2017 Catholic Schools
Academic Junior High Decathlon
Study Guide

Theme: American Justice

Team Event: Logic Test

The Logic Test may contain, but is not limited to, any of the following types of problems:

Ken Ken	Sudoku
Cryptograms	Word problems
Anagrams	Spatial reasoning
Patterns & graphs	Probability
Lateral thinking	Logic grids
Venn diagrams	Rebus puzzles
True/False logic	Kakuro
Word ladders	Riddles
Logic fallacies	

The following websites provide excellent sample problems:

http://www.brainbashers.com

http://www.mensa.org/workout.php

http://www.mensaforkids.org

http://puzzlersparadise.com

http://www.sudoku.org.uk

http://www.mathisfun.com/puzzles

http://www.allstarpuzzles.com

http://www.braingle.com/brainteasers

Team Event: Logic Test

For examples of logic and argument fallacies:

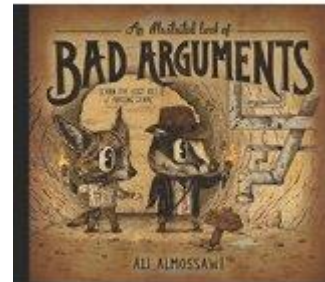*An Illustrated Book of Bad Arguments* by Ali Almossawi

Hardcover: 64 pages
Publisher: The Experiment; ILL edition (September 23, 2014)
ISBN-10: 1615192255
ISBN-13: 978-1615192250
Available in Kindle and hardcover versions. Free e-publish book available at
https://bookofbadarguments.com

Decathletes should be familiar with the following argument fallacies:

Slippery slope	Affirming the consequent
Appeal to hypocrisy	Scapegoating
Groupthink	Ad hominem
Faulty cause/Effect	False dilemma
Appeal to fear	Two wrongs make a right
Red Herring/Obfuscation	Straw man
Composition	Division
Appeal to ignorance	Guilt by association
Appeal to authority	

In addition, there are a number of websites that provide excellent examples and descriptions for these argument fallacies.

Team Event: Super Quiz

Fine Arts

13 *Art Techniques Children Should Know* by Angela Wenzel

Hardcover: 48 pages
Publisher: Prestel (April 25, 2013)
ISBN-10: 3791371363
ISBN-13: 978-3791371368
Available in hardback.

13 Art Techniques Children Should Know introduces young readers to a variety of important art techniques, explained through some of the world's most recognizable masterpieces. Readers explore methods of producing art and study masterpieces in dazzling color reproductions. Children will learn about drawing through cave paintings and Leonardo's sketches, understand how van Eyck and Van Gogh used oil paints to vastly different effect, and discover what Matisse accomplished with colored paper and a pair of sharp scissors. (Note – Decathletes do not need to study the suggested art activities included in the book.)
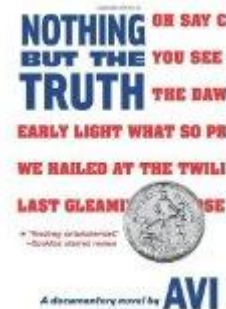
Literature

Nothing but the Truth by Avi

Mass Market Paperback: 208 pages
Publisher: Scholastic Paperbacks (January 1, 2010)
ISBN-10: 0545174155
ISBN-13: 978-0545174152
Available in Kindle, paperback, and mass market paperback.

In this thought-provoking examination of freedom, patriotism, and respect, ninth-grader, Philip Malloy, is kept from joining the track team by his failing grades in English class. Convinced that the teacher just doesn't like him, Philip concocts a plan to get transferred out of her class. Breaking the school's policy of silence during the national anthem, he hums along, and ends up in a crisis at the center of the nation's attention. Newberry Book Honor Award winner.

Team Event: Super Quiz

Religion

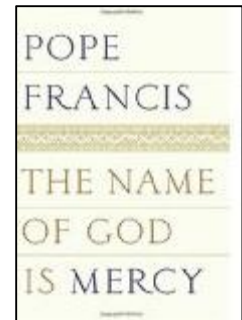***The Name of God is Mercy*** by Pope Francis

Hardcover: 176 pages
Publisher: Random House
ISBN-10: 0399588639
ISBN-13: 978-0399588631
Available in Kindle, paperback, and hardcover versions.

NEW YORK TIMES **BESTSELLER •** In his first book published as Pope, and in conjunction with the Extraordinary Jubilee of Mercy, Pope Francis here invites all humanity to an intimate and personal dialogue on the subject closest to his heart—mercy—which has long been the cornerstone of his faith and is now the central teaching of his papacy.

In this conversation with Vatican reporter Andrea Tornielli, Pope Francis explains—through memories from his youth and moving anecdotes from his experiences as a pastor—why "mercy is the first attribute of God." God "does not want anyone to be lost. His mercy is infinitely greater than our sins," he writes. As well, the Church cannot close the door on anyone, Francis asserts—on the contrary, its duty is to go out into the world to find its way into the consciousness of people so that they can assume responsibility for, and move away from, the bad things they have done.

Science

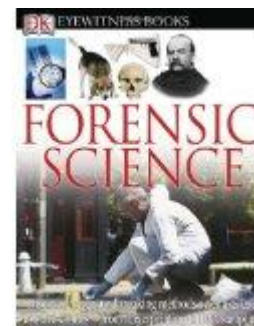***DK Eyewitness Books Forensic Science***
Hardcover: 72 pages
Publisher: DK Children; Pck Har/Co edition
ISBN-10: 0756633834
ISBN-13: 978-0756633837
Available in hardcover.

A fascinating presentation on the tools and techniques forensic scientists use in solving crimes--from fingerprint analysis to DNA testing

Team Event: Super Quiz

Social Studies

The Penguin Guide to the United States Constitution by Richard Beeman
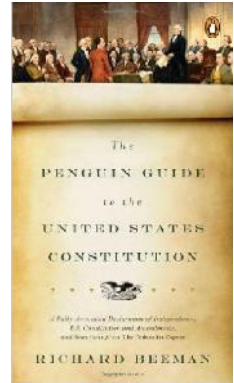
> **Paperback:** 224 pages
> **Publisher:** Penguin Books; annotated edition
> **ISBN-10:** 0143118102
> **ISBN-13:** 978-0143118107
> Available in paperback and kindle versions.

Known across the country for his appearance on *The Daily Show with Jon Stewart*,
Professor Richard Beeman is one of the nation's foremost experts on the United States Constitution.
In this book, he has produced what every American should have: a compact, fully annotated copy of the
Declaration of Independence, the Constitution and amendments, all in their entirety. A marvel of
accessibility and erudition, the guide also features a history of the making of the Constitution with
excerpts from *The Federalist Papers* and a look at crucial Supreme Court cases that reminds us that the
meaning of many of the specific provisions of the Constitution has changed over time.

Decathletes will only be tested on the following:
The Constitution of the United States, pages 21 - 59
Amendments to the Constitution, pages 61 - 92

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Individual Subject Tests:

Current Events

Every two weeks, a new list of news stories will be posted to the Academic Junior High Decathlon wikispaces page. Each news story will have a link to articles, videos, and/or photographs regarding the news stories.

Go to https://academicdecathlon.wikispaces.com to request membership to the AJHD wikispaces page. Then check on the Current Events page by clicking on the Current Events tab on the left margin of the AJHD home page or go to https://academicdecathlon.wikispaces.com/Current+Events for the list of news articles.

In addition, study guides for each month that include graphic organizers, review questions, worksheets, practice quizzes, and access to an online classroom are available at https://www.teacherspayteachers.com/Store/Education-Test-Creators

Please note: Links from the Catholic Schools Academic Junior High Decathlon (AJHD) to third-party sites do not constitute an endorsement by the AJHD of the parties or their products or services. The appearance of advertisements or products or information for services on third-party sites does not constitute an endorsement by the AJHD, nor does the AJHD investigate any claims made by any advertiser. The AJHD is not responsible for incorrect information on third-party sites, nor is it responsible for alterations or edits to materials linked to the AJHD site. It is advised that parents and/or coaches screen all materials prior to viewing by academic decathletes.

Individual Subject Tests:

Fine Arts

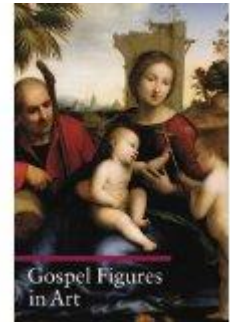*Gospel Figures in Art* by Stefano Zuffi

Paperback: 384 pages
Publisher: The J. Paul Getty Museum
ISBN-10: 089236727X
ISBN-13: 978-0892367276

Available in paperback from Amazon and the J. Paul Getty Museum at
http://shop.getty.edu/products/gospel-figures-in-art-978-0892367276

In viewing the great works of sacred Western art, many people find it difficult to understand the stories and identify the figures portrayed in them. This informative guide decodes these often-mysterious scenes and reveals a vibrant world of images from the Christian tradition.

Gospel Figures in Art examines art depicting the stories and figures from the New Testament's Gospels (the books of Matthew, Mark, Luke, and John) which serve as rich sources of inspiration for medieval and Renaissance artists. The book, illustrated with masterpieces from many of the world's premier museums, provide visual references for the four evangelists and major biographical turning points in the life of Jesus. Decathletes will focus on the writers of the Gospels, Jesus' public life, and the miracles and good deeds Jesus performed.

Decathletes will only be tested on the following:
The Evangelists and Their Symbols – pgs. 8 -23
The Public Life of Jesus – pgs. 166 – 203
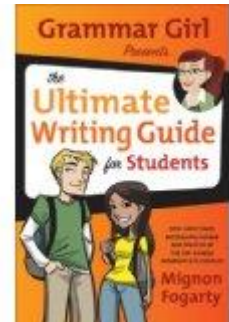Miracles and Parables – pgs. 204 - 235

Individual Subject Tests:

English

Grammar Girl Presents the Ultimate Writing Guide for Students,
by Mignon Fogarty

> **Paperback:** 304 pages
> **Publisher:** St. Martin's Griffin; 1 edition (July 5, 2011)
> **ISBN-10:** 0805089446
> **ISBN-13:** 978-0805089448
> Available in Kindle and paperback versions.

Grammar Girl Presents the Ultimate Writing Guide for Students is a complete and comprehensive guide to all things grammar. Complete with a writing style chapter and a guide to the different kinds of writing--everything from school papers to letter writing to e-mails--this guide is sure to become the one-stop, essential book on every student's desk.

Conventions of Standard English:

CCSS.ELA-LITERACY.L.8.1
Demonstrate command of the conventions of Standard English grammar and usage when writing or speaking.

> CCSS.ELA-LITERACY.L.8.1.A
> Explain the function of verbals (gerunds, participles, infinitives) in general and their function in particular sentences.

> CCSS.ELA-LITERACY.L.8.1.B
> Form and use verbs in the active and passive voice.

> CCSS.ELA-LITERACY.L.8.1.C
> Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.

> CCSS.ELA-LITERACY.L.8.1.D
> Recognize and correct inappropriate shifts in verb voice and mood.

Individual Subject Tests:

English

CCSS.ELA-LITERACY.L.8.2
Demonstrate command of the conventions of Standard English capitalization, punctuation, and spelling when writing.

CCSS.ELA-LITERACY.L.8.2.A, B and C
Use punctuation (comma, ellipsis, dash) to indicate a pause or break. Use an ellipsis to indicate an omission. Spell correctly.

Knowledge of Language:
CCSS.ELA-LITERACY.L.8.3
Use knowledge of language and its conventions when writing, speaking, reading, or listening.

CCSS.ELA-LITERACY.L.8.3.A
Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).

Vocabulary Acquisition and Use:
CCSS.ELA-LITERACY.L.8.4
Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on *grade 8 reading and content*, choosing flexibly from a range of strategies.

CCSS.ELA-LITERACY.L.8.4.A
Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

CCSS.ELA-LITERACY.L.8.4.B
Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *precede, recede, secede*).
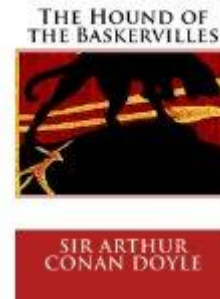
Individual Subject Tests:

Literature

The Hound of the Baskervilles by Sir Arthur Conan Doyle

Paperback: 112 pages
Publisher: Black & White Classics
ISBN-10: 1503312755
ISBN-13: 978-1503312753

Available in Kindle, paperback, and MP3 version.

Note – This book has been published by several publishing houses. Any unabridged version of this book is acceptable for use. However, the page numbers cited in the study guide from Education Test Creators only coordinate with the published version of the book listed above.

The Hound of the Baskervilles is the third of the four crime novels written by Sir Arthur Conan Doyle featuring the detective Sherlock Holmes. Originally published in The Strand Magazine from August 1901 to April 1902, it is set largely in Devon in England's West Country and tells the story of an attempted murder inspired by the legend of a fearsome, diabolical hound of supernatural origin. Sherlock Holmes and his companion Dr. Watson investigate the case.

Individual Subject Tests:

Math

Know that there are numbers that are not rational, and approximate them by rational numbers.

⟩ Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
  Convert between decimals and fractions or mixed numbers (8-D.4)
  Identify rational and irrational numbers (8-D.5)

⟩ Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., pi²).
  Estimate positive and negative square roots (8-F.16)
  Estimate cube roots (8-F.21)

Understand and apply the Pythagorean Theorem.

⟩ Explain a proof of the Pythagorean Theorem and its converse.
  Converse of the Pythagorean theorem: is it a right triangle? (8-R.5)

⟩ Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
  Pythagorean theorem: find the length of the hypotenuse (8-R.1)
  Pythagorean theorem: find the missing leg length (8-R.2)
  Pythagorean theorem: find the perimeter (8-R.3)
  Pythagorean theorem: word problems (8-R.4)

⟩ Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

<u>Math</u>

Work with radicals and integer exponents.

) Know and apply the properties of integer exponents to generate equivalent numerical expressions.

<u>Understanding exponents (8-F.1)</u>

<u>Evaluate exponents (8-F.2)</u>

<u>Solve equations with variable exponents (8-F.3)</u>

<u>Exponents with negative bases (8-F.4)</u>

<u>Exponents with decimal and fractional bases (8-F.5)</u>

<u>Understanding negative exponents (8-F.6)</u>

<u>Evaluate negative exponents (8-F.7)</u>

<u>Multiplication with exponents (8-F.8)</u>

<u>Division with exponents (8-F.9)</u>

<u>Multiplication and division with exponents (8-F.10)</u>

<u>Power rule (8-F.11)</u>

<u>Evaluate expressions involving exponents (8-F.12)</u>

<u>Identify equivalent expressions involving exponents (8-F.13)</u>

<u>Multiply monomials (8-BB.6)</u>

<u>Divide monomials (8-BB.7)</u>

<u>Multiply and divide monomials (8-BB.8)</u>

<u>Powers of monomials (8-BB.9)</u>

) Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that the square root of 2 is irrational.

<u>Identify rational and irrational numbers (8-D.5)</u>

<u>Square roots of perfect squares (8-F.14)</u>

<u>Positive and negative square roots (8-F.15)</u>

<u>Relationship between squares and square roots (8-F.17)</u>

<u>Cube roots of perfect cubes (8-F.19)</u>

<u>Solve equations involving cubes and cube roots (8-F.20)</u>

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Math

Work with radicals and integer exponents.

⟩ Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.
   Convert between standard and scientific notation (8-G.1)
   Compare numbers written in scientific notation (8-G.2)

⟩ Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.
   Convert between standard and scientific notation (8-G.1)
   Multiply numbers written in scientific notation (8-G.3)
   Divide numbers written in scientific notation (8-G.4)

Understand the connections between proportional relationships, lines, and linear equations.

⟩ Graph proportional relationships, interpreting the unit rate as the slope of the graph.
   Compare two different proportional relationships represented in different ways.
   Unit rates (8-H.4)
   Do the ratios form a proportion? (8-H.6)
   Do the ratios form a proportion: word problems (8-H.7)
   Solve proportions (8-H.8)
   Solve proportions: word problems (8-H.9)
   Find the constant of proportionality from a graph (8-I.3)
   Graph proportional relationships (8-I.5)
   Solve problems involving proportional relationships (8-I.8)

<u>Math</u>

Understand the connections between proportional relationships, lines, and linear equations.

⌡ Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b.
> <u>Write equations for proportional relationships (8-I.4)</u>
> <u>Find the slope of a graph (8-Y.1)</u>
> <u>Find the slope from two points (8-Y.2)</u>
> <u>Find the slope of an equation (8-Y.4)</u>
> <u>Graph a line using slope (8-Y.5)</u>
> <u>Graph a line from an equation (8-Y.6)</u>
> <u>Write a linear equation from a graph (8-Y.8)</u>

Analyze and solve linear equations and pairs of simultaneous linear equations.

⌡ Solve linear equations in one variable.

⌡ Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).
> <u>Find the number of solutions (8-W.13)</u>
> <u>Create equations with no solutions or infinitely many solutions (8-W.14)</u>

⌡ Analyze and solve pairs of simultaneous linear equations.

⌡ Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
> <u>Is (x, y) a solution to the system of equations? (8-AA.1)</u>
> <u>Solve a system of equations by graphing (8-AA.2)</u>
> <u>Find the number of solutions to a system of equations by graphing (8-AA.4)</u>

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Math

Analyze and solve linear equations and pairs of simultaneous linear equations.

⟩ Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.
> Solve equations involving squares and square roots (8-F.18)
> Model and solve equations using algebra tiles (8-W.3)
> Write and solve equations that represent diagrams (8-W.4)
> Solve one-step equations (8-W.6)
> Solve two-step equations (8-W.7)
> Solve multi-step equations (8-W.8)
> Solve equations involving like terms (8-W.9)
> Solve equations with variables on both sides (8-W.10)
> Solve equations: mixed review (8-W.11)
> Solve equations: word problems (8-W.12)

⟩ Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.
> Find the number of solutions to a system of equations (8-AA.5)
> Classify a system of equations by graphing (8-AA.6)
> Classify a system of equations (8-AA.7)
> Solve a system of equations using substitution (8-AA.8)
> Solve a system of equations using elimination (8-AA.10)

⟩ Solve real-world and mathematical problems leading to two linear equations in two variables.
> Solve a system of equations by graphing: word problems (8-AA.3)
> Solve a system of equations using substitution: word problems (8-AA.9)
> Solve a system of equations using elimination: word problems (8-AA.11)

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Solve real-world and mathematical problems involving areas of geometric shapes and volume of cylinders, cones, and spheres.

⟩ Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.
>
> Areas of squares, triangles, pyramids, cylinders, cones, circles, rhombuses, trapezoids, parallelograms, and regular polygons
>
> Volume of cylinders, cones, right pyramids, and cubes (8-T.9)
>
> Volume of spheres (8-T.11)

Define, evaluate, and compare functions.

⟩ Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.
>
> Identify functions (8-Z.1)
>
> Complete a table for a linear function (8-Z.7)
>
> Complete a table and graph a linear function (8-Z.8)
>
> Interpret the graph of a linear function: word problems (8-Z.9)
>
> Find values using function graphs (8-Z.17)
>
> Complete a table for a function graph (8-Z.18)

⟩ Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).
>
> Graph a line from an equation (8-Y.6)
>
> Complete a table and graph a linear function (8-Z.8)
>
> Write a linear function from a table (8-Z.10)
>
> Compare linear functions: graphs, tables, and equations (8-Z.11)
>
> Identify linear and nonlinear functions (8-Z.14)

⟩ Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.
>
> Graph a line from an equation (8-Y.6)

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Math

Use functions to model relationships between quantities.

⌡ Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

> Find the constant of proportionality from a graph (8-I.3)
> Write equations for proportional relationships (8-I.4)
> Find the constant of proportionality: word problems (8-I.7)
> Solve problems involving proportional relationships (8-I.8)
> Find the slope of a graph (8-Y.1)
> Find the slope from two points (8-Y.2)
> Find a missing coordinate using slope (8-Y.3)
> Write a linear equation from a graph (8-Y.8)
> Write a linear equation from two points (8-Y.10)
> Rate of change (8-Z.4)
> Constant rate of change (8-Z.5)
> Write a linear function from a table (8-Z.10)
> Write linear functions: word problems (8-Z.12)

⌡ Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.
> Write linear functions: word problems (8-Z.12)

Math

Investigate patterns of association in bivariate data.

⌡ Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.

⌡ Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.
    Constant rate of change (8-Z.5)
    Write linear functions: word problems (8-Z.12)

Rewrite expressions involving radicals and rational exponents using the properties of exponents.
    Simplify radical expressions (A1-EE.1)
    Simplify radical expressions involving fractions (A1-EE.2)
    Multiply radical expressions (A1-EE.3)
    Add and subtract radical expressions (A1-EE.4)
    Simplify radical expressions using the distributive property (A1-EE.5)

Simplify, factor, and solve quadratic equations, monomials, and polynomial.

⌡ Solve quadratic equations with real coefficients that have complex solutions.

⌡ Use the structure of an expression to identify ways to rewrite it.
    Simplify variable expressions involving like terms and the distributive property (A1-I.2)
    Evaluate expressions involving exponents (A1-V.8)
    Powers of monomials (A1-Y.5)
    Factor out a monomial (A1-AA.2)

⌡ Factor a quadratic expression to reveal the zeros of the function it defines.
    Factor quadratics with leading coefficient 1 (A1-AA.4)
    Factor quadratics with other leading coefficients (A1-AA.5)
    Factor quadratics: special cases (A1-AA.6)
    Solve a quadratic equation by factoring (A1-BB.7)

Math

Use the properties of exponents to transform expressions for exponential functions.

Negative exponents (A1-V.3)

Multiplication with exponents (A1-V.4)

Division with exponents (A1-V.5)

Multiplication and division with exponents (A1-V.6)

Power rule (A1-V.7)

Evaluate expressions involving exponents (A1-V.8)

Evaluate an exponential function (A1-X.1)

Match exponential functions and graphs (A1-X.2)

Create inequalities in one variable and use them to solve problems.

Write inequalities from graphs (A1-K.2)

Write compound inequalities from graphs (A1-K.13)

Solve linear inequalities (G-A.7)

Individual Subject Tests:

Religion

Ablaze: Stories of Daring Teen Saints, by Colleen Swaim
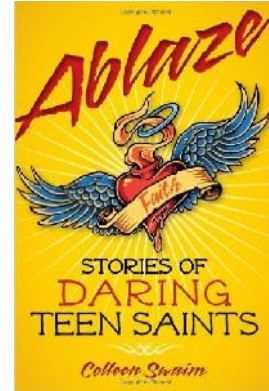
> **Paperback:** 144 pages
> **Publisher:** Liguori (July 1, 2011)
> **Language:** English
> **ISBN-10:** 076482029X
> **ISBN-13:** 978-0764820298

Following Christ is not always easy, but takes courage, patience, and love. In *Ablaze: Stories of Daring Teen Saints,* Colleen Swaim examines the lives of eight young men and women who were set fire with the Spirit and set free to live lives of extraordinary virtue.

All became saints for the outgoing, against-the-current heroism of their teen years. Read how Chiara Luce, an Italian high school student, faced cancer joyfully, inspiring thousands to throng her funeral in song. Follow Kizito, a brand-new Christian, as his faith is challenged by a king and he is marched to his death for standing firm. From martyrdom to missionary life and from sickness to the silence of religious life, these teens show that we are all called to follow Christ in our own unique ways.

These stories come alive with vivid storytelling and saintly challenges designed to inspire reflection and enflame your heart. Through prayers, images, and maps, catch a glimpse of a saint's world that carries lessons for our own--and discover how you can set our world ablaze with love for the Lord!

Science

DK Science – The Definitive Visual Guide, by Adam Hart – Davis
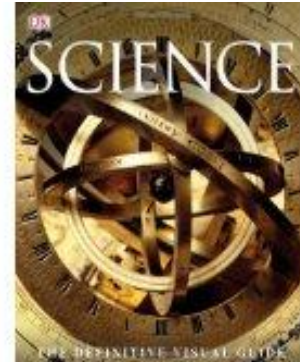
Paperback: 512 pages
Publisher: DK ADULT; Reprint edition (September 19, 2011)
ISBN-10: 0756689015
ISBN-13: 978-0756689018
Available in paperback and e-book versions.
Additional product site: www.us.dk.com

Note: This is the same resource that was used for the Academic Decathlon individual Science test in 2014 & 2015.

Decathletes will only be tested on the following pages:

Plant Life Cycles, pgs. 152-153

How Plants Work, Pgs. 154-155

How Evolution Works, pgs. 200-201

Laws of Inheritance, pgs. 204-205

Animal and Plant Cells, pgs. 214-215

How Cells Divide, pgs. 306 – 307

Chromosomes and Inheritance, pgs. 308 – 309

The Structure of DNA, pg. 346

The Genetic Code, pgs. 348-349

The Human Genome, pgs. 410 – 411

2016 - 2017 Catholic Schools
Academic Junior High Decathlon
Study Guide

Individual Subject Tests:

Social Studies

The Penguin Guide to the United States Constitution by Richard Beeman
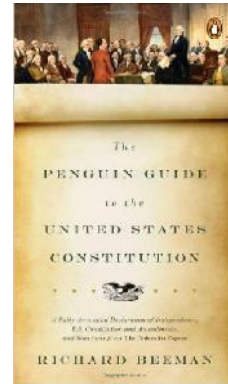
Paperback: 224 pages
Publisher: Penguin Books; annotated edition
ISBN-10: 0143118102
ISBN-13: 978-0143118107
Available in paperback and kindle versions.

Known across the country for his appearance on *The Daily Show with Jon Stewart*,
Professor Richard Beeman is one of the nation's foremost experts on the United States Constitution.
In this book, he has produced what every American should have: a compact, fully annotated copy of the United States Constitution and its amendments, in their entirety. The guide also features a history of the making of the Constitution, with a look at crucial Supreme Court cases that reminds us that the meaning of many of the specific provisions of the Constitution has changed over time.

Decathletes will only be tested on the following:

Chapter 1 - The Revolutionary Origins of the American Constitution

Chapter 2 – America Struggles to Achieve Independence, Liberty, and Union

Chapter 3 – The Constitutional Convention of 1787

Chapter 4 – The Contest over Ratification

Chapter 5 – Establishing Government under the Constitution, 1789 – 1801

Chapter 6 – Supreme Court Decisions that Have Shaped America's Constitutional History**

Please note: pages 205-206 in Chapter 6 contain information on Roe v. Wade. Roe v. Wade will not be used in the Academic Decathlon tests because legalized abortions are contrary to the teachings of the Catholic Church. You have the option to redact all information on pages 205-206 up to United States v. Nixon.

Optional Individual Subject Tests:

Writing

For the second year, the Academic Junior High Decathlon program is offering an optional individual writing test. The individual writing test is a timed-essay competition. Writers will be assessed based on the Common Core Standard for Literacy listed below. Awards will be given for first, second, and third place.

The individual writing test will be administered approximately two weeks before the diocesan Academic Decathlon competition. The date, time, and place for the individual writing test will be provided by the diocesan Academic Decathlon coordinator.

As this is an optional test, points awarded in the writing test competition will <u>not</u> be used to determine the overall team score for the Academic Junior High Decathlon.
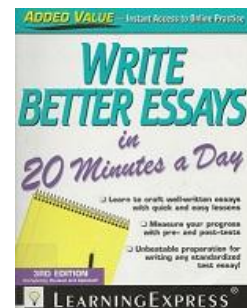
Write Better Essays in 20 Minutes a Day, 3rd Edition by Learning Express

Paperback: 188 pages
Publisher: LearningExpress, LLC; 3rd edition
ISBN-13: 978-1576857922
ISBN-10: 1576857921

Whether you are applying to school, trying to pass an academic course, or drafting a business proposal, writing effectively can be challenging. This guide covers all essentials: how to understand essay questions, create a strong thesis, develop a captivating introduction, support your ideas, and revise your work. Included are many sample essays, strategies for planning and revising in-class essays, tips to overcome writer's block, and instruction on achieving high scores on essay exams.

Optional Individual Subject Tests:

Writing

CCSS.ELA-LITERACY.W.8.2

Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

CCSS.ELA-LITERACY.W.8.2.A
Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.

CCSS.ELA-LITERACY.W.8.2.B
Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.

CCSS.ELA-LITERACY.W.8.2.C
Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.

CCSS.ELA-LITERACY.W.8.2.D
Use precise language and domain-specific vocabulary to inform about or explain the topic.

CCSS.ELA-LITERACY.W.8.2.E
Establish and maintain a formal style.

CCSS.ELA-LITERACY.W.8.2.F
Provide a concluding statement or section that follows from and supports the information or explanation presented.