# School Age Curricular Framework Easy Sheet

## STEM - Science, Technology, Engineering and Math Level 2

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

- ★ UConn STEM resources for Teachers
- ★ PBS Learning Media for Teachers
- ★ STEM resources by NASA
- ★ National inventors Hall of Fame STEM resources for educators

Activities

- ★ Build bridges out of different materials and test the strength
- ★ Speed stacking
- ★ Testing buoyancy of toys and objects in a water tub
- ★ Paper airplane flying and creation
- ★ Jenga and other balancing/ building games

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

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