

Technology Competencies 2008-2009

Grade 5/Math

ISTE Standards

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

<i>AKS/LA/5</i>	<i>ISTE Standards</i>	<i>Suggested Activity</i>
<p>For additional interactive lessons that reinforce numerous topics -- use this site: http://www.harcourtschool.com/menus/math2004/math2004_gr5.html Lessons at this site could be done with the class using the classroom projector.</p>		
<p>Decimals (AKS 23, 25 and 26):</p>		
<p>read, write, order and compare place value of decimal fractions (GPS) (5MA_B2007-23)</p> <p>model multiplication and division of decimal fractions by another decimal fraction (GPS) (5MA_B2007-25)</p> <p>explain the process of multiplication and division, including situations in which the multiplier and the divisor are both whole numbers and decimal fractions (GPS) (5MA_B2007-26)</p>	<ol style="list-style-type: none"> 2. Communication and collaboration 4. Critical Thinking, Problem Solving and Decision Making 6. Technology Operations and Concepts 	<p>Use the PowerPoints below (with the classroom projector) to introduce decimal concepts to students.</p> <p><i>(PowerPoint: 5MA_Decimals_and_Fractions_Relationships.ppt)</i> <i>(PowerPoint: 5MA_Rounding_Decimal_Numbers.ppt)</i> <i>(PowerPoint: 5MA_Comparing_and_Ordering_Decimals.ppt)</i> <i>(PowerPoint: 5MA_Equivalent_Decimals.ppt)</i></p> <p>Use the web sites below (as a classroom activity with the classroom projector or in a lab with students accessing the sites individually) to reinforce decimal concepts to students.</p> <p><u>Decimal Matching Words:</u> http://www.oswego.org/ocsd-web/match/dragflip.asp?filename=ccarrolldecimal1</p> <p><u>Decimals – Introduction, Using, and Comparing with Fact Sheets: (Also, Online Quizzes and Fun Activities)</u> http://www.bbc.co.uk/skillswise/numbers/fractiondecimalpercentage/decimals/introductiontodecimals/ http://www.bbc.co.uk/skillswise/numbers/fractiondecimalpercentage/comparing/fractionsdecimals/</p>

Technology Competencies 2008-2009

Grade 5/Math

ISTE Standards

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

<i>AKS/LA/5</i>	<i>ISTE Standards</i>	<i>Suggested Activity</i>
Geometry (AKS 41-48):		
<p>analyze and explain the relationship of the circumference of a circle, its diameter, and pi ($\pi \sim 3.14$) (GPS) (5MA_C2007-41)</p> <p>estimate the area of fundamental geometric plane figures (GPS) (5MA_D2007-42)</p> <p>derive the formula for the area of a parallelogram (e.g., cut the parallelogram apart and rearrange it into a rectangle of the same area) (GPS) (5MA_D2007-43)</p> <p>derive the formula for the area of a triangle (e.g., demonstrate and explain its relationship to the area of a rectangle with the same base and height) (GPS) (5MA_D2007-44)</p> <p>use formulas to find area of polygons, including triangles and parallelograms (GPS) (5MA_D2007-45)</p> <p>find the area of a polygon (regular and irregular) by dividing it into squares, rectangles, and/or triangles and finding the sum of the area of those shapes (GPS) (5MA_D2007-46)</p> <p>estimate the area of a circle through partitioning and tiling and then find the area of a circle using a formula (let $\pi = 3.14$) (GPS) (5MA_D2007-47)</p> <p>find the circumference of a circle using a formula (5MA_D2007-48)</p>	<ol style="list-style-type: none"> 2. Communication and collaboration 4. Critical Thinking, Problem Solving and Decision Making 6. Technology Operations and Concepts 	<p>Use the PowerPoint below (with the classroom projector) to introduce decimal concepts to students.</p> <p><i>(PowerPoint: 5MA_Jeopardy_Geometry.ppt)</i> <i>(PowerPoint: 5MA_Basic_Geometry.ppt)</i> <i>(PowerPoint: 5MA_Circles.ppt)</i> <i>(PowerPoint: 5MA_Triangles.ppt)</i> <i>(PowerPoint: 5MA_Polygons.ppt)</i> <i>(PowerPoint: 5MA_Perimeters_and_Angles.ppt)</i></p> <p>Use the PowerPoint below (with the classroom projector) to reinforce geometry concepts. <i>(PowerPoint: 5MA_Jeopardy_Geometry2.ppt)</i></p> <p>Use the web sites below (as a classroom activity with the classroom projector or in a lab with students accessing the sites individually) to reinforce geometry concepts.</p> <p><u>Geometry Activities:</u> http://www.funbrain.com/poly/index.html http://www.bbc.co.uk/schools/ks2bitesize/maths/shape_space_measures.shtml (be sure to click on "Full Screen") http://www.crickweb.co.uk/assets/resources/flash.php?&file=angle (guess the angle) http://www.aplusmath.com/cgi-bin/games/geopicture students reveal hidden pictures by correctly identifying geometric shapes http://www.crickweb.co.uk/assets/resources/flash.php?&file=triangles</p>

Technology Competencies 2008-2009

Grade 5/Math

ISTE Standards

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

<i>AKS/LA/5</i>	<i>ISTE Standards</i>	<i>Suggested Activity</i>
Measurement (AKS 49-56):		
<p>use milliliters, liters, fluid ounces, cups, pints, quarts and gallons to measure capacity (GPS) (5MA_D2007-49)</p> <p>compare one unit to another within a single system of capacity measurement (GPS) (5MA_D2007-50)</p> <p>use words, pictures, and/or numbers to show a cubic unit is represented by a cube in which each edge has the length of one unit (GPS) (5MA_D2007-51)</p> <p>identify the units used in computing volume as cubic centimeters (cm³), cubic meters (m³), cubic inches (in³), cubic feet (ft³), and cubic yards (yd³) (GPS) (5MA_D2007-52)</p> <p>derive and apply the formula for the volume of a cube and a rectangular prism using manipulatives (GPS) (5MA_D2007-53)</p> <p>compute the volume of a cube and a rectangular prism using a formula (GPS) (5MA_D2007-54)</p> <p>estimate the volume of simple geometric solids in cubic units (GPS) (5MA_D2007-55)</p> <p>analyze and explain the similarities and differences between volume and capacity (GPS) (5MA_D2007-56)</p>	<ol style="list-style-type: none"> 2. Communication and collaboration 4. Critical Thinking, Problem Solving and Decision Making 6. Technology Operations and Concepts 	<p>Use the PowerPoint below (with the classroom projector) to introduce measurement concepts to students.</p> <p><i>(PowerPoint: 5MA_Measurement.ppt)</i></p> <p>Use the web sites below (as a classroom activity with the classroom projector or in a lab with students accessing the sites individually) to reinforce measurement concepts.</p> <p>http://www.aaastudy.com/mea.htm (measurement topics)</p> <p>http://www.oswego.org/ocsd-web/match/matchgeneric.asp?filename=capacity (capacity and weight)</p> <p>http://www.funbrain.com/measure/index.html (measurement activities)</p>

Technology Competencies 2008-2009

Grade 5/Math

ISTE Standards

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

<i>AKS/LA/5</i>	<i>ISTE Standards</i>	<i>Suggested Activity</i>
Algebra (AKS 57-60):		
<p>express, investigate and represent math relationships in formulas and equations (GPS) (5MA_E2007-57)</p> <p>use variables, such as n or x, for unknown quantities in algebraic expressions (GPS) (5MA_E2007-58)</p> <p>investigate expressions by substituting numbers for the unknown (GPS) (5MA_E2007-59)</p> <p>determine that a formula is reliable regardless of the type of number (whole number, decimal or fraction) substituted for the variable (GPS) (5MA_E2007-60)</p>	<ol style="list-style-type: none"> 2. Communication and collaboration 4. Critical Thinking, Problem Solving and Decision Making 6. Technology Operations and Concepts 	<p>Use these two video segments downloaded from United Streaming (Math Mastery:Equations Lesson_1__Unknowns__Reciprocals__and__Signed__Numbers.asf (length-5:37) and Lesson_2__Absolute_Value_and_Solving_Equations.asf (length-7:21))</p> <p>Work with your LSTC to download (do not stream) additional appropriate segments of the Algebra Video from United Streaming Math Mastery:Equations as needed.</p> <p>Use the video segments to enhance classroom instruction.</p> <p>Use the web sites below (as a classroom activity with the classroom projector or in a lab with students accessing the sites individually) to reinforce algebra concepts.</p> <p>http://www.aaastudy.com/alg.htm http://www.bbc.co.uk/schools/gcsebitesize/maths/algebra/ http://mathforum.org/dr.math/faq/faq.age.problems.html (Ask Dr. Math-Variables) http://math.rice.edu/~lanius/Lessons/calcn.html (Algebra fun with calendars)</p>
Data Analysis (AKS 61-63):		
<p>analyze data presented in a graph (GPS) (5MA_F2007-61)</p> <p>collect, organize and display data using the most appropriate graph (GPS) (5MA_F2007-62)</p> <p>compare and contrast multiple graphic representations (such as bar, circle, and line graphs) for a single set of data and analyze the advantages and disadvantages of each (GPS) (5MA_F2007-63)</p>	<ol style="list-style-type: none"> 1. Creativity and Innovation 2. Communication and collaboration 4. Critical Thinking, Problem Solving and Decision Making 6. Technology Operations and Concepts 	<p>Use the web sites below (as a classroom activity with the classroom projector or in a lab with students accessing the sites individually) to reinforce data analysis concepts.</p> <p>http://nces.ed.gov/nceskids/createagraph/default.aspx (create a graph) http://www.bbc.co.uk/skillswise/numbers/handlingdata/ (handling data tab) http://www.gamequarium.com/data.html (data interpretation) http://www.glencoe.com/sec/math/studytools/cgi-bin/msgQuiz.php4?isbn=1-57039-850-X&chapter=6&lesson=1 (using graphs to understand data—a 5 question quiz) http://www.bbc.co.uk/schools/ks2bitesize/maths/handling_data.shtml (interpreting data)</p>