

Executive function fact sheet and activity ideas

What is executive function?

Executive function refers to the “higher order” functions of the frontal lobe of the brain. These include volition, initiation, and planning of tasks or actions, which are made up of countless foundational cognitive skills. A major element of executive function is self regulation (see Self Regulation Fact Sheet for more information). Executive function and self regulation are challenging skillsets that take years to form. Most young people are developing these skills well into their early 20s, as the brain continues to mature.

What are the building blocks to develop executive function?

Cognitive Functions:

- Awareness of time
- Cognitive flexibility
- Decision making
- Generalization
- Inhibition
- Organization
- Prediction/Anticipation
- Problem solving
- Initiation/Sequencing
- Sustained/Divided attention
- Working memory

Social/Emotional Functions:

- Awareness of others
- Cooperation/collaboration
- Emotional control and awareness
- Self-awareness
- Social cues/awareness

A sensory note: It is important to note that individuals must be able to modulate basic sensory input appropriately in order to perform the more complex and challenging tasks related to executive function. See Self Regulation Fact Sheet for more detail.

Executive function activity ideas

1. **Cooking activities:** Work on making a snack or other simple recipe. Follow the directions closely, and work with a partner.
2. **Feelings check in:** Take a moment to discuss feelings and emotions. Help label emotions if a student is unsure or having difficulty. Can be done in moments of difficulty, or as part of a regular routine.
3. **Expect the unexpected game:** While working on a project or activity, throw in a silly or unexpected direction every few steps-do a funny dance, sing a silly song, etc.
4. **Item recall:** Present an array of random items. Close your eyes while a partner takes one (or more) away. See if you can remember the missing item. Can be done visually or tactilely.
5. **Make music:** Play instruments with a friend, or write a song together. Take turns thinking of lyrics or testing out instruments. Perform for family or friends, or make a video.
6. **Matching activity:** Play a visual or tactile matching game.
7. **Memory games:** Try games like Alphabet Picnic (name an item for every letter of the alphabet and recall previous ones each turn), or do an auditory activity like Bop It, or Simon.
8. **Packing game:** Propose a scenario-vacation to a beach, ski trip, etc., “gather” all items you would need to “pack a backpack” for the trip

including necessary materials. Can be completed with real materials, or be done verbally.

9. **Perform a play:** Act out a story with a partner, or make up your own. Incorporate music or costumes, work together to perform for family or friends.
10. **Puzzles:** Complete a physical puzzle, or play “brain teasers” or guessing games.
11. **Red light green light:** Practice stopping as soon as you hear “red light”!
12. **Talk it out:** Pair up with a partner for a craft project, obstacle course, or other activity. The catch is that your partner follows your verbal instruction. Think about sequencing steps, and giving clear directions.
13. **Team activities:** Play a sport, board game, or card game in a team. Cooperate together to do your best. Practice taking turns. If there’s a winner or loser, practice being a good sport by congratulating the winner, or telling your teammates “good game”.
14. **Timer based activity:** Use a timer while racing to build something with blocks, draw a picture, etc. Stop when you hear the timer!

Supports for executive function in daily routines:

Bathroom:

- Schedule and plan appropriate times for longer routines (i.e. showers)
- Utilize a timer or timed playlist to manage duration of routines
- Implement a visual guide or checklist for order of routines
- Set items up sequentially, according to use
- Group materials together: all toothbrushing items in a cup, all shower materials in a caddy
- Use a “head to toe” strategy while bathing
- Place a visual or tactile marker for position of faucet handle to avoid water that is too hot

Kitchen/Mealtime:

- Work on any prep task with a partner
- Plan when snacks or meals will be eaten, and set an alarm or reminder
- Break up recipes into pieces (visual/written/braille) to distinguish materials, ingredients, and directions
- Use a checklist or visual cue for safety steps when using tools or appliances
- Set a timer for a “stop and clean” every few minutes to avoid a mess building up
- For meal planning or grocery shopping, make lists and explore recipes before shopping
- Count the number of people eating before setting the table
- Ensure you have all the materials, tools, or ingredients you need before beginning a project
- Reduce distractions while in the kitchen-limit social interactions, keep music off, etc.
- Try to work on more challenging skills when not overly hungry or tired

- Have a backup plan in place for possible challenges or errors
- Utilize a standard set of visual or verbal cues to support emotional/behavioral responses to unexpected challenges in the kitchen

Dressing/Clothing Management:

- Select clothing the night before or on the weekend for the entire week
- Utilize a hanging organizer or other storage container to gather necessary materials, including socks, underwear, accessories, etc.
- Check the weather before dressing to ensure appropriate choice of clothing
- Maintain organization systems: drawer organizers, labels, in the room to support ease of task

Other:

- Use a calendar to plan or anticipate events: birthdays, holidays, appointments
- Work cooperatively with a family member or peer on a task
- Develop familiar “contingency plans” for different scenarios in different settings-the response to an unexpected change or challenge may be different at the playground versus the grocery store.