

2024-25 Academic Pentathlon Fine Arts Resource Guide Outline

Section I. Introduction to Music and Art History.....	15%
A. Introduction to Music	
B. Pitch, Rhythm, and Harmony	
C. Form in Music	
D. Music Summary	
E. Introduction to Art History	
F. Elements of Art	
G. Processes and Techniques	
H. Art Summary	
Section II. Land Use and Land Rights.....	10%
A. Selected Works	
Section III. The Natural World.....	24%
A. Marvels Made Musical	
B. Listening Companion	
C. Stormy Weather	
D. Listening Companion	
E. The Globe’s Growing Things	
F. Listening Companion	
G. Playing with Pollinator	
H. Listening Companion	
I. Birds as Composers	
J. Listening Companion	
Section IV. Pollution and Extraction.....	10%
A. Selected Works	
Section V. Celebrating the Planet.....	16%
A. Singing the Seasons	
B. Listening Companion	
C. Trees of Green, Red Roses Too	
D. Listening Companion	
E. Warming Up After the Cold War	
F. Listening Companion	

Section VI. The Human Experience of Environment14%

A. Selected Works

Section VII. The Human Experience of Environment11%

A. You Don't Know What You've Got 'Til It's Gone

B. Listening Companion

C. Poison Is the Wind that Blows

D. Listening Companion

2024-25 Academic Pentathlon Literature Resource Guide Outline

Section I. Critical Reading.....	10%
Section II. <i>Melt</i> by Ele Fountain.....	36%
A. Melt and the Theme of “Climate Change”	
B. Overview of Ele Fountain’s Life and Work	
C. Historical and Cultural Contexts for the Novel	
D. Key Characters	
E. Settings	
F. Themes	
G. Plot Summaries and Analyses	
H. Literary Elements and Rhetorical Devices	
Section III. Shorter Works.....	54%
A. Short Stories	
B. Poetry	

2024-25 Academic Pentathlon Mathematics Resource Guide Outline

Section I. Probability, Permutations and Combinations.....24%

- A. Probability
- B. Probability
- C. Combinations

Section II. Statistics.....27%

- A. Measures of Central Tendency
- B. Organizing and Displaying Data
- C. Sequences

Section III. Algebra.....49%

- A. Basic Terms in Set Theory
- B. Sets of Numbers
- C. Exponents and Roots
- D. Variables and Algebraic Expressions
- E. Equations
- F. Ratios and Proportions
- G. Monomials and Polynomials
- H. Factoring
- I. Solving Quadratic Equations
- J. Inequalities

2024-25 Academic Pentathlon Science Resource Guide Outline

Section I. Foundations of Environmental Science.....22%

- A. What Is Environmental Science?
- B. Environmental Indicators
- C. The Scientific Method
- D. Environmental Systems
- E. System Analysis: Determining How Matter and Energy Flow in the Environment

Section II. Biodiversity: From Local to Global.....37%

- A. Biodiversity
- B. Evolution
- C. Changes in Environmental Conditions and Extinctions
- D. Human Activity and Biodiversity
- E. Linking Biodiversity and Evolution to Ecology
- F. Community Ecology
- G. Ecological Communities
- H. Major Aspects of Ecosystems
- I. Biomes
- J. Biogeochemical Cycles

Section III. The Human Impact on Natural Resources.....41%

- A. Water Pollution
- B. Air Pollution and the Atmosphere
- C. Energy Use and Sources
- D. Global Climate Change

2024-25 Academic Pentathlon Social Science Resource Guide Outline

Section I: Conceptualizing Climate Change in the Past and the Present.....23%

- A. Essential Concepts from Earth System Science (ESS)
- B. Sources for Reconstructing the History of Climate
- C. Fields for Studying the History of Climate
- D. Conceptualizing Climate Change Today
- E. Climate Change and Narratives of Global History

Section II: Humans in the Holocene.....23%

- A. An Overview of the Holocene
- B. Climate and the Development of Human Civilizations
- C. The Little Ice Age (LIA) and the Colonial World

Section III: The Anthropocene.....25%

- D. The Origins of the Anthropocene
- E. The Causes of the Anthropocene
- F. The Consequences of the Anthropocene

Section IV: Responding to the Climate Crisis.....29%

- A. Recognizing the Climate Crisis
- B. Opposition to Climate Action
- C. Opposition to Climate Action
- D. Opposition to Climate Action