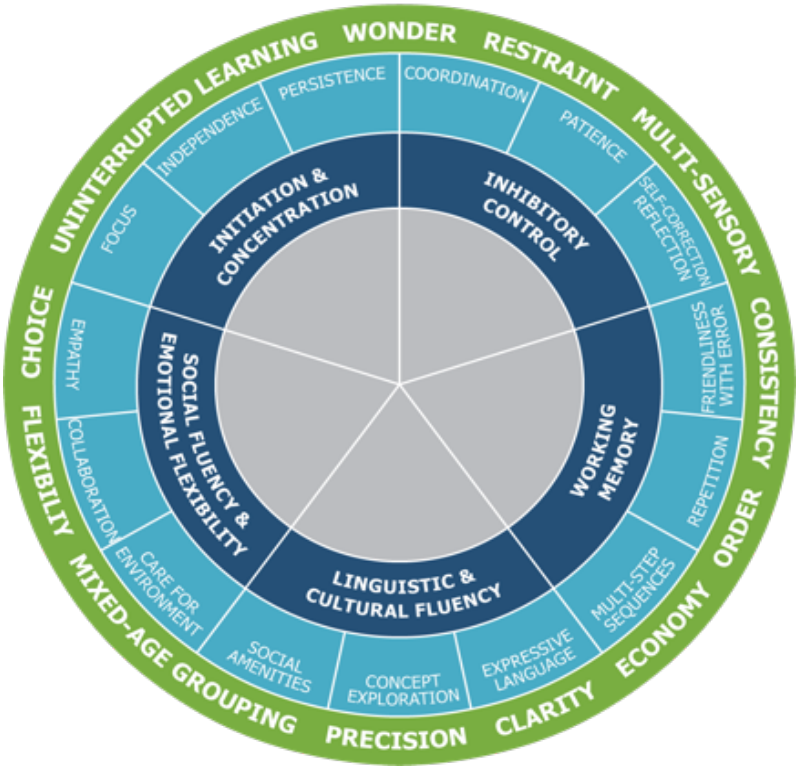
NATIONAL CENTER for MONTESSORI in the PUBLIC SECTOR

The Developmental Environmental Rating Scale (DERS) Summary

The *Developmental Environmental Rating Scale* (DERS) measures the quality of learning environments offered in classrooms serving children between the ages of 2.5 and 6 [i]. The DERS is designed to align environmental design and implementation with desired outcomes related to executive functions, language, and social-emotional development[ii].



The DERS consists of 60 research-based items clustered around five broad aspects of human development: **1) initiation & concentration, 2) inhibitory control, 3) working memory, 4) linguistic and cultural fluency,** and **5) social fluency and emotional flexibility**. The first three domains function as a cluster of skills associated with executive functioning and are generally assessed by a single measure. Likewise, the fourth and fifth domains correlate to measures of oral language and social and emotional development, which are also influenced by executive functioning skills.

The DERS may be used internally to identify priorities for continuous improvement or externally as an assessment of environmental quality.

The assessment is administered in two parts: (1) a teacher questionnaire, and (2) a 60 minute classroom observation focused on three environmental categories: **child behavior**, **adult behavior**, and **environmental attributes**. Each of the items is aligned to at least one of the domains listed below, and the instrument is scored based on assessor reports of observed item presence, magnitude, and frequency.

Many of the observable qualities of classrooms that nurture executive functions, language, and social-emotional development map onto multiple domains. For instance, environments that feature spontaneous turn taking support both the development of inhibition as well as social fluency. Likewise, uninterrupted learning time, free choice, voluntary physical movement, and adult behavior that is calm, predictable, and respectful of student engagement are items that influence all five domains. Other items are prioritized to predict more specific domain-related outcomes. The Domain Summary below illustrates the relationship between discrete items and each of the five domains.

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Domain 1: Initiation and Concentration

Child Behavior	• Children begin activities without adult assistance. • Children transition independently from one activity to another. • Children move freely around the environment and select work with minimal adult involvement • Children remain focused for extended periods of time, often choosing to repeat work. • Children express joy and satisfaction in the process of concentrated work.
Adult Behavior	• Adults observe student activity, but do not interrupt when students are clearly concentrating. • Adults respond to child questions or requests with information and encourage independent problem solving. • Adults introduce new activities as an invitation rather than a command to learn and communicate wonder in their approach to children and content. • Adults permit children to discover the results of their actions rather than receive a warning about them.
Environmental Attributes	• Materials and furnishings are child sized.. • All materials are available to children every day. • Materials are kept at children's level. • All areas of the environment are designed for children's use.

Domain 2: Inhibitory Control

Child Behavior	• Children walk around the room without stepping on or intruding on the work-space of others. • Children observe peers, and are able to refrain from touching others' work. • Children continue to engage in an activity even if they are obviously frustrated, (e.g.: sighing, frowning). • Children attempt multiple ways of correcting an error. • Children refocus and choose another activity/material when their first choice is unavailable.
Adult Behavior	• Adults give clear instructions for activities. • Adults to not force or coerce children to do activities. • Adults offer children choices of different options. • Adults use descriptive language and avoid praise designed to flatter (e.g. "good job" or "you're so smart).
Environmental Attributes	• Materials are purposefully limited to allow students to make alternative work choices when work is in use.

Domain 3: Working Memory

Child Behavior	• Children repeat work with productive engagement. • Younger children observe peers at work. • Children engage in multi-step tasks and activities and have the opportunity to self-correct • Children engage in self-talk and narrate activity as they engage in it.
Adult Behavior	• Adults' movements are unhurried, intentional, and observable by children. • Adults perform repeated activities in the same way each time. • Adult-demonstrated motor sequences become progressively longer and more complex as children demonstrate mastery.

Environmental Attributes	• Materials and decor are organized according to learning domain and purpose. • Materials are displayed in sequence and from simple to complex. • Materials are selected for specific developmental appropriateness and functionality; there is nothing extraneous and no presence of commercial toys. • Decoration is strategic, with carefully curated visual stimulation. • The classroom provides lengthy (ideally three hour) periods of uninterrupted work. • Digital technology is largely absent from the environment, and not part of the method of curriculum delivery.

Domain 4: Linguistic and Cultural Fluency

Child Behavior	• Children engage in frequent conversation. • Children sing – both spontaneously and as part of small or large group activity. • Children socialize in self-formed groups rather than adult-directed activity. • Children greet adults and peers with ease (indicators may include hand-shakes & eye contact).
Adult Behavior	• Adults use language intentionally, with specific attention to vocabulary, clarity, modulation, pace, and tone. • Adults speak with children using a conversational tone and manner, speaking with and not “at” children. • If a second language is part of the program, it is delivered via an immersion model, in which one adult speaks exclusively or almost exclusively in the second language.
Environmental Attributes	• The classroom contains many objects for naming, fetching and labeling. • Carefully selected, age-appropriate print material is available at all times and on a range of topics that may be of interest to one or more children. • Room décor reflects cultural and ethnic backgrounds of the community of families. • Real objects, pictures, and books are used to introduce children to vocabulary, phonics, and syntax. • Materials are available for children to discriminate textures, and the majority are made of natural materials (wood, glass, metal, fabric). • Children have access to a range of functional, child-sized tools and implements (brooms, mops, shovels, flatware).

Domain 5: Social Fluency and Emotional Flexibility

Child Behavior	• Children demonstrate care for their environment, including spontaneously dusting, washing, setting tables, pushing in chairs. • Children demonstrate care for their peers, including assisting with dressing, offering food, resolving conflicts. • Children use words to resolve conflicts with one another. • Children display an overt sense of comfort and trust in adults. • Children (over the age of four) clearly regard adults as a source of support and comfort, but direct most of their social attention to peers. • Children frequently display signs of joy and pleasure in their activity (may be indicated through laughter, singing, smiling, or physical contact such as hugs or hand-holding).
Adult Behavior	• Adults model respect for the environment by participating directly in its care. • Adults make eye contact with children, bend to their level when speaking with them. • Adults share wonder and joy in student accomplishment and discoveries. • Adults use a soft, conversational voice at all times.
Environmental Attributes	• Children are grouped in mixed-age communities. • The physical space is organized according to aesthetic values of simplicity and order, garnering an overall sense of calm and harmony. • Turn taking is embedded into activities such as sharing snack, using the restroom, selecting materials.

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[i] An Elementary DERS (Ages 6-12) is also available. The DERS is inspired by similar instruments developed by educators at Family Star Montessori, in Denver, Colorado, and Cornerstone Montessori, in St. Paul, Minnesota, and developed by a team of researchers affiliated with the *What, Why, How: Establishing a Framework for Research on Montessori Education* project.