School Age Curricular Framework Easy Sheet
STEM – Science, Technology, Engineering and Math Level 1

Marshfield Clinic Health System

WOSTA WISCONSIN OUT OF SCHOOL TIME ALLIANCE

Science, Technology, Engineering and Mathematics includes providing 21st century skills that prepare children and youth for a global society. It should be hands-on and increase analytical and critical thinking skills. Numeracy is reasoning with numbers and other mathematical concepts. Aspects of numeracy include number sense, operation sense, computation, measurement, geometry, probability and statistics.

Rationale	★ Opportunities for Collaboration and teamwork ★ Ability to express creativity and imagination ★ Demonstrate critical thinking and problem solving skills ★ Understand how the world works ★ Plan implement, interpret results of experiments ★ Hypothesis and record observations ★ Understand mathematical concepts ★ Applying mathematics to everyday experiences ★ Ability to use mathematical ideas effectively ★ Incorporates numerical, special, graphical and statistical concepts ★ Communicate mathematical reasoning

Examples	Materials
	★ Take-a-parts: old computers, clocks, phones...
	★ Loose parts/natural materials
	★ STEM kits
	★ Makerspace: cardboard, recyclables and other materials to build or construct models or machines
	
	Activities
	★ Simple experiments
	★ Building with various materials-toothpicks and marshmallows, playdoh, blocks....
	★ Geocaching
	
	Interactions
	★ Set up partnerships with STEM content experts (For Example Mad Science)
	★ conduct simple experiments
	  ○ Ask what the students think the outcome will be
	  ○ Create/ write hypothesis with kids
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	★ Notes for Next Time: (time used, reactions to activity, staff/children interactions)

Resources	★ UConn STEM resources for Teachers ★ PBS Learning Media for Teachers ★ STEM resources by NASA ★ National inventors Hall of Fame STEM resources for educators ★ Afterschool Alliance http://www.afterschoolalliance.org/STEM-curriculum.cfm ★ You for Youth (math, literacy, science, arts, technology, homework) https://y4y.ed.gov/en/toolkits/afterschool/math