

Developing Future Problem Solvers through STEM

Developmental Goals	Early Childhood	Grades K-4	Grades 5-8	Grades 9-12	
Science	Experience <i>Be in it</i>	Observation <i>Watch it</i>	Experimentation <i>Question it</i>	Formulation <i>Quantifying discovery</i>	STEM Ready!
Technology	Exposure <i>See it</i>	Manipulation <i>Use it</i>	Creation <i>Bend it to will</i>	Integration <i>Implement solution to larger problem</i>	STEM Ready!
Engineering	Persistence <i>Keep at it</i>	Logical Problem Solving <i>Reason it out</i>	Informed Synthesis <i>Use multiple disciplines to solve it</i>	Efficient Design <i>Get to viable solution efficiently</i>	STEM Ready!
Mathematics	Spatial Understanding <i>Move it</i>	Numeric Understanding <i>Quantify it</i>	Algorithmic Processing <i>Make it a process</i>	Predictive Ability <i>Go in right direction and get in the ball park</i>	STEM Ready!

Collaboration / Teamwork	Sharing	Taking Turns and Cooperative Learning	Division of Labor and Individual Accountability	Coordination and Positive Interdependence	STEM Ready!
Communication	Listening and Understanding	Asking and Answering	Suggest, Critique (not criticize), and Compromise	Brainstorm, Persuade, and Negotiate	STEM Ready!
Projects	Explore	Modify	Combine	Create	STEM Ready!