

# MIND MASTERS LIBERIA INITIATIVE (MMLI)

## Senior High Division – Study Outline

### 1. Mathematics

- **Algebra:** Linear equations, quadratic equations, inequalities, functions, and graphs.
- **Geometry:** Circle theorems, congruence, similarity, coordinate geometry.
- **Trigonometry:** Trigonometric ratios, identities, solving triangles.
- **Statistics and Probability:** Frequency tables, mean, median, mode, probability concepts.
- **Calculus (basic intro):** Limits, differentiation, and simple applications.
- **Word Problems:** Logical reasoning, problem-solving strategies, and real-life applications.

### 2. Science

- **Modern Biology:** Cell biology, human body systems, genetics, evolution, ecology.
- **Modern Chemistry:** Atomic structure, periodic table, chemical bonding, reactions, acids and bases, stoichiometry.
- **Modern Physics:** Kinematics, Basic scientific laws, energy, electricity and magnetism, light, and waves.
- **Environmental Science:** Pollution, climate change, conservation, sustainable energy.
- **Modern Earth Science**

### 3. Language Arts (English)

- **Grammar and Usage:** Advanced sentence structure, active/passive voice, clauses, punctuation.
- **Vocabulary:** Academic and literary vocabulary, context clues, synonyms and antonyms.
- **Reading Comprehension:** Inference, main ideas, author's tone, analysis of texts.
- **Writing Skills:** Argumentative and expository essays, formal letters, thesis statements, paragraph transitions.
- **Literature:** Poetry analysis, prose comprehension, drama (Shakespeare and African writers), literary devices.
- **Writers and series**

### 4. Social Studies

- **Liberian Government and Politics:** Constitution, branches of government, electoral system.
- **Geography:** Map interpretation, climate, vegetation, regional geography of Africa.
- **Civic Education:** Democracy, human rights, governance, civil responsibilities.
- **Economics:** Demand and supply, market structures, national income, inflation, taxation.
- **World History:** Transatlantic slave trade, colonialism, world wars, African independence movements.
- **West African and Ancient world History:** Ancient Kingdoms and empires; Pattern of interactions