

INCLUSIVE TEACHING PRACTICES: FRACTIONS

[LT]²

Suggestions to Support Diverse Abilities



LT Level	Cognition	Motor	Sensory	Communication	Social Emotional
Foundations: Early Proportional Thinker	Focus on sharing to teach fractions at this developmental level, using songs and rhymes to build connections.	Monitor that all toys are physically accessible for children who are mobile and those who are not yet mobile.	Provide young children with a range of textured toys/materials that are safe for them to explore orally.	Use animated facial expressions and vocal tone to help engage children with the activity.	Bring items of interest close to your face to engage the child and encourage joint attention.
	Model curiosity about sharing and the specific actions you would like to see the child accomplish during an activity.	If a child is not yet able to grasp or manipulate an object, hold the object close to the child or provide hand-over-hand support as tolerated.	Some children might benefit from kinesthetic input, such as being bounced on the teacher's lap during an activity.	Read children's nonverbal cues for when they may need a break or are ready to move on to a new activity.	Promote a child's self-esteem development by positively reinforcing their actions and attempts to engage with the activity.
Shape Equipartitioner	Scaffold children's learning as needed, but be sure to provide ample, independent practice as well.	Ensure that any gross motor activities are done in an open, level space for children's safety.	Utilize materials that have a stark contrast in color (i.e., black/white or red/yellow) for very young children or for children with a visual impairment.	Provide ample wait time before intervening. Watch for any non-verbal communication attempts, including pointing.	Prime students on any safety expectations before outdoor activities (i.e., walking feet, careful hands, etc.).
	Use highly motivating materials so children truly care about equality/fairness, such as food or a favorite set of toys.	Incorporate movement, such as moving one half of your body, then the other half. For children with physical impairments, integrate seated movements.	Offer a quiet retreat area in the classroom for children to re-regulate their bodies as needed (*note: this should always be positive and not used as a time-out corner).	Narrate your actions and child's actions to teach key vocabulary, such as part, whole, half/halves, etc.	Give students time to explore new materials before starting the activity, to decrease distraction over their novelty.

LT Level	Cognition	Motor	Sensory	Communication	Social Emotional
----------	-----------	-------	---------	---------------	------------------

INCLUSIVE TEACHING PRACTICES: FRACTIONS

[LT]²

Suggestions to Support Diverse Abilities



Half Recognizer, Unit Fraction Recognizer	At this level, ground fraction learning within children's understanding of 2D shapes.	Place materials and manipulatives in a bowl or on a paper plate for easier grasping.	Provide math manipulatives that appeal to multiple senses, offering a variety of textures, such as soft Playdoh or hard connecting cubes.	If a child seems overwhelmed by responding, offer simple yes/no questions (verbal, head nod, thumbs up/down) to keep them engaged.	Have a rotating special helper set up/clean up the activity, promoting ownership and confidence with the task.
	Provide additional fraction supports for children to explore independently (i.e., books, videos, etc).	Use interlocking manipulatives when available.	Offer sensory breaks as needed. Consult with the school's OT for specific sensory supports, such as a weighted vest or oral motor chewy.	Use new fraction words in meaningful conversations throughout the day. Check for understanding.	If playing a fraction/sharing game that requires taking turns, utilize a visual to help children know when it's their turn. (e.g., rotate children's pictures through a line to indicate who's next).
Fraction Recognizer, Fraction Maker from Units	Color-code manipulatives to represent different parts of a fraction, visually clarifying and organizing the concept.	Make sure children can comfortably reach any materials (either sitting or standing), without hunching over or standing on tiptoes.	Take note of children's unique sensory needs and provide the necessary supports for them to do their best (i.e., noise cancelling headphones, classroom lighting preferences, fidget bands, etc.).	Create a visual word bank of newly-taught fraction terms for children to reference, such as denominator, numerator, etc.	Give immediate and specific feedback during the activity. Focus less on the child being "smart" and more on the specific ways they worked hard to achieve their goals.
	Have children practice composing and decomposing 2D shapes to build their understanding of fractions. Model the strategies they can use.	Implement planned, timed movement breaks, such as a "GoNoodle" video.	Ensure that children with hearing or visual needs sit closest to the teacher during instruction.	Allow for nonverbal participation, such as the use of response cards.	Prioritize group activities, encouraging children to discuss their learning and collaborate with peers.
Fraction Maker, Fraction Repeater	Give students pre-segmented number lines to better visualize fractions. Work them towards using	Provide adaptive scissors, pencil grips, and other fine motor supports to ensure all students can participate.	Provide multisensory learning and response opportunities (i.e., tactile,	Simplify and reduce the number of words used when describing something.	Try the activity one-on-one with the student (if possible) to limit distractions and provide explicit

	unsegmented number lines as they progress.	Implement	auditory, visual, etc).		modeling.
	Children with executive functioning difficulties may need visual supports to keep track of their place/progress throughout the activity.	Offer flexible seating options for children to find what suits their needs best.	If appropriate, offer assignments in braille or large print for children with visual impairments.	Do not answer for the student if they fail to respond immediately. Instead, rephrase the question and give hints as needed.	Pair students up in twos to provide each student with a positive peer model.
Fraction Arithmetic +/-	Make sure to keep number lines for each denominator separate, displaying them vertically so the 0 and 1 line up.	If possible, add a gross motor component to the activity, to encourage muscle memory and body/brain connection.	When speaking to children with hearing impairments, face them while talking so they can read your lips (during the pandemic - wear a clear mask).	Break down oral instructions into small chunks, using visuals and frequently checking for understanding.	Flexibly group children with a range of knowledge on the concept.

LT Level	Cognition	Motor	Sensory	Communication	Social Emotional
Fraction Arithmetic x/\pm, Fraction & Integer Sequencer	Allot extra time for children to work on activities.	Some children might benefit from a tablet or other technological support, particularly for writing or drawing fractions.	For visual learners, create a video model of what is expected during the activity. Provide clear, explicit instructions.	Repeat a student's answer or question back to them, to ensure there is no miscommunication.	Use open-ended questions during group discussion to encourage a deeper level of collaborative thinking.
	Ask the child to "teach" specific concepts to you, in order to assess their level of understanding.	For children with fine motor challenges, add Velcro or tape to manipulatives to keep them from scattering.	An angled workspace/slant board can help decrease visual glare on the paper when writing out fractions.	If children have a difficult time explaining their thoughts verbally, allow them to visualize it through a drawing instead.	To help build confidence, prioritize the concepts themselves over "getting the right answer."