAEYC-FRC](#) to support active and creative uses of technology by young children. Educators can consider using this checklist to guide their thinking when integrating technology and interactive media into their early childhood programs and classrooms.

How to use the media checklist chart

- When selecting educational media for the early childhood setting, review each of the three sections below (Developmentally Appropriate, Time Limited, and Staff-child Interactions)
- For any consideration checked “No,” complete the “Notes/Action Taken” section and refer to the recommendations above to make adjustments to technology exposure to ensure children have high quality experiences during screen time.

Considerations	Notes/Action Taken
Developmentally Appropriate Materials	
<ul style="list-style-type: none"> <input type="checkbox"/> Aligned with children’s developmental ability (e.g., touch screen/child-friendly mouse, not too easy or too difficult). <input type="checkbox"/> Embraces diversity in many forms (e.g., positively represents all ages, races, abilities, genders, cultures, etc.). <input type="checkbox"/> Free of violence or sexually explicit content (e.g., YouTube video, music lyrics, etc.) <input type="checkbox"/> Encourage creativity (e.g., asks questions/allows the child to control the pace). <input type="checkbox"/> Matches environment (e.g., tablet used with one or two children; SMART board for whole group) <input type="checkbox"/> Allows uninterested children to make another choice (e.g., children are not forced to join) 	
Time Limited To:	
<ul style="list-style-type: none"> <input type="checkbox"/> No more than 10 minutes for passive screen time <input type="checkbox"/> No more than 15 minutes for active screen time 	
Staff-Child Interactions While Using Technology	
<ul style="list-style-type: none"> <input type="checkbox"/> Extend classroom experience (e.g., talk about related theme/recent conversation) <input type="checkbox"/> Provide opportunities for children to explain their thinking (e.g., ask “How” and “Why” questions) <input type="checkbox"/> Connects to non-technological materials in the classroom/throughout centers (e.g., watching a video on plants while referring to the plant in the Science Center) 	