

## ALL TOGETHER NOW

Children are better problem solvers and collaborators when they feel like they are part of a team. Playing cooperative games and sharing experiences, like swinging on swings in sync, builds community and supports collaborative problem solving.

Rabinowitch et al., 2017; Master, et al., 2017

## IT'S BIOLOGY!

Play is fundamental to development. Almost all mammals play! Researchers think that play helps animals (humans too!) to be flexible, creative, and adaptable in a changing world.

Pellis et al., 2010

## CREATIVITY

Creativity is a practiced skill. Neuroimaging research indicates that the brains of creative professionals show different patterns of activation as they solve problems. During play, we have an opportunity to create entire worlds. Play is the perfect landscape for building life-long creative practice.

Beaty et al., 2018

## ABC's

# Play

## research to support practice

## DRAMATIC PLAY

Dramatic play supports learning across domains, including social and emotional growth and early literacy skills. When children play and act out roles, they explore identities - their own, and others. And research shows that when children act out a story after they listen to it, they tend to remember it better.

Pellegrini and Galda, 1982

## EXECUTIVE FUNCTION

Games like "Simon Says" and "red light, green light" help children build executive functioning skills. These include attention and focus, impulse control, working memory, and cognitive flexibility. All of these skills are key to school readiness and success in life.

McClelland et al., 2014

## FREE PLAY

Free play is self-directed learning. It is entirely child-initiated, voluntary, joyful, active, and has no outside goals. During free play, children learn about their world at their own pace by exploring exactly what interests them most in the moment.

Gray, 2019; Sigel, 1987

## GUIDED PLAY

There is really only one difference between free play and guided play - the participation of an adult! While the child still leads the action, the adult is there to suggest interesting ways to explore, or to boost learning by adding more information to the mix. However, they're not setting the exact learning path.

Fisher, Hirsh-Pasek, Golinkoff, 2012

## HEALTH

The American Academy of Pediatrics now recommends a "prescription for play" at every well-child visit in the first 2 years of life. Play has enormous impacts on health, from motor development and physical exercise, to wide-ranging mental health benefits, including reduced anxiety and depression.

Yogman et al., 2018

## IMITATION

Play begins early in life, often as infants imitate facial expressions, and caregivers imitate sounds and actions. In this earliest form of play, adults are helping children learn about back and forth interactions, and the joy of connection.

Meltzoff, 2007; Yogman, 1981

## JAZZ: MUSICAL PLAY

Jazz is often referred to as musical play. Jazz musicians experiment with notes and sounds as they express their creative ideas on the spot. When children move to a beat or rhythm during a musical play session, they build many skills, including identifying patterns in both language and music.

Zhao & Kuhl, 2016

## KIDS OF ALL AGES

Play isn't just for kids. Adults benefit from play too. Research shows that play provides many of the same benefits to adults as it does to children, from boosting creativity, to building relationships, to supporting physical and mental health. We all need time to play!

Magnuson & Barnett, 2013

## LANGUAGE

Children build language skills through play. In particular, when children play with other children, they have to negotiate roles, set up rules, and build a world together. As they do so, they learn to use more sophisticated vocabulary to express themselves, and to better understand others.

Weisberg et al., 2013

## MATH

Play provides a unique context for supporting math learning. One study found that roughly half of children's free play time is spent exploring mathematical concepts! Other research shows that guided play can help children learn math vocabulary, and even complex math concepts like geometry.

Ginsburg, et al., 2001; Ferrara et al., 2011

## NARRATIVE

Acclaimed educator and researcher Vivian Paley wrote, "play . . . [is] story in action, just as storytelling is play put into narrative form." Multiple studies demonstrate the power of play to build narrative and symbolic thinking skills. In one, children who regularly created and acted out stories built school readiness skills.

Nicolopoulou et al., 2015

## OUTSIDE

For children and adults alike, spending time outside is not only key to our physical health, but also our mental health. Mounting evidence points to the importance of creating opportunities to spend time in nature. These experiences support our cognitive functioning and emotional well-being.

Bratman et al., 2019

## PROBLEM SOLVING

During play, children are motivated problem solvers. One of the best ways adults can encourage children to stick with tricky tasks is through modeling. When toddlers watch adults try a few strategies before ultimately solving a challenging puzzle, children spend longer trying to solve a tricky puzzle of their own.

Leonard et al., 2015

## QUESTIONS

Asking open-ended questions supports children's learning and critical thinking skills. Play, particularly social, dramatic play, provides a rich context for supporting children's developing language skills. In this context, both open and closed-ended questions can be used, though children respond more often to open-ended questions.

Meacham et al., 2014

## RELATIONSHIPS

During play, children have to negotiate roles, develop characters, interact and even share resources. This builds key social skills. For children on the autism spectrum, improv and theater-style games can be used to support children's ability to read and show emotion.

Lillard et al., 2013; Maas, 2019

## S.T.E.M.

An important way to help children build skills in science, technology, engineering, and math is to ensure all children have the opportunity to actively participate. When girls have access to computer science games, they are more confident and report greater interest in S.T.E.M.

Master et al., 2017

## TESTING THEORIES

Children use play to explore the world, running little experiments to figure out how things work. Children as young as 11 months spend more time playing with objects that pique their curiosity, and they play in ways that help them discover how those objects work.

Stahl and Feigenson, 2015

## UNIVERSAL

Play is nearly universal, but **how** we play and **what** we play varies between individuals, families, cultures, geographic locations, ages, personalities, and more. How adults view play's role in society and child development also varies across cultures in important ways.

Roopnarine, 2011

## VARIETY NOT VOLUME

Children don't need many toys to engage in high-quality play. Research indicates that with fewer options, children are more likely to be creative and spend longer periods engaged in high quality play. Providing a variety of open-ended materials supports play better than a large quantity of toys.

Dauch et al., 2018

## WONDER

Children's imaginative play, which often includes wonder, exploration, and creativity, is a fundamental part of development. Imaginative play has been linked to everything from the development of self-regulatory skills, to communication, problem solving, and empathy.

Hirsh-Pasek, et al., 2009; Hughes, 1999

## EXPERT

You don't always have to be the expert - and in fact, research shows that it's better for children's learning if you explore with them or let them lead the exploration. Researchers have found that too much direction from teachers can sometimes narrow the range of creative solutions that children think about.

Bonawitz et al., 2011

## YES

When designing spaces to support children's play, think about creating a "yes" environment. This doesn't mean never saying no; instead build opportunities to say "yes" frequently. "Yes, you can see what happens when you put your shoes on your hands!" Flexible environments support children's natural curiosity.

Elkins, 2019

## ZIG - ZAG

During active play, children exercise and develop muscle control. Yet active play time is decreasing. One study found that only 14% of children's time in childcare was physically active. Providing plenty of time for outdoor play, which tends to be more physically active, is key to supporting healthy development.

Tandon et al., 2015

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