

Using STEM Instructional Practices: A Reflective Tool

Reflect on your use of STEM instructional practices by answering the questions below. Consider where you want to grow. Choose one practice area to focus on and try a few changes in your approach. Be curious: see what happens!

WHEN CONNECTING WITH STUDENTS INDIVIDUALLY, DO YOU...	Not At All	Rarely	A Few Times A Week	Daily
Ask about their thinking, for example, Show me how you figured that out. Or, Tell me what you did to discover that.				
Normalize errors: Making mistakes and trying again is how we learn				
Observe and build on children's experiences, interests, and curiosity				
WHEN FACILITATING GROUP WORK, DO YOU...	Not At All	Rarely	A Few Times A Week	Daily
Create diverse student groups (gender, race, ethnicity, etc.)				
Ensure all children have an opportunity to lead/participate in the activity and use tools/equipment				
Promote age-appropriate collaboration skills				
WHEN ADDRESSING THE WHOLE CLASS, DO YOU...	Not At All	Rarely	A Few Times A Week	Daily
Nurture a sense of STEM identity and community: We are Problem Solvers (mathematicians/scientists/engineers)!				
Promote a growth mindset—We get better with practice—emphasize that children are learning everyday				
Ensure that ALL children are engaged through questions, discussion, or comments/observations				
WHEN PLANNING ACTIVITIES, DO YOU CONSIDER HOW TO...	Not At All	Rarely	A Few Times A Week	Daily
Include movement and manipulatives				
Engage dual/multi-language learners				
Adapt/modify activities for children with special needs				
Embed STEM concept(s) across the curriculum (through music, arts, literacy, daily routines, etc.)				
Feature STEM-based children's books with diverse characters (gender, race/ethnicity, ability level, etc.)				
WHEN YOU ARE WITH FAMILIES, DO YOU...	Not At All	Rarely	A Few Times A Week	Daily
Share information about STEM curriculum content				
Offer ideas for at-home learning experiences				
Discuss families' beliefs about STEM instruction				
Explore families' experiences with STEM topics; what could/would they like to share with students?				
WHEN ASSESSING THE EFFECTIVENESS OF AN ACTIVITY, DO YOU...	Not At All	Rarely	A Few Times A Week	Daily
See children actively engaged (moving, doing, showing)				
Observe children sharing/showing their thinking, predictions, discoveries				
See children using STEM practices (observing, asking, noticing patterns, testing ideas, etc.)				
Observe children discussing/using/applying STEM content and vocabulary				