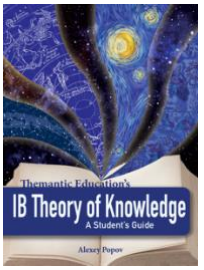
Themantic Education™
Building concrete foundations for limitless horizons

IB Theory of Knowledge
A Student's Guide



Overview

Introduction

Lesson 1. What is TOK?
Lesson 2. Elements of TOK
Lesson 3. Knowledge framework

Unit 1. Knowledge of knowledge

Exhibition: The philosopher's stone
Story: Hollow Earth

Lesson 4. Meaningful doubt
Lesson 5. Forms of meaningful doubt
Lesson 6. Justification
Lesson 7. Standards of justification
Lesson 8. Theories of truth
Lesson 9. Tests for truth
Lesson 10. JTB
Lesson 11. Problems with JTB
Lesson 12. Knowledge questions and claims (part 1)
Lesson 13. Knowledge questions and claims (part 2)

Unit 2. Knowledge and technology

Exhibition: Graph of emotions in the Bible
Story: Predicting Supreme Court decisions

2.1. Technology and personal knowledge
Lesson 14. Information bubble
2.2. Technology and the human mind
Lesson 15. AI: Turing test
Lesson 16. AI: Artificial consciousness
Lesson 17. Hard problem of consciousness
Lesson 18. Technological singularity
2.3. Technology in Natural Sciences
Lesson 19. Computer simulation
Lesson 20. Simulated world
Lesson 21. Computer-generated knowledge

2.4. Technology in Human Sciences and History
Lesson 22. Big Data
Lesson 23. Nomothetic and idiographic research
Lesson 24. Text mining
2.5. Technology in Mathematics
Lesson 25. Proof-by-exhaustion
Lesson 26. Experimental mathematics
2.6. Technology in the Arts
Lesson 27. Redefinition of Art
Lesson 28. Digital art
2.7. Technology and ethics
Lesson 29. Technoethics

Unit 3. Bias in personal knowledge

Exhibition: A turbulence map
Story: Senate Bill 464

Lesson 30. Bias
Lesson 31. Personal experience
Lesson 32. Darwinian evolution of personal knowledge
Lesson 33. Analogy analysis
Lesson 34. Cultural experience
Lesson 35. Memes and Universal Darwinism
Lesson 36. Heuristics
Lesson 37. Implicit bias and bias self-awareness
Lesson 38. Bias reduction
Lesson 39. Compos mentis

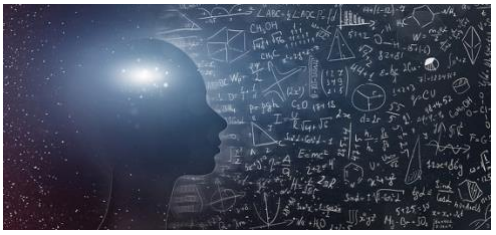
Unit 4. Bias in shared knowledge

Lesson 40. Naïve theories

4.1. Bias in Natural Sciences

Exhibition: a refracting telescope
Story: Discovery of Neptune

Lesson 41. Demarcation problem
Lesson 42. Falsifiability
Lesson 43. Scientific progress
Lesson 44. Underdetermination of scientific theories
Lesson 45. Theory-laden facts
Lesson 46. Verisimilitude
Lesson 47. Paradigm shifts
Lesson 48. Incommensurability



4.2. Bias in History

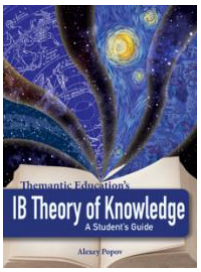
Exhibition: British History for Dummies
Story: The Battle of Waterloo

Lesson 49. Historical interpretation
Lesson 50. Historical perspectives
Lesson 51. Historical objectivity and historical facts
Lesson 52. Historical objectivity and rival interpretations
Lesson 53. Historical objectivity and ethics
Lesson 54. Heteroglossia (in theory)
Lesson 55. Multiperspectivity (in practice)

4.3. Bias in Mathematics

Exhibition: a FIFA football
Story: George Dantzig's homework

Lesson 56. Proof
Lesson 57. Axiomatic systems
Lesson 58. Discovered or invented? Truth in mathematics
Lesson 59. Consistency
Lesson 60. Mathematical realism
Lesson 61. Overview: bias in mathematics, natural sciences and history



Unit 5: Knowledge and understanding

Exhibition: Kamal, a navigation device
Story: The savior of mothers

5.1. Objectivity, subjectivity and understanding

Lesson 62. Subjectivity and objectivity
Lesson 63. Understanding

5.2. Knowledge and understanding in Natural Sciences

Lesson 64. Determinism
Lesson 65. Indeterminism
Lesson 66. Scientific worldview

5.3. Knowledge and understanding in Human Sciences

Lesson 67. Reasons versus purposes
Lesson 68. Verstehen
Lesson 69. Intersubjectivity
Lesson 70. Qualia (Part 1)
Lesson 71. Qualia (Part 2)

5.4. Knowledge and understanding in the Arts

Lesson 72. Propositional and non-propositional knowledge
Lesson 73. Van Gogh's Starry Night (Part 1)
Lesson 74. Van Gogh's Starry Night (Part 2)
Lesson 75. Three components of art: artist, creation, audience (Part 1)
Lesson 76. Three components of art: artist, creation, audience (Part 2)
Lesson 77. Aesthetic judgment: subjectivity and universality
Lesson 78. Deep human response
Lesson 79. Understanding in art

5.5. Hermeneutics

Lesson 80. Hermeneutics

Unit 6. Knowledge and language

Exhibition: Pioneer plaque
Story: Arrival

6.1. What is language?

Lesson 81. Signals and signs
Lesson 82. Meaning

6.2. Language and thought

Lesson 83. Concepts
Lesson 84. A priori and a posteriori concepts
Lesson 85. Spacetime
Lesson 86. Linguistic nativism
Lesson 87. The continuity hypothesis
Lesson 88. Mentalese
Lesson 89. Sapir-Whorf hypothesis

6.3. Language and communication

Lesson 90. Translation
Lesson 91. Machine translation
Lesson 92. Loaded language

6.4. Language in the areas of knowledge

Lesson 93. The role of language in natural sciences
Lesson 94. The role of language in human sciences
Lesson 95. The role of language in history
Lesson 96. The role of language in mathematics
Lesson 97. The role of language in the arts

Unit 7. Assessment guidance

For more free resources check out our TOK Blog: https://www.themantic-education.com/ibtok/