**Math 8 Year-At-A-Glance**

**Big Ideas Correlated with Common Core and NAD Standards**

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| **Pacing** | **Mathematical Essential**  **Questions** | **Spiritual Essential**  **Questions** | **Common**  **Core**  **Standards** | **NAD**  **Standards** | **Topics** | **Textbook**  **Reference** | **Connect**  **To**  **Previous** | **Resources with links** |
| Q-1a | How are mathematical principles useful in problem solving? | How are spiritual principles useful in problem solving? |  |  | Basic Skills (Estimation),  Solving Problems  and Test Preparation | ITBS Practice (Proportions, Percent, Solving Problems) Workbook & ixl.com | BIGR: Skills Review Handbook, Basic Skills Handbook | Placement Algebra Test  [http://184.168.83.81/Diagnostic/Algebra1.pdf](http://184.168.83.81/Diagnostic/Algebra1.pdf" \t "_blank)  BIGR: Game Closet, Review  BIGR: Intensive Intervention Activities  BIGR: Additional Support for the CC Standards-  (grades 6 and 7) |
| Q-1b | How can you solve simple and multi-step equations? | How do mathematical principles demonstrate that God never changes? | 8.EE.7a,b | 8.OAT.3 | Solving Equations | BIM Ch.1 | 5.NF.1  6.RP.3d | Equations  <http://pinterest.com/pin/174725660513660736/>  BIGR: Game Closet, Tic-Tac-Toe  BIGR: Interactive Activities: Equation Scale |
| Q-2a | How can objects be represented by tables, graphs, and models? | How can objects be represented to help us understand the variety of God’s creation? | 8.EE.5  8.EE.6  8.EE.8a,b,c  8.SP.3 | 8.OAT.2  8.OAT.3 | Graphing Linear Equations and Linear Systems | BIM Ch.2 | 6.EE.2c  6.NS.6c | Solve System of Equations  <http://questgarden.com/99/91/0/120204204451/index.htm>  <http://illuminations.nctm.org/LessonDetail.aspx?id=L766> |
| Q-2b | How can you write an equation of a line? | How can objects be represented to help us understand the variety of God’s creation? | 8.EE.6  8.EE.8a,b,c  8.F.4 | 8.OAT.2 | Writing Linear Equations and Linear Systems | BIM-Ch.3 | 6.NS.1  6.RP.3c | Equations with the Calendar  <http://math.rice.edu/~lanius/Lessons/calen.html> |
| Q-3a | How can you recognize when a pattern in real life is linear or nonlinear? | How does the consistency of proportional principles continue to demonstrate the orderliness and precision of God? | 8.EE.5  8.F.1,2,3,4,5 | 8.OAT.2  8.OAT.4 | Functions | BIM-Ch.4 | 6.EE.9 | Patterns and Fibonacci  <http://www.youtube.com/watch?v=ahXIMUkSXX0>  BIGR: Interactive Activities, Function Machine |
| Q-3a | How do relationships exist between angles, triangles, and properties of parallel lines? | How do relationships and their parts help us appreciate God’s creation? | 8.G.5 | 8.GEO.1 | Angles and Similarity | BIM-Ch.5 | 7.G.1 | Interactive Transversal and Angles  <http://www.mathwarehouse.com/geometry/angle/interactive-transveral-angles.php>  BIGR: Game Closet, Picture This; What’s the Angle |
| Q-3b | How can very large and very small numbers be represented? | How can numbers be represented to help order and compare things in God’s world? | 8.EE.1,3,4 | 8.OAT.1 | Exponents and Scientific Notation | BIM-Ch.9 | 6.NS.3 | Scientific Notation <http://ieer.org/resource/classroom/scientific-notation/>  <http://janus.astro.umd.edu/cgi-bin/astro/scinote.pl> |
| Q-3b | How do you use rational and irrational numbers?  How do you solve real life problems with the Pythagorean theorem? | How is the complexity of God’s creation revealed when studying mathematical principles? | 8.EE.2  8.G.6,7,8  8.NS.1,2 | 8.NO.1  8.OAT.1  8.OAT.2 | Square Roots and the Pythagorean Theorem | BIM-Ch.6 | 5.NBT.3b  6.EE.1 | Squares and Square Roots  <http://illuminations.nctm.org/LessonDetail.aspx?ID=L833>  BIGR: Interactive Activities, Pythagorean Thm Explorer |
| Q-4a | How can the volume of 3-D objects be used to solve real world problems? | How do the attributes of measurement reveal God’s accuracy, dependability, and precision? | 8.G.9 | 8.GEO.3 | Volume | BIM Additional Topic 2 | 7.G.4 | BIM 7th Gr.Ch.7  Area of the Circle <http://www.youtube.com/watch?v=YokKp3pwVFc>  Volume Activity  http://illuminations.nctm.org/LessonDetail.aspx?id=L797 |
| Q-4a | How can we quantify and interpret the world around us with visual representations? | How is the Master Designer revealed when attributes of the physical world are described? | 8.SP.1,2,3,4 | 8.DSP.1 | Data Analysis and Display | BIM-Ch.7 | 6.SP.4 | Statistic and Probability  <http://jmathpage.com/middleschoolmath/jmsmstatisticsprobability.html>  BIGR: Game Closet, M and M and M |
| Q-4b | How can you describe the effects of transformations within a coordinate plane? | How is God revealed when describing the effects of transformation of the physical world? | 8.G.1a,b,c | 8.GEO.1 | Transformation | BIM Additional Topic 1 | 6.G.3  7.G.4 | Similarities and Transformation  <http://illuminations.nctm.org/LessonDetail.aspx?id=L720>  BIM 7th Gr Ch. 5  BIGR: Interactive Activities, Translations, Tesselations |
| Q-4b | How do you solve linear inequalities? | How can objects be represented to help us understand the variety of God’s creation? | 8.EE.7 | 8.OAT.3 | Solving Linear Inequalities | BIM-Ch.8 | 6.EE.8  8.NS.2 | Solving Linear Inequalities  <http://www.quia.com/rr/79715.html?AP_rand=1360970413>  Graphing Inequalities  <http://www.math.com/school/subject2/lessons/S2U4L1GL.html> |

Websites: Khan Academy.com, IXL.com, mathplayground.com,

Apps: Educreations, Showme, My Dear Aunt Sally, Hands-On Equations, YourTeacher (Math), revised 7/18/15