

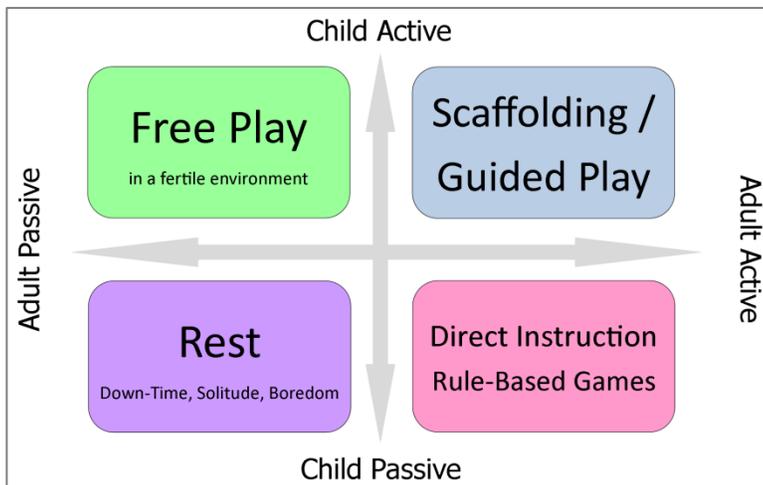
Hands On is Brains On: Kids Learn through Play

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How do children learn (i.e. how does the brain develop)?

Babies are born with as many brain cells (neurons) as an adult has. But they don't yet have all the connections that adults have that help them use those brain cells quickly and effectively. As children are exposed to new experiences (novelty), they create new connections (synapses). When they see the same object again or do the same action again (repetition), the connection gets stronger. As they use a connection over and over (develop mastery), they develop insulation (a myelin sheath) that helps the brain make connections faster and faster, and learn more and more. The more senses a child uses when exploring something new, the better they will remember the experience.

What learning opportunities do kids need? They need a balance of activities to help them learn.



Direct instruction: When a parent, teacher or book "teaches" a child, we are adding information to their database – their *crystallized intelligence*.

Free Play: When a child has a chance for hands-on self-guided improvisation (play), they build *fluid intelligence* – what allows them to adapt info to new situations.

Guided Play: When an adult plays with a child, and asks them questions like "what do you think will happen if..." that takes the child's learning to a new level.

Rest: Oftentimes, parents and teachers forget an essential component of learning: down time. Kids need a chance to process and incorporate all the information from all their new experiences. For a more extroverted child, they might process while playing with others or by talking to others. They do need lots of sleep to allow their brain connections to build. A more introverted child might need solitude – a chance to be alone for some period of every day to absorb everything.

What is play-based learning?

The adult (teacher or parent) sets the stage with engaging activities. The adult then steps back and hangs out nearby to observe, ask questions, make suggestions, or play along. Play is defined as:

- *Child-Led.* Freely chosen. The child is in control. He makes the plan. He decides which activities to do, which toys to play with, what to do with them, and for how long. This self-regulation allows him to "fill his brain" without overloading his brain.
- *Process, Not Product.* Play is done for its own sake, not to accomplish a task. It involves lots of exploring of possibilities, experiments, trial and error, and repetition.
- *Creative.* The child can adapt items, create something new or experience things in a new way.
- *Spontaneous.* It's flexible and open-ended, and it changes and evolves as play time goes on.
- *Fun.* The player looks happy and engaged. (We learn best when we're happy!)

Teacher's Role / Parent's Role

The adult plans an environment and schedule which promotes learning. Children learn best when they feel safe, so familiar routines, consistent rules, and respectful caregivers are essential components. The adults offer meaningful experiences that are stimulating, invite exploration and engage kids. The teacher often has outcomes in mind: knowledge, skills, and understandings they want children to acquire. But they haven't determined an exact path the child must take to get that knowledge.

Some roles an adult may play are:

- *Stage manager*: Sets the stage. Creates an "invitation to play" that combines familiar objects and activities (for repetition and mastery) with novel objects to explore and discover.
- *Observer*: Observe quietly. Be there so if they look up with an "a-ha" moment, or an "I did it", you're there to reflect that success back to them. Practice observing for at least 3 minutes before talking. Make suggestions or ask questions to extend thinking, or encourage reflection.
- *Facilitator*: Help get them the tools they need to accomplish their play plan. Help clear away the "clutter" that gets in the way of their play. Ask more, answer less.
- *Mediator*: Help resolve conflicts by offering new materials or suggesting alternatives, and modelling the flexible thinking needed for children to interact with their peers.
- *Interpreter*: Help children understand what is meant by another's words and actions.
- *Participant in play*: You follow *their* lead, respect their individual style of play. Don't try to make the game your own. Simply be one of the kids who is playing!
- *Reggio Emilia – inquiry-based style*: When your child demonstrates interest in a topic, you collect resources related to it: books, videos, tools, resources for dramatic play. The child chooses a project and pursues it. You offer support and suggestions as needed.
- *Scaffolding*: When a child has mastered something and is ready to move to the next level, an adult can help them get there simply by giving a hint, asking a leading question, modelling a skill, or adapting the materials or activities then letting the child continue to play.

Benefits – Kids who learn by playing gain:

- *Physical competence*. Free play allows a child to practice emerging skills till they are mastered.
- *Self-direction*. The child gets to make decisions, make plans, and see them through.
- *Creativity*. Experiments show that children who are taught "the right way" to use a toy will use it in limited ways. Kids who are allowed to freely explore develop many more creative uses.
- *Problem-solving*. When a child creates her own plan for play, she doesn't foresee challenges that will come up that an adult might see. This offers lots of chances for problem-solving.
- *Language skills*. Play requires asking and answering questions, giving commands and acting on them, and explaining your goals to the person you are playing with.
- *Conflict resolution skills*. There's lots of negotiation that goes on in cooperative play.
- *Emotional intelligence*. Dramatic play helps children understand emotions, learn how to express emotions, and distinguish between real emotions and "pretend" emotions.
- *Symbolic play*. If a child can use a stick to simulate an ice cream cone, it helps her later understand that numbers on a page represent how many objects they have, and that letters represent sounds, and musical notes on a page indicate where to place her fingers.
- *Better memory*. Kids are motivated to remember things they need to know for a play scenario.
- *Reduced stress*. Play is fun. Children play when they feel safe. We are all more capable of learning new things when we are having fun and feeling safe.

Resources: Brain Rules for Babies, by John Medina. www.naeyc.org/play and www.zerotothree.org/child-development/play/