

Summary Guidelines for School Design to Include Children with Disabilities

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Sensory Disabilities

Hearing

- Soundproofing in certain areas and good acoustics throughout the school will help all students hear and focus on tasks more effectively.
- Children with auditory processing problems benefit from sound that is balanced.
- Provide space near the classroom front board for a signer.
- Install FM Broadcast or surround sound in classrooms, labs, resource rooms, etc. Pre-wire new construction for these technologies.
- Good lighting and unobstructed views are needed to assist children who read lips.
- Alarm systems should be bi-modal—visual and auditory.
- Locate classrooms and labs away from “noisy function” areas (e.g., the gym, outdoor play grounds, cafeteria, band and chorus room, etc.) to decrease background noise.

Vision

- All signage and room numbers should be provided in Braille.
- Stairs should be eliminated and replaced with ramps to accommodate changes in levels that students with vision loss may not detect.
- Handrails and guides on the wall will assist with tracking
- Avoid objects that protrude into the hall (i.e.-water fountains).
- Eliminate or minimize glare in classrooms with good lighting, matte finishes, and sunlight filtration at windows and doors with windows.
- Install white boards in lieu of chalk boards and use “smart” or “activity” boards to magnify a lesson.
- Color code wings to assist wayfinding.

Speech

- Provide a separate speech therapy area for individual and group work.
- The speech therapy room should have good acoustics (preferably sound proofed), and be located away from noisy areas (cafeteria, gym, band room, main corridors, etc.).
- Provide illumination levels that enable students to observe proper word enunciation.

Learning and Intellectual Disabilities

Design concerns related to students with learning and intellectual disabilities focus heavily on their susceptibility to distractions. As a result, environmental supports are necessary to assist with task focusing and individualized learning. Distractions are both visual and auditory and can originate from a wide spectrum of sources.

Outside classroom distractions can come from:

- Hallways
- Other classes
- Noisy areas: gym, band room, chorus/music room, cafeteria
- Playgrounds, playing fields and outdoor gym classes
- Lawn maintenance
- Arriving and departing buses and other vehicular traffic

Inside classroom distractions can include:

- Simultaneously occurring lessons and activities
- The close presence of other children: sharing a table that is too small, other kids' materials (books, papers, devices, etc.) extending into their space, etc.
- Disruptive/distracting students
- Loud HVAC systems
- Other Noise (e.g., chairs that squeak when they are moved across the floor)
- Excessive visual stimulation from glare, clutter, displays, equipment, and supplies that fill the classroom

Recommendations to combat distractions/over stimulation include:

- Good acoustics to decrease distracting background noises (white noise, acoustical panels, ceiling tiles, etc.).
- FM broadcast so the teacher is clearly heard, distractions are filtered out, and the student can remain focused on the lesson or activity.
- Bathrooms nearby. The trip to the bathroom can create a major, and lengthy, distraction. If the distance to the bathroom is short, the amount of un-focused time spent out of the classroom is decreased.
- Lighting and window treatments that can filter out visual sources of distractions (e.g., glare, direct sunlight, and outdoor activities) and make the front board easy to see.
- The use of furniture to create sub-areas in the classroom that the teacher can easily monitor. Distraction-prone students, or students working in small groups, can be separated from the larger class so they can focus more directly on their work without being distracted by activities in the main classroom.
- Separate rooms and areas outside the classroom so children can be removed for more individualized learning or if they are experiencing behavioral or focusing issues.
- Sub-areas within the classroom created through retractable screens, dividers, study carrels, etc. These spaces can be used for 1:1 teaching of children with autism spectrum and for children who need to focus but do not need to be separated from the class.
- Separate mini-rooms for discrete trial learning in a classroom for children with autism.
- Classrooms located away from playing fields, the cafeteria, the entrance to the school and other areas of potential distractions.
- Additional stimulation control through:

- enclosed storage so students are not visually distracted/stimulated by supplies and equipment that are stored all over the classroom.
- zoned lighting that can be dimmed.

Emotional-Behavioral Disabilities

Children with emotional-behavioral disabilities may need to be removed from the immediate environment when an emotional outburst has either already occurred or is about to erupt. A safe “quiet” or “re-focus” room where a child could be taken as a pre-emptive strike to diffuse an impending de-compensation or after an emotional outburst will address this need. The re-focus room should be large enough to accommodate several students and one or two teachers. The room should look and feel comfortable and soothing. The re-focus room should be located close to the classrooms so an upset child does not have to walk down long hallways in full view of others.

Other Considerations:

- Classrooms often need to accommodate the teacher and other adults. In addition to the general education teacher, at various times of the day, there may be a co-teacher, teacher-consultant, paraprofessional, related services therapist, or a one-on-one aide, etc. in the room. Adequate space and furniture are needed to accommodate these additional personnel.
- With the growing use of classroom technology, additional space is needed for both using and storing computers, scanners, smart boards, LCD projectors, etc. When in use, visual technologies should be stationed in areas where they are visually and auditorily accessible (i.e.-the front center of the room). When stored, they need to be in an enclosed and lockable space.
- Electrical outlets should be numerous and placed throughout the walls and floors of the classroom. This makes all technologies readily accessible and does not relegate students who need electrical power for laptops or communication devices to the back or edge of the room where the outlets are.

Physical/Orthopedic Disabilities

A. General Design

The entire school should be accessible so all students can be included, alongside each other, in all activities. Here are some basic guidelines:

- Make every entry accessible so students with mobility problems are not relegated to the “handicapped” entrance
- Design wide halls and doorways throughout the facility
- Provide an accessible stall and sink in each bathroom throughout the building.
- Install elevator(s) in the most logical location to minimize travel time from first to second floor classrooms.
- Steps and long distances are problematic for children using arm canes, manual wheelchairs, or prosthetic legs. Travel issues for students with mobility problems can be reduced by design schemes that minimize distances.
- Classroom doors should be spaced far enough apart so they open flat against the wall without hitting each other. This maximizes the clear opening for a

wheelchair. (It also relieves congestion in the hallway that occurs from large numbers of students simultaneously passing through multiple doorways in close proximity to each other.)

- Mobility devices (wheelchairs, walkers, etc.) come in a large variety of sizes and shapes. Classrooms should be large enough to allow students to maneuver through the room and sit comfortably at a desk or table.
- The gym, auditorium, and stage should be designed so they are accessible and allow the student with a disability to participate in all activities and sit and work with their classmates. The stage should be accessible from both front and back.
- Playgrounds, playing fields and other areas on the grounds should be accessible via smooth, paved pathways.

B. Equipment

- Equip doors with press plate openers.
- Select accessible lockers for students that provide key or combination lock options.

C. Furniture

- Provide accessible (adjustable height) tables and chairs that do not look different than the other furniture in the room.
- Choose tables and chairs with straight legs. Students using wheelchairs or with gait or perceptual problems might trip over or ride into a protruding chair leg.
- Seating attached to a desk is generally not accessible.

Specialized Rooms

Resource Rooms

Resource rooms function as classrooms for children in need of special attention.

- The resource room should look like, and be equipped similarly to, the regular classrooms in the school.
- The room should have the capability of being divided into sub-areas so students can work individually or in small groups.
- Older students may be sensitive to the fact that they have to use the resource room. Consider locating this room in less trafficked areas and reducing the visibility into the room from the hall.

Life Skills Training

Independent Living or Life Skills training areas may need to be provided for students with intellectual disabilities.

Physical, Occupational, and Speech Therapy Spaces

With the growth of inclusive education, the demand for physical (PT), occupational (OT) and speech therapy services has increased. It is logistically and financially more feasible to provide therapy in the school setting than to send students out to off-site providers.

Designated therapy spaces are currently unavailable in most schools. Therapists are providing therapy in areas of the school that lack privacy and equipment. These spaces include corridors, the cafeteria, the back of classrooms, etc. A designated therapy room with proper equipment shared by the physical and the occupational therapists should be included in the design. (Requirements for Speech Therapy areas are listed above.)