





## Executive Function Skills through Play for Preschoolers

### Three Core Domains of Executive Function

1. **working memory** - the amount of information a person can hold in mind and apply to cognitive tasks
2. **cognitive flexibility** - adaptability of the brain to changes, new situations, or unplanned situations
3. **inhibition** - using attention and reasoning to respond appropriately to automatic urges - such as attention, behavior, thoughts, and emotions.

### Skill building games

<p><b>Dimensional Change Card Sorting</b></p>	<ul style="list-style-type: none"> <li>• Cards that have two sorting dimensions such as color and shape</li> <li>• Sorting by either dimension is performed by the child</li> <li>• Eventually, the child learns to switch between dimensions</li> </ul>	
<p><b>Lips and Ears</b></p>	<ul style="list-style-type: none"> <li>• Children are given either a picture of lips which indicates they are speakers or an ear which indicates they are listeners.</li> <li>• Children with lips are the only ones who can speak.</li> <li>• Children take turns and alternate between lips and ears</li> </ul>	
<p><b>Block Building</b></p>	<ul style="list-style-type: none"> <li>• Small building blocks are placed on the left and right sides of a table in front of the child</li> <li>• A model of building blocks is also displayed in front of the child</li> <li>• Using their preferred hand, the child recreates the model</li> </ul>	
<p><b>Musical Freeze</b></p>	<ul style="list-style-type: none"> <li>• Music is playing.</li> <li>• An instructor selects one of several picture cards showing stickmen in various poses</li> <li>• As soon as the music stops, the children are instructed to assume that pose</li> <li>• In the event they do the wrong pose, they are out, and the last person to do the pose is out as well</li> <li>• As the game progresses, different poses are used until one winner is determined</li> </ul>	
<p><b>Opposites</b></p>	<ul style="list-style-type: none"> <li>• Children are asked to respond to a deck of picture cards by offering the "opposite" of what is depicted on the card.</li> <li>• As an example, if the child is shown a picture of "the sun", they should respond "night", and if they are shown a picture of "the moon," they should respond "day."</li> </ul>	

<b>Pretend Play</b>	<ul style="list-style-type: none"> <li>• As part of this game, two children take on "roles" (e.g., doctor and patient).</li> <li>• It is best to encourage them to play unstructured, but some guidance may be necessary at first.</li> <li>• Halfway through the play session, the children should switch roles.</li> </ul>	
<b>Red Light Green Light</b>	<ul style="list-style-type: none"> <li>• In this game, the instructor instructs the children when to move indicated by a green light and when to stop indicated by a red light.</li> <li>• Children can also take turns giving instructions.</li> <li>• Children who do not follow the cues will be called out.</li> </ul>	
<b>Shared Project</b>	<ul style="list-style-type: none"> <li>• Using different household materials (such as paper, boxes, and tape), children create a picture or another constructive creation.</li> <li>• They are encouraged to negotiate how it will be made.</li> </ul>	
<b>Simon Says</b>	<ul style="list-style-type: none"> <li>• Children are instructed to follow all actions that begin with "Simon says."</li> <li>• For example, if Simon says, "put your hands on your head," the child should put their hands on their head.</li> <li>• The children must not perform an action if the adult doesn't say "Simon says".</li> <li>• A child who does the action is out.</li> </ul>	



### Reference

Gibb, R., Coelho, L., Van Rootselaar, N. A., Halliwell, C., MacKinnon, M., Plomp, I., & Gonzalez, C. L. R. (2021). Promoting executive function skills in preschoolers using a play-based program. *Frontiers in Psychology*, 12(1) Article 720225.  
<https://doi.org/10.3389/fpsyg2021.720225>