Forestry Camp Standards

**CCSS – Math**

**Geometry**

[CCSS.MATH.CONTENT.4.G.A.1](http://www.corestandards.org/Math/Content/4/G/A/1/)
Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

[CCSS.MATH.CONTENT.5.G.B.3](http://www.corestandards.org/Math/Content/5/G/B/3/)
Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles

Apply geometric concepts in modeling situations

[CCSS.MATH.CONTENT.HSG.MG.A.1](http://www.corestandards.org/Math/Content/HSG/MG/A/1/)
Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).\*

[CCSS.MATH.CONTENT.HSG.MG.A.2](http://www.corestandards.org/Math/Content/HSG/MG/A/2/)
Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).\*

[CCSS.MATH.CONTENT.HSG.MG.A.3](http://www.corestandards.org/Math/Content/HSG/MG/A/3/)
Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

**Use the four operations with whole numbers to solve problems.**

[CCSS.MATH.CONTENT.4.OA.A.1](http://www.corestandards.org/Math/Content/4/OA/A/1/)
Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

[CCSS.MATH.CONTENT.4.OA.A.2](http://www.corestandards.org/Math/Content/4/OA/A/2/)
Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.1

[CCSS.MATH.CONTENT.4.OA.A.3](http://www.corestandards.org/Math/Content/4/OA/A/3/)
Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding

Write and interpret numerical expressions.

[CCSS.MATH.CONTENT.5.OA.A.2](http://www.corestandards.org/Math/Content/5/OA/A/2/)
Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product*

**Use place value understanding and properties of operations to perform multi-digit arithmetic.**

[CCSS.MATH.CONTENT.4.NBT.B.4](http://www.corestandards.org/Math/Content/4/NBT/B/4/)
Fluently add and subtract multi-digit whole numbers using the standard algorithm.

[CCSS.MATH.CONTENT.4.NBT.B.5](http://www.corestandards.org/Math/Content/4/NBT/B/5/)
Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

[CCSS.MATH.CONTENT.4.NBT.B.6](http://www.corestandards.org/Math/Content/4/NBT/B/6/)

**Standards of Mathematical Practices**

**[CCSS.MATH.PRACTICE.MP1](http://www.corestandards.org/Math/Practice/MP1/)**Make sense of problems and persevere in solving them.

**[CCSS.MATH.PRACTICE.MP2](http://www.corestandards.org/Math/Practice/MP2/)**Reason abstractly and quantitatively.

**[CCSS.MATH.PRACTICE.MP3](http://www.corestandards.org/Math/Practice/MP3/)**Construct viable arguments and critique the reasoning of others.

**[CCSS.MATH.PRACTICE.MP4](http://www.corestandards.org/Math/Practice/MP4/)**Model with mathematics

**[CCSS.MATH.PRACTICE.MP5](http://www.corestandards.org/Math/Practice/MP5/)**Use appropriate tools strategically.

**[CCSS.MATH.PRACTICE.MP6](http://www.corestandards.org/Math/Practice/MP6/)**Attend to precision.

**[CCSS.MATH.PRACTICE.MP7](http://www.corestandards.org/Math/Practice/MP7/)**Look for and make use of structure.

**[CCSS.MATH.PRACTICE.MP8](http://www.corestandards.org/Math/Practice/MP8/)**Look for and express regularity in repeated reasoning

NGSS (Science)

**MS. Structure and Properties of Matter**

MS-PS1-3 **–** Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

**MS. Matter and Energy in Organisms and Ecosystems**

MS-LS2-1 – analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

MS-LS2-4 – Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

**MS. Interdependent Relationships in Ecosystems**

MS-LS2-5 – Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

**MS. Human Impacts**

MS-ESS3-3 – Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

**Science and Engineering Practices**

1. Asking questions (for science) and defining problems (for engineering)

2. Developing and using models

3. Planning and carrying out investigations

4. Analyzing and interpreting data

5. Using mathematics and computational thinking

6. Constructing explanations (for science) and designing solutions (for engineering)

7. Engaging in argument from evidence

8. Obtaining, evaluating, and communicating information