2014–2015

Academic Decathlon®

CURRICULUM OVERVIEW

New Alternatives in Energy: Ingenuity and Innovation

Academic Decathlon®

The vision of the United States Academic Decathlon® is to provide students the opportunity to excel academically through team competition.

USAD® United States Academic Decathlon®

Toll Free: 866-511-USAD (8723) • Direct: 712-366-3700 • Fax: 712-366-3701 • Email: info@usad.org • Website: www.usad.org

This material may not be reproduced or transmitted, in whole or in part, by any means, including but not limited to photocopy, print, electronic, or internet display (public or private sites) or downloading, without prior written permission from USAD. Violators may be prosecuted.
Copyright © 2014 by United States Academic Decathlon®. All rights reserved.

2014–2015

Academic Decathlon®

CURRICULUM OVERVIEW

New Alternatives in Energy: Ingenuity and Innovation

Academic Decathlon®

The vision of the United States Academic Decathlon® is to provide students the opportunity to excel academically through team competition.

USAD United States Academic Decathlon®

Toll Free: 866-511-USAD (8723) • Direct: 712-366-3700 • Fax: 712-366-3701 • Email: info@usad.org • Website: www.usad.org

This material may not be reproduced or transmitted, in whole or in part, by any means, including but not limited to photocopy, print, electronic, or internet display (public or private sites) or downloading, without prior written permission from USAD.
Copyright © 2014 by United States Academic Decathlon®. All rights reserved.

Table of Contents

Corporate Sponsors, NASSP Approval, and USAD Staff 5

United States Academic Decathlon® Vision Statement, Mission Statement, and Core Values. 6

What Is the United States Academic Decathlon®? 7

Team Study Materials 9

Curriculum Package and Student Study Aids. 10

Additional Study and Practice Test Materials 11

Art Outline 12

Economics Outline. 13

2015 United States Academic Decathlon® National Finals 14

Literature Outline. 16

Mathematics Outline 17

Music Outline. 18

Science Outline 19

Social Science Outline 20

Board of Directors and State Directors 21

2014 USAD National Finals Awards. 23

2014 USAD National Finals Winners 24

Corporate Sponsors

WE THANK OUR CORPORATE SPONSORS FOR THEIR SUPPORT!

Enlyght Software

GCI

L&L www.loeb.com LOEB&LOEB LLP

NASSP Approved

The National Association of Secondary School Principals has placed this program on the NASSP National Advisory List of Contests and Activities for 2014–2015.

APPROVED FOR LISTING NASSP 2014–2015 STUDENT CONTESTS & ACTIVITIES

USAD Staff

Daniele Grigsby: Testing Director

Terry McKiernan: Curriculum Director

Les Martisko: Executive Director

VISION

The vision of the United States Academic Decathlon® is to provide students the opportunity to excel academically through team competition.

MISSION

The mission of the United States Academic Decathlon® is to promote learning and academic excellence among students of varying achievement levels by developing and providing multidisciplinary academic competitions using Academic Decathlon®-based curricula.

CORE VALUES

AS A PREMIER NATIONAL SCHOLASTIC COMPETITION FOR HIGH SCHOOL STUDENTS, UNITED STATES ACADEMIC DECATHLON® BELIEVES IN:

The academic growth of students;

Challenging multidisciplinary learning;

Teamwork as a means to achieve self-knowledge and life-skills development;

Providing equal opportunities for students of varying achievement levels;

The inclusion and diversity of students to enrich learning and the human experience;

High standards of honesty and integrity;

Transparency in our relations and interactions with all of our stakeholders;

Excellence in our programs, services and activities; and,

Respect for diverse points of view.

What Is the United States Academic Decathlon®?

Overview

The United States Academic Decathlon®, the premier national scholastic competition for high school students, was created to provide opportunities for students to experience the challenges of rigorous team and individual academic competition. Each student competes in ten events: Art, Economics, Essay, Interview, Literature, Mathematics, Music, Science, Social Science, and Speech. Students compose an essay based on a prompt related to the current curriculum. Students also perform a prepared speech and impromptu speech and participate in an interview before a panel of volunteer judges from the local community.

The culmination of the competition is the exciting Super Quiz™ oral relay in which students have the opportunity to demonstrate their mastery of the broad range of the United States Academic Decathlon's interdisciplinary curriculum by answering questions from six different subject areas: art, economics, literature, music, science, and social science. The Super Quiz™ is the only part of the actual testing that is open to the public, and it is inevitably one of the most memorable and exciting parts of the United States Academic Decathlon® competition.

Gold, silver, and bronze medals are awarded for individual events and total scores. Overall individual winners are recognized as are champion teams. The broad base of awards allows for major recognition of academic accomplishment. Teams advance through local, regional, and state levels of competition. The state champions compete at the national finals. The 2015 United States Academic Decathlon® National Finals will take place on April 16–18, 2015, in Garden Grove, CA.

Program Description

The United States Academic Decathlon® emphasizes the personal and academic growth of each student who, by meeting the challenges with honesty and integrity, can reap the rewards of greater self-knowledge and self-confidence for the future.

The ten-event academic program strives to foster a greater respect for knowledge, to promote wholesome inter-school academic competition, and to further develop student communication skills. A unique aspect of the United States Academic Decathlon® is that it is designed to include students with diverse academic abilities and achievement levels. Each nine-member team consists of three "A" (Honor division), three "B" (Scholastic division), and three "C or below" (Varsity division) students. Each team member competes in all ten events against other students in his/her division. Overall team scores are calculated using the top two individual scores from each division.

History

The United States Academic Decathlon® was first created by Dr. Robert Peterson, former Superintendent of Schools in Orange County, California. Firmly believing that everyone's learning potential can be maximized through competitive challenge, Dr. Peterson set in motion the contest that has since come to be recognized as the most prestigious high school academic team competition in the United States. The program spread rapidly due to the success and excitement it engendered. The United States Academic Decathlon® was founded in 1981.

The United States Academic Decathlon® and Curriculum and Content Standards

Overview

The United States Academic Decathlon's curriculum is an interdisciplinary curriculum in which a selected theme is integrated across six different subject areas: art, economics, literature, music, science, and social science. Students also study mathematics and participate in essay-writing, speech, and interview events. The theme for the 2014–2015 U.S. Academic Decathlon® (USAD) curriculum is *New Alternatives in Energy: Ingenuity and Innovation*. While in most subjects the majority of the topics relate to the overall curricular theme, some topics that cover fundamentals may also be included to encourage a thorough understanding of the subject area as a whole. The USAD mathematics curriculum is unrelated to the theme and focuses on standard high school mathematics topics.

Following is a summary of the Common Core Standards for high school mathematics and reading that are addressed in USAD's 2014–2015 curriculum as well as the national content standards met by USAD's 2014–2015 curriculum.

The United States Academic Decathlon® Curriculum and the Common Core Standards

THE UNITED STATES ACADEMIC DECATHLON® AND THE COMMON CORE STANDARDS FOR HIGH SCHOOL MATHEMATICS

The Common Core High School Mathematics Standards consist of six broad categories, and USAD's 2014–2015 mathematics curriculum addresses aspects of all of these six categories. In addition to the content standards, the Common Core High School Mathematics Standards emphasize eight practice standards. These practice standards are meant to address the manner in which students approach the content and reason during their learning of mathematics. USAD's 2014–2015 mathematics curriculum encourages students to apply seven of these eight practice standards.

THE UNITED STATES ACADEMIC DECATHLON® AND THE COMMON CORE READING STANDARDS FOR LITERATURE

USAD's 2014–2015 literature curriculum in concert with other Academic Decathlon® subject areas (speech, essay, art, etc.) addresses all ten of the Common Core College and Career Readiness Anchor Standards for Reading for students in grades 6–12 and addresses aspects of all of the Common Core Reading Standards for Literature for students in grades 9–10 and all but one of the Common Core Reading Standards for Literature for students in grades 11–12.

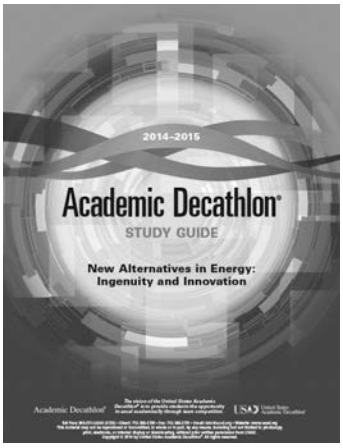
The United States Academic Decathlon® Curriculum and National Content Standards

USAD's 2014–2015 curriculum addresses aspects of the following:

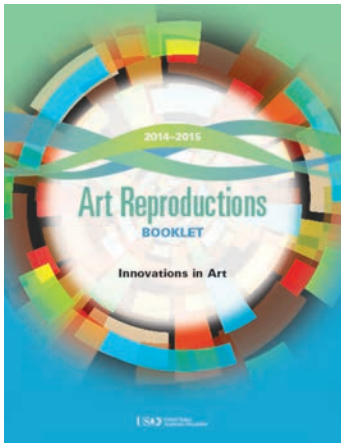
- All twenty of the Voluntary National Content Standards in Economics.
- Eleven of the twelve Curriculum and Content Area Standards for English Language Arts outlined by the National Council of Teachers of English (NCTE).
- All five content areas of the high school mathematics curriculum outlined by the National Council of Teachers of Mathematics (NCTM) and provides students with opportunities to utilize all four reasoning habits delineated by the NCTM.
- Four of the nine National Content Standards for Music.
- Five of the six National Content Standards for Visual Arts.
- Five of the twelve earth and space science Disciplinary Core Ideas for Grades 9–12 and eleven of the twelve physical science Disciplinary Core Ideas for Grades 9–12 outlined by the Next Generation Science Standards (NGSS).
- Seven of the ten overarching curricular themes outlined by the National Council for Social Studies (NCSS), one NCSS geography standard, four of the ten historical eras of focus delineated by the NCSS' National Content Standards for U.S. History, and three of the nine historical eras of focus delineated by the NCSS' National Content Standards for World History.

Team Study Materials

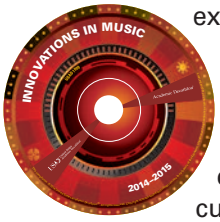
ACADEMIC DECATHLON® STUDY GUIDE: Summarizes the curriculum for the entire year. Includes detailed outlines for Art, Economics, Literature, Mathematics, Music, Science, and Social Science. Also includes rules and guidelines for the Essay, Interview, and Speech events. Available printed, as PDF for download, or as an eBook.



ART REPRODUCTIONS BOOKLET: Contains full-color reproductions of the 18 selected artworks for this year's art curriculum. Includes works of art that demonstrate innovative techniques from across the centuries. A must-have companion to the *Art Resource Guide*. Available printed, as a PDF for download, or as an eBook.



MUSIC CD: INNOVATIONS IN MUSIC This year's music CD, *Innovations in Music*, is a 14-track CD produced exclusively for Academic Decathlon®. The music CD will introduce students to innovative musical works from across the centuries, from the Middle Ages to the modern era and is an essential companion piece to this year's music curriculum. The CD is also available as an MP3 file for electronic download.



PRACTICE TEST BOOKLET: The PTB is the most important coaching tool for understanding Academic Decathlon® tests. Written by the official USAD test writers in each subject area. Contains eight tests, sample essay prompts, speech and interview rules and rubrics. The PTB may be reproduced at the school level only. Includes accompanying CD for art questions based on artwork images, music questions based on listening excerpts, and a PowerPoint® Slideshow for Super Quiz™ relay. The PTB is also available as a PDF and the CD as an MP3 file for electronic download.

RESOURCE GUIDES: *Resource Guides* will be provided in Art, Economics, Literature, Mathematics, Music, Science, and Social Science. These *Resource Guides* will provide teams with a thorough review and academic treatment of all the topics noted in the subject area outlines for these subjects. All Academic Decathlon® competition test items will be derived from the information and concepts presented in the *Resource Guides*, as well as the selected literature, artworks, and musical works. The *Resource Guides* offer an essential resource that will assist students in their mastery of the topics and aid in their preparation for the competition tests. Available printed, as a PDF for download, or as an eBook.

Curriculum Package

THE CURRICULUM PACKAGE:

- *10 Academic Decathlon® Study Guides*
- *10 Art, Economics, Literature, Mathematics, Music, Science, and Social Science Resource Guides*
- *10 Art Reproductions Booklets*
- *10 Music CDs*
- *1 Practice Test Booklet (with CD)*

Student Study Aids

NEW! These are the notes you need to have!

#OFFICIALREADYSETS: Brand new this year to the United States Academic Decathlon® are the *#OfficialReadySets*, which include Art, Economics, Literature, Mathematics, Music, Science, and Social Science in one comprehensive package. *#OfficialReadySets* are specifically designed to provide teams with that last look, a final overview of everything they've already studied in the *Resource Guides*. The simple layout allows readers to quickly scan and review the most pertinent information teams need to know. *#OfficialReadySets* are filled with colorful info graphics, charts, and illustrations highlighting and clarifying important concepts previously explained in the *Resource Guides*. Don't forget, *#OfficialReadySets* are to be used in conjunction with the *Resource Guides*. Electronic download only. (Hard copies available upon request. Contact customer service for pricing and timeline.)

STUDENT EXERCISE BOOKS: Available in Art, Economics, Literature, Mathematics, Music, Science, and Social Science, the *Student Exercise Books* provide a student-friendly synthesis of the material presented in the *Resource Guides* and offer students a chance to test and reinforce their knowledge of the curriculum through a variety of exercises and activities. The *Student Exercise Books* will include section overviews as well as short quizzes, true/false questions, fill-in-the-blank items, etc., to assist students in their mastery of the curriculum. Available printed or as a PDF for download.

NOTE

Individual Student Exercise Books for each subject may only be purchased with the order of a complete set of Student Exercise Books for that subject. Student Exercise Books are NOT included in the Curriculum Package.

Additional Study & Practice Test Materials

THIS YEAR'S SELECTED LITERATURE:

PILGRIM AT TINKER CREEK

BY ANNIE DILLARD

This year's selected literature is *Pilgrim at Tinker Creek* by Annie Dillard. The United States Academic Decathlon® has arranged for a special discount from the publisher. Students will also study selected shorter works of literature that relate to the curricular theme.

ART IMAGES CD: This CD includes images of the 18 artworks selected for this year's competition and is a useful companion to the *Art Resource Guide*. Coaches can use the *Art Images CD* to stimulate art appreciation, promote the study of art history, or teach aesthetics.

SUPER QUIZ™ RELAY POWERPOINT® TESTS: This CD includes twelve tests that are displayed in a PowerPoint® SlideShow. The *Super Quiz*™ relay will include questions (in multiple-choice format) from the following six subject areas: art, economics, literature, music, science, and social science. The CD will help to reinforce student mastery of the United States Academic Decathlon® *Resource Guides*.

4,000 SUBJECT AREA FLASH CARDS: Companion to the *Resource Guides* and *Online Practice Tests*. 600 questions each in art, music, literature, social science, science, and economics; 400 in mathematics. Questions and answers are referenced directly to the *Resource Guides* to reinforce learning and strengthen fast-answer skills. Also available as a PDF for electronic download.

NOTEBOOK DIVIDERS (10 SETS): Crammed with pertinent information, this set of 10 tabbed notebook dividers helps students stay organized. Includes artist and composer bios, lists of key terms and definitions, and other information.

PRACTICE COMBO QUIZZES: Contains four quizzes with a total of 200 items in each subject area. Quizzes focus on topics in sequential order of the subject outlines. Quizzes include a combination of fill-in-the-blank items, short-question and answer format, multiple-choice items, and matching to help students master the curriculum with a variety of question styles. Also available as a PDF for electronic download.

PRACTICE SPECIALTY TESTS: Includes two 100-item tests in art, literature, music, science, and social science, focused in depth on a specific portion of the subject outlines. Tests consist of a variety of question styles for students to gain knowledge on focused topics. Also available as a PDF for electronic download.

ESSAY EXAM BOOKLET: Contains 20 essay tests with a total of 60 essay prompts, which focus on the following six subject areas: art, economics, literature, music, science, and social science. The essay rubric used at the National Competition is included in the booklet. Great for essay writing practice. Also available as a PDF for electronic download.

IMPROMPTU TOPIC BOOKLET: Contains 200 impromptu speech topics, including a variety of sample approaches that may be encountered in the United States Academic Decathlon® competition. Great for speech practice and impromptu preparation. Also available as a PDF for electronic download.

LITERATURE CHAPTER QUIZZES: Test your knowledge of *Pilgrim at Tinker Creek*. Chapter quizzes will include a combination of fill-in-the-blank items, short question and answer format, multiple-choice items, and matching to help students to master the 15 chapters in this year's selected text. Also available as a PDF for electronic download.

Art

INNOVATIONS IN ART

I. ART FUNDAMENTALS 20%
- A. Introduction to Art History
- B. Elements of Art

II. ARTISTIC INNOVATIONS IN THE ANCIENT WORLD 15%
- A. The Ancient World – Overview
- B. Selected Works of Art

III. ARTISTIC INNOVATIONS OF THE RENAISSANCE 25%
- A. The Renaissance – Overview
- B. Selected Works of Art

IV. EIGHTEENTH- AND NINETEENTH-CENTURY ARTISTIC INNOVATIONS 15%
- A. The Eighteenth and Nineteenth Centuries – Overview
- B. Selected Works of Art

V. ARTISTIC INNOVATIONS OF THE TWENTIETH CENTURY 25%
- A. The Twentieth Century – Overview
- B. Selected Works of Art

Economics

AN INTRODUCTION TO ECONOMICS AND THE ECONOMICS OF ENERGY

I. FUNDAMENTAL ECONOMIC CONCEPTS 10%

- A. Basic Assumptions of Economics
- B. Models and Economic Theory
- C. Positive and Normative Economics
- D. Efficiency as a Goal
- E. Microeconomics and Macroeconomics

II. MICROECONOMICS 40%

- A. Perfectly Competitive Markets
- B. Applications of the Competitive Market Model
- C. Evaluating Government Policy: The Impact of Price Controls and Taxes
- D. International Trade
- E. The Profit Motive and the Behavior of Firms
- F. Imperfect Competition
- G. Creative Destruction: The Profit Motive and the Sources of Economic Change
- H. Market Failures
- I. Institutions, Organizations, and Government

III. MACROECONOMICS 30%

- A. Macroeconomic Issues
- B. Macroeconomic Measurement
- C. Economic Growth, Productivity, and Living Standards
- D. Savings, Investment, and the Financial System
- E. Money and Prices in the Long Run
- F. Short-Run Economic Fluctuations

IV. THE ECONOMICS OF ENERGY 20%

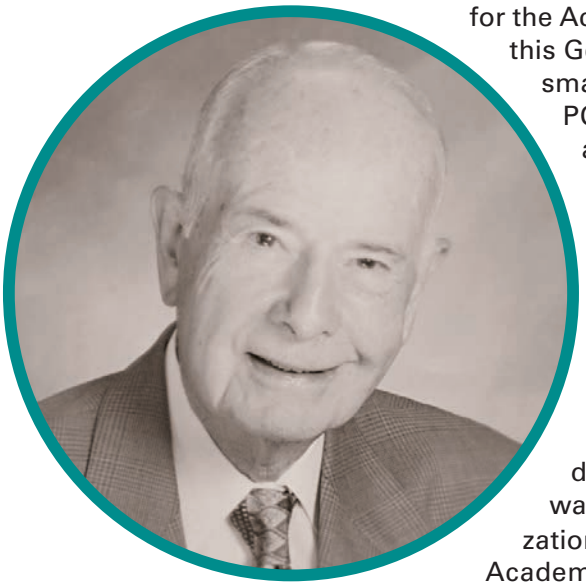
- A. The Fundamental Global Commodity
- B. Overview of Energy Sectors
- C. Physical Limits, Deregulation, and the Evolution of Energy Markets
- D. Contemporary Issues and the Energy Future

2015 Academic Decathlon® National Finals

GARDEN GROVE CALIFORNIA

Back to the Beginning

"There ought to be more rallies and a decathlon of studies for all students" were notes handwritten in pencil, found in the late Dr. Robert Peterson's belongings. Peterson was a B17 pilot in World War II who was shot down over Italy and became a POW in Stalag Luft One for 18 months. History tells us the concept for the Academic Decathlon® was created in this German POW camp. By 1981, Dr. Peterson's small pocket journals written in pencil in a POW camp would be transformed into an academic decathlon competition.

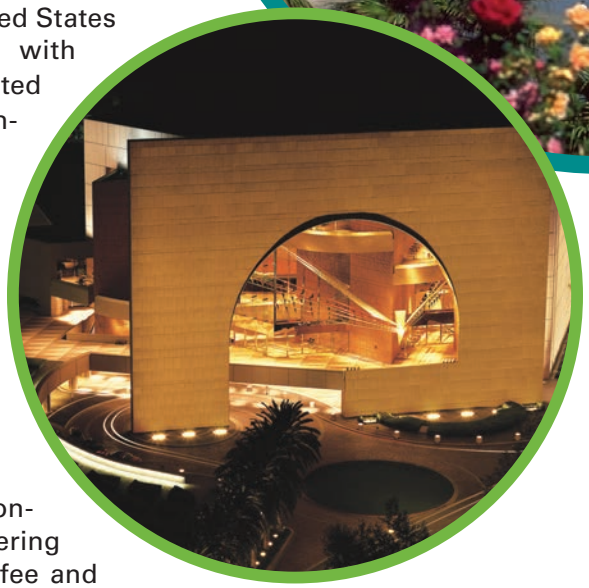


In the late 1960s, Peterson campaigned for his idea of an academic decathlon. It would include all high school students, regardless of their grade-point averages. The aim was to get the average student to participate and work up to his/her potential.

In 1968, the first Orange County academic decathlon was held. In 1981, USAD was established as a formal national organization, and in 1982 the first United States Academic Decathlon® was held, with eighteen states participating. The United States Academic Decathlon® has since become the premier academic competition in the nation.

A Slice of Orange County

There are six regions in the United States named Orange County. But this slice is located in the heart of Southern California between Los Angeles and San Diego, and spans 798 square miles and includes 42 miles of scenic coastline and 34 cities, each with its own distinctive personality. The region's warm sunshine, swaying palm trees, and friendly atmosphere create a relaxed lifestyle where shorts, sandals, and sunglasses are always in season.



Orange County is known for being a premier trendsetter, from internationally syndicated television shows depicting the area, to the area's pioneering entrepreneurs in the surf apparel, sports, biomedical, aeronautical, coffee and

theme park industries. The area attracts more than 44 million visitors each year! The hub of the county's tourism industry is the city of Anaheim. It's a vibrant metropolitan area with a reputation for fun and exceptional hospitality and is a top business and leisure destination.

Hyatt Hospitality

Showcased by a magnificent 17-story atrium, the Hyatt Regency Orange County is an architectural triumph with an inviting atmosphere. Marble and granite grace the lobby floor and complement the hotel's contemporary furnishings. Relax at the rooftop pool and spa or the new courtyard pool and spa areas.

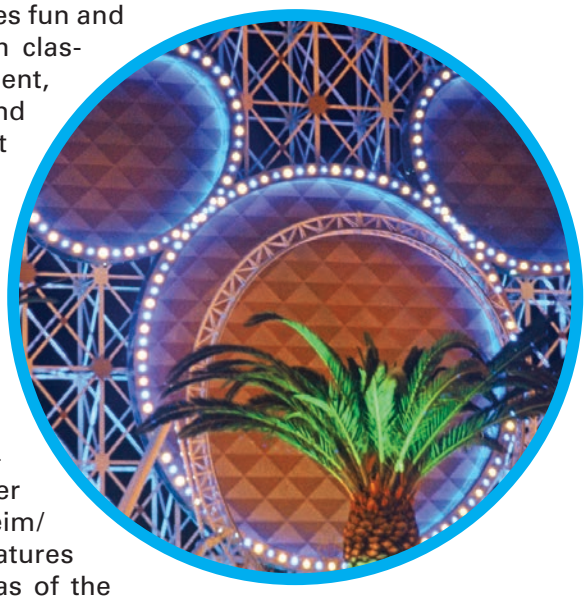
The Hyatt Regency Orange County is located four blocks south of the Disneyland Resort and less than one mile from the Anaheim Convention Center. In the heart of Orange County, this hotel is just minutes away from Angel Stadium and the Honda Center, and is conveniently located to both John Wayne/Orange County Airport (15 min.) and Los Angeles Airport (35 min.).

APRIL 16–18 2015

It's So California!

From the friendly faces of Mickey Mouse and Snoopy to exciting rollercoasters and world-class attractions, both families and thrill-seekers will find plenty of entertainment in Orange County.

Located in the heart of Anaheim, the Disneyland Resort encompasses Disneyland Park, Disney's California Adventure, Downtown Disney and multiple resort hotels. Celebrating its 60th Anniversary in 2015, Walt Disney's original theme park, Disneyland, inspires fun and adventure in eight themed lands with classic Disney characters, live entertainment, more than 60 rides and attractions, and colorful parades down Main Street U.S.A.



Originally a family-owned berry farm business in the 1920s, Knott's Berry Farm in Buena Park emerged as America's first theme park and grew to one of the nation's most popular destinations for thrill-seekers.

In addition to theme parks, Orange County offers a variety of other attractions and entertainment venues, including two elaborate, themed dinner theatres in Buena Park. And just a short drive from Anaheim/Orange County, the Aquarium of the Pacific in Long Beach features more than 12,000 marine animals representing three distinct areas of the Pacific Ocean. Also located in Long Beach, the legendary Queen Mary ocean liner offers behind-the-scenes tours in restored areas under wraps since its final voyage in 1967. Universal Studios Hollywood—the world's largest movie studio and theme park—brings the silver screen to life with an inside look at the sets and secrets of legendary films.

Happiness is more than a state of mind — it's a destination!

Literature

ANNIE DILLARD'S *PILGRIM AT TINKER CREEK*, NATURE WRITING, AND MODERN ENVIRONMENTAL LITERATURE

I. CRITICAL READING 20%

- A. Purpose and Main Idea
- B. Structure
- C. Restatement of Information
- D. Genres and their Characteristics
- E. Language and Tone
- F. Grammar and Syntax
- G. Vocabulary in Context
- H. Diction

II. ANNIE DILLARD'S *PILGRIM AT TINKER CREEK*, NATURE WRITING, AND ENVIRONMENTAL LITERATURE 40%

- A. The Natural History Essay and the Romantic Movement
- B. Ralph Waldo Emerson's *Nature*
- C. Henry David Thoreau's *Walden*
- D. Historical Context
- E. Keywords
- F. Annie Dillard's *Pilgrim at Tinker Creek* (1974)

III. SELECTED POETRY AND SHORT WORKS OF LITERATURE 40%

- A. Keywords
- B. Author Biographies
- C. "The World Is Too Much With Us," by William Wordsworth
- D. "Steamboats, Viaducts, and Railways," by William Wordsworth
- E. "Passage to India," by Walt Whitman
- F. "A Wind-storm in the Forests," by John Muir
- G. "There Will Come Soft Rains," by Sara Teasdale
- H. "The Horses," by Edwin Muir
- I. "Carmel Point," by Robinson Jeffers
- J. "Positive Feedback Loop," by Jorie Graham
- K. "To the Field of Scotch Broom that Will Be Buried by the New Wing of the Mall," by Lucia Perillo

Mathematics

GENERAL MATHEMATICS, GEOMETRY, AND AN INTRODUCTION TO DIFFERENTIAL CALCULUS

I. GENERAL MATHEMATICS 25%

- A. Simple and Compound Interest
- B. Basic Counting
- C. Probability of Equally Likely Events and Binomial Distribution

II. GEOMETRY 65%

- A. Right Triangles
- B. Coordinate Geometry
- C. Plane and Solid Figures

III. INTRODUCTION TO DIFFERENTIAL CALCULUS 10%

- A. Average Rate of Change of Basic Polynomial Functions
- B. Basic Limits and Continuity
- C. First Derivative of Basic Polynomial Functions and Graphical Interpretation
- D. Equations of Tangent Lines

Music

INNOVATIONS IN MUSIC

I. BASIC ELEMENTS OF MUSIC THEORY 20%
- A. Sound and Music
- B. Pitch, Rhythm, and Harmony
- C. Other Aspects of Musical Sound
- D. Form in Music
- E. Which Is the Real Music? Scores, Recordings, and Performance

II. MUSIC AND THE MIDDLE AGES 12%
- A. Society: The Medieval World
- B. Music in the Catholic Church
- C. Innovations in Medieval Music

III. MUSIC AND THE RENAISSANCE 12%
- A. Society: The Renaissance "Rebirth"
- B. Innovations in Renaissance Music

IV. MUSIC AND THE BAROQUE 12%
- A. Society: Going for "Baroque"
- B. Innovations in Baroque Music

V. MUSIC AND THE CLASSICAL ERA 12%
- A. Society: The Classical Era and the Age of Reason
- B. Innovations in Classical Music

VI. MUSIC AND THE ROMANTIC ERA 12%
- A. Society: The Romantic Era and Transcendence
- B. Innovations in Romantic Music

VII. MUSIC AND THE MODERN ERA 20%
- A. Society: Marvels of the Modern Era
- B. Innovations in Art Music
- C. Innovations in Popular Music

Science

AN INTRODUCTION TO ENERGY CONVERSION

I. TRADITIONAL ENERGY GENERATION 10%

- A. Energy and Energy Consumption
- B. Units of Energy and Power
- C. Turbines, Pumps, and Compressors

II. THERMODYNAMICS AND ELECTRODYNAMICS 25%

- A. Temperature, Heat, and the First Law of Thermodynamics
- B. The Kinetic Theory of Gases
- C. Entropy and the Second Law of Thermodynamics
- D. Electricity and Magnetism

III. CHEMISTRY AND BATTERIES 25%

- A. Inorganic Chemistry
- B. Electrochemistry
- C. Catalysis

IV. OPTICS AND AN INTRODUCTION TO QUANTUM PHYSICS 20%

- A. Geometrical and Physical Optics
- B. Solid State Physics and the Photoelectric Effect
- C. Solar Cells

V. NUCLEAR ENERGY 18%

- A. The Structure of Atoms and their Nuclear Properties
- B. Nuclear Power Generation

VI. RENEWABLE ENERGY 2%

- A. Wind Power
- B. Solar Energy
- C. Solar-Powered Transportation
- D. Biofuels
- E. Fuel-Cell Cars

Social Science

ENERGY POLICY, THE ENVIRONMENT, AND THE NEW ENERGY ECONOMY

I. THE HISTORICAL ARC OF ENERGY POLICY AND DEVELOPMENT 33%

A. Energy in the Nineteenth and Twentieth Centuries

B. The Evolution of U.S. Energy Policy

II. ENERGY AND THE ENVIRONMENT 33%

A. The Modern Environmental Movement

B. The Global Commons and Climate Change

III. THE NEW ENERGY ECONOMY 34%

A. Trending Toward Renewable Energy

B. Public Electric Utilities

C. Dethroning King Coal: The Shale Gas Revolution

D. Low-Hanging Fruit: The Future of Energy Efficiency

E. The Renaissance of Nuclear Power

Board of Directors

Nadine Kujawa
USAD Board President
Texas

Dr. James Augustin
Emeritus Advisor

Liz Boario
Director
Alaska

Robert Brezina
Director
Texas

Dr. Richard Cooper
Director
California

Denise Greene-Wilkinson
Director
Alaska

Jerry Helgeson
USAD-SD Representative
Idaho

Dr. Pam Lloyd
GCI
Alaska

Anita Lohr
Emeritus Advisor

David Mikkalson
Enlyght Software
Minnesota

Nelson Mitchell
Director
Arizona

Mercedes Paxton
Director
Georgia

Jack Peterson
Director
California

Asa Reaves
Director
California

Suzanne Roberts
Emeritus Advisor

Stephanie Sartain Herrera
Director
California

Cary Sell
USAD-SD Representative
Georgia

Dr. E. Arthur Stunard
Director
Illinois

Dr. Brian Talbott
Director
Washington

Keith Wenner
Director
Minnesota

Franklin Wurtzel
Director
California

Dr. Sally Ann Zoll
Director
California

State Directors

ALASKA
Curtiss Clifton
2550 Denali Street,
Suite 1000
Anchorage, AK 99503
Phone: 907-868-6994
Fax: 907-868-5676
cclifton@gci.com

ARIZONA
Anne Edelstein
6010 N. 10th Way
Phoenix, AZ 85014
Phone: 602-263-5335
Fax: 602-263-8433
Cell: 602-550-2285
azacdec@cox.net

CALIFORNIA
Ken Scarberry
2460 Clay Bank Rd. Suite 7C
Fairfield, CA 94533
Phone: 707-646-7603
kscarberry@solanocoe.net

COLORADO
Participating Schools

CONNECTICUT
Participating Schools

FLORIDA
Laura Springstroh
1828 Oak Drive S.
Rockledge, FL 32955
Cell: 321-544-4610
Fax: 321-433-4338
springstrohl@brevard.k12.fl.us

GEORGIA
Cary Sell
1896 Norcross Chase Circle
Lawrenceville, GA 30044
Phone: 770-963-2740
Cell: 404-274-6381
cwsell@comcast.net

HAWAI'I
Cindy Martisko
PO Box 564
Pepeekeo, HI 96783
Phone: 808-964-5040
Cell: 612-743-6853
cindy@usad.org

IDAHO
Jerry Helgeson
PO Box 9312
Boise, ID 83707
Phone: 208-724-9545
Fax: 208-853-0677
helgesonj@msn.com

ILLINOIS
Participating Schools

INDIANA
Kyle Harrop
IN Assoc. of School
Principal
11025 East 25th St.
Indianapolis, IN 46229
Phone: 317-891-9900 x220
Fax: 317-894-9807
kharrop@iasp.org

IOWA
Jolene Teske
Iowa Falls-Alden HS
1903 N. Taylor Ave.
Iowa Falls, IA 50126
Phone: 641-648-6440
Cell: 515-689-4864
Fax: 641-648-3222
iowaacademicdecathlon@gmail.com

KANSAS
Shelley Vittorino
16761 W. 156th St.
Olathe, KS 66062
Phone: 913-871-6734
shelley.kad@gmail.com

KENTUCKY
Participating Schools

LOUISIANA
Participating Schools

MAINE
David S. Heckman
157 Academy Rd.
Monmouth, ME 04259
Phone: 207-933-4252
dheckman@fairpoint.net

MARYLAND/VIRGINIA/ WASHINGTON, D.C.
Dr. K. Habib Khan
PO Box 706
Oakton, VA 22124
Phone: 703-543-7364
Cell: 571-438-5064
khknjk4314@gmail.com

MASSACHUSETTS
Paul Thorp
Framingham State College
100 State St.
Framingham, MA 07101
Phone: 508-626-4955
Fax: 508-626-4794
pthorp@framingham.edu

MINNESOTA
Joyce Swenson
S. Central Service Cooperative
2075 Lookout Dr.
North Mankato, MN 56003
Phone: 507-389-2461
Fax: 507-389-1772
jswenson@mnscsc.org

MISSISSIPPI
Participating Schools

MISSOURI
Roy Copeland
7537 Walnut St.
Kansas City, MO 64132
Phone: 816-678-5998
copelandr@hotmail.com

NEBRASKA/ NORTH DAKOTA/ SOUTH DAKOTA
John Anstey
2175 N. 124th Ave. Circle
Omaha, NE 68164
Phone: 402-498-0798
Fax: 402-445-2828
jranstey@aol.com

NEW JERSEY
Glenn Koegel
62 Lincoln Ave.
Wood-Ridge, NJ 07075
Phone: 201-935-3096
Fax: 201-935-2970
gkoegel@optonline.net

NEW MEXICO
Participating Schools

NEW YORK
Barry Jones
146 Roseland Ave.
Medina, NY 14103
Phone: 585-798-4114
Cell: 585-735-5531
jonesgrp@rochester.rr.com

OHIO
Joshua Reichard
Youngstown Christian School
4401 Southern Blvd.
Youngstown, OH 44512
Phone: 330-788-8088
Cell: 330-651-0225
jreichard@youngstownchristian.org

OKLAHOMA
Patty Neuwirth
715 Heinzwood Cr.
Lawton, OK 73505
Phone: 580-355-5532
Cell: 580-595-0201
Fax: 580-355-1453
bkpatty1@sbcglobal.net

OREGON/IDAHO/ WASHINGTON
Jerry Helgeson
PO Box 9312
Boise, ID 83707
Phone: 208-724-9545
Fax: 208-853-0677
helgesonj@msn.com

PENNSYLVANIA/ WEST VIRGINIA
Michelle Schroeder
Erie School District
148 W. 21st St.
Erie, PA 16502
Phone: 814-874-6161
Fax: 814-874-6162
mschroeder@eriesd.org

RHODE ISLAND
Sue Melaragno
Rhode Island Mentoring
3296 Post Rd.
Warwick, RI 02886
Phone: 401-732-7700
Fax: 401-732-7715
riacdec@gmail.com

SOUTH CAROLINA
Kevin Kirkley
Dreher High School
3319 Millwood Ave.
Columbia, SC 29205
Phone: 803-253-7016
kkirkley@richlandone.org

SOUTH DAKOTA/ NEBRASKA/ NORTH DAKOTA
John Anstey
2175 N. 124th Ave. Circle
Omaha, NE 68164
Phone: 402-498-0798
Fax: 402-445-2828
jranstey@aol.com

TENNESSEE
Participating Schools

TEXAS
Sue Edwards
6300 Irvington Blvd.
Suite 217
Houston, TX 77022
Phone: 713-696-8253
Fax: 713-696-8253
sedwards@hcde-texas.org

UTAH
Ed Rogers
Dixie Applied Tech. College
46 S. 1000 E.
St. George, UT 84770
Phone: 435-652-7729
Fax: 435-656-4076
Cell: 435-632-8550
erogers@dixie.edu

VIRGINIA /MARYLAND/ WASHINGTON, D.C.
Dr. K. Habib Khan
PO Box 706
Oakton, VA 22124
Phone: 703-543-7364
Cell: 571-438-5064
khknjk4314@gmail.com

WASHINGTON/ IDAHO/OREGON
Jerry Helgeson
PO Box 9312
Boise, ID 83707
Phone: 208-724-9545
Fax: 208-853-0677
helgesonj@msn.com

WASHINGTON, D.C./ MARYLAND/VIRGINIA
Dr. K. Habib Khan
PO Box 706
Oakton, VA 22124
Phone: 703-543-7364
Cell: 571-438-5064
khknjk4314@gmail.com

WEST VIRGINIA/ PENNSYLVANIA
Michelle Schroeder
Erie School District
148 W. 21st St.
Erie, PA 16502
Phone: 814-874-6161
Fax: 814-874-6162
mschroeder@eriesd.org

WISCONSIN
Molly Ritchie
524 Daisy Ct.
Verona, WI 53593
Phone: 608-845-3544
Fax: 608-845-3850
mritchie@wiad.org

WYOMING
Maureen Ryff
141 Hightower Rd.
Wheatland, WY 82201
Phone: 307-331-1397
mryff@wyoming.com

CHINA
Dr. K. Habib Khan
PO Box 706
Oakton, VA 22124
Phone: 703-543-7364
Cell: 571-438-5064
khknjk4314@gmail.com

LONDON, ENGLAND
Participating Schools

2014 USAD National Finals Awards

Awards Distributed at the 2014 United States Academic Decathlon® National Finals

Robert D. Peterson National Award

2014 National Champions
DIVISION ONE • DIVISION TWO • DIVISION THREE

Rookie of the Year
DIVISION ONE • DIVISION TWO • DIVISION THREE

Kristin Caperton Scholarship Award

B. Franklin Reinauer Economics Scholarship Award

Norman Katz Scholarship Award

Most Improved Varsity Student Award

Most Valuable Team Member Scholarship

Overall Individual Scholarship Awards

HONOR

Division One Gold Honor
Division One Silver Honor
Division One Bronze Honor

Division Two Gold Honor
Division Two Silver Honor
Division Two Bronze Honor

Division Three Gold Honor
Division Three Silver Honor
Division Three Bronze Honor

SCHOLASTIC

Division One Gold Scholastic
Division One Silver Scholastic
Division One Bronze Scholastic

Division Two Gold Scholastic
Division Two Silver Scholastic
Division Two Bronze Scholastic

Division Three Gold Scholastic
Division Three Silver Scholastic
Division Three Bronze Scholastic

VARSITY

Division One Gold Varsity
Division One Silver Varsity
Division One Bronze Varsity

Division Two Gold Varsity
Division Two Silver Varsity
Division Two Bronze Varsity

Division Three Gold Varsity
Division Three Silver Varsity
Division Three Bronze Varsity

Highest Scoring Student Scholarship Awards

Highest Scoring Student—Alaska
Highest Scoring Student—Arizona
Highest Scoring Student—California
Highest Scoring Student—Colorado
Highest Scoring Student—Connecticut
Highest Scoring Student—Florida
Highest Scoring Student—Georgia
Highest Scoring Student—Hawai'i
Highest Scoring Student—Idaho
Highest Scoring Student—Illinois
Highest Scoring Student—Indiana
Highest Scoring Student—Iowa
Highest Scoring Student—Kansas
Highest Scoring Student—Maine
Highest Scoring Student—Massachusetts
Highest Scoring Student—Minnesota
Highest Scoring Student—Mississippi
Highest Scoring Student—Missouri
Highest Scoring Student—Nebraska
Highest Scoring Student—New Jersey
Highest Scoring Student—New Mexico
Highest Scoring Student—New York
Highest Scoring Student—Ohio
Highest Scoring Student—Oklahoma
Highest Scoring Student—Pennsylvania
Highest Scoring Student—Rhode Island
Highest Scoring Student—South Carolina
Highest Scoring Student—South Dakota
Highest Scoring Student—Tennessee
Highest Scoring Student—Texas
Highest Scoring Student—Utah
Highest Scoring Student—Wisconsin
Highest Scoring Student—Wyoming
Highest Scoring Student—China
Highest Scoring Student—London

Awards Distributed at the 2014 United States Academic Decathlon® Online National Finals

2014 National Champions
SMALL SCHOOL • MEDIUM SCHOOL • LARGE SCHOOL

Overall Individual Scholarship Awards

HONOR

Small School Gold Honor
Small School Silver Honor
Small School Bronze Honor

Medium School Gold Honor
Medium School Silver Honor
Medium School Bronze Honor

Large School Gold Honor
Large School Silver Honor
Large School Bronze Honor

SCHOLASTIC

Small School Gold Scholastic
Small School Silver Scholastic
Small School Bronze Scholastic

Medium School Gold Scholastic
Medium School Silver Scholastic
Medium School Bronze Scholastic

Large School Gold Scholastic
Large School Silver Scholastic
Large School Bronze Scholastic

VARSITY

Small School Gold Varsity
Small School Silver Varsity
Small School Bronze Varsity

Medium School Gold Varsity
Medium School Silver Varsity
Medium School Bronze Varsity

Large School Gold Varsity
Large School Silver Varsity
Large School Bronze Varsity

Highest Scoring Student Scholarship Awards

Highest Scoring Student—Arizona
Highest Scoring Student—California
Highest Scoring Student—Georgia
Highest Scoring Student—Idaho
Highest Scoring Student—Indiana
Highest Scoring Student—Iowa
Highest Scoring Student—Kansas
Highest Scoring Student—Maine
Highest Scoring Student—Maryland
Highest Scoring Student—Minnesota
Highest Scoring Student—Nebraska
Highest Scoring Student—New Jersey
Highest Scoring Student—New York
Highest Scoring Student—Ohio
Highest Scoring Student—Pennsylvania
Highest Scoring Student—Tennessee
Highest Scoring Student—Texas
Highest Scoring Student—Utah
Highest Scoring Student—Wisconsin

2014 USAD National Finals Winners

ROBERT D. PETERSON NATIONAL AWARD
El Camino Real HS, California

KRISTIN CAPERTON SCHOLARSHIP
Beatrice Braeuer
Scarborough HS, Maine

B. FRANKLIN REINAUER ECONOMICS SCHOLARSHIP AWARD
Sandra Vadhin
El Camino Real HS, California

FOUNDER'S SCHOLARSHIP AWARD
Yin Zhao
Whitney Young HS, Illinois

OVERALL SCHOLARSHIP WINNERS

HIGHEST SCORING STUDENTS

FIRST PLACE — DIVISION ONE
El Camino Real HS, California

SECOND PLACE — DIVISION ONE
Granada Hills Charter HS, California

FIRST PLACE — DIVISION TWO
Madison Central HS, Mississippi

SECOND PLACE — DIVISION TWO
Wilmot HS, Wisconsin

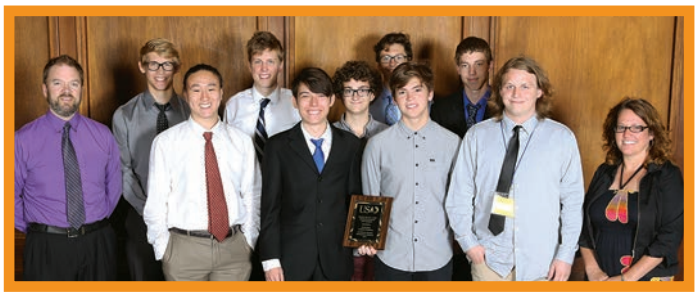
FIRST PLACE — DIVISION THREE
Oakwood HS, Ohio

SECOND PLACE — DIVISION THREE
Kamehameha Schools Hawai'i, Hawai'i

THIRD PLACE — DIVISION ONE
Rockwall HS, Texas

THIRD PLACE — DIVISION TWO
Scarborough HS, Maine

THIRD PLACE — DIVISION THREE
Northwest PA Collegiate Academy, Pennsylvania



ROOKIE OF THE YEAR — DIVISION ONE
Boulder Creek HS, Arizona

ROOKIE OF THE YEAR — DIVISION TWO
Wilmot HS, Wisconsin

ROOKIE OF THE YEAR — DIVISION THREE
Vail Christian HS, Colorado

NORMAN KATZ SCHOLARSHIP AWARD
Kailin Li, Granada Hills Charter, California

United States Academic Decathlon®

Toll Free: 866-511-USAD (8723)

Direct: 712-366-3700 • Fax: 712-366-3701

Email: info@usad.org • Website: www.usad.org