**IBMYP Subject Overview**

**2021-22**

**Subject Area: Math Course: Standard Math MYP Level: 5 Teacher(s)**: Acheampong.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Time **Frame**  **(Dates)** | Unit Title and Topic (\*=interdisciplinary connection; @=Action) | **MYP Objectives** | State Standards | **Key Concept** | **Related Concepts** | **Global Context** | **Statement of Inquiry** | **MYP Assessment Task**  **&**  **ATL Focus** | **MYP Criteria** | **Learner Profile Focus** |
| September 5 – October 2 | Unit 1 Error, Exponents and Scientific Notation | Knowledge and Understanding  Communication  Real-life problems | n/a | Relation-ships | Equivalence, Model and Simplification | Scientific and Technical Innovation | Through innovations in mathematics and modelling mathematicians create models and simplify equations in order to solve real world problems | Chapter 1 Quiz | A, D | Risk-taking |
| October 3 –  November 10 | Unit 2: Linear Functions | Knowing and Understanding  Investigating Patterns  Communicating  Applying mathematics in real-life contexts | AII.4 & 6 | Form | Representation, change and pattern | Identities and relationships | Working systematically from answer to question | CH 9 & 5 Test,  Rich Eisen Investigation | A, B | Inquirer |
| November 13 -  January 5 | Unit 3: Quadratic Functions | Knowledge and Understanding  Communication  Investigations | T2, 3, 5, 6 | Relation-ships | Measurement, model and representation | Scientific and Technical Innovation | Show how rotation relates to displacement and use this knowledge to answer timeless questions | Ch 4 & 20 Quiz  Arches Assessment | A, B, C, D | Knowledge-able |
| January 8 –  February 2 | Unit 4:  Exponential Functions | Investigation, Communication, Real life problems | n/a | Form | Pattern, representation and simplification | Scientific and Technical Innovation | Explore the concept of inverse functions in order to solve exponential equations | Exponential Transformations Investigation, Newtonian Mechanics Assessment | B, C, D | Principled |
| February 5 –  February 19 | Unit 5: Sequences and Series | Investigation, communication and real world problems | MA.3 | Relation- ships | Representation, change and pattern | Identities and relationships | Apply linear and exponential equations to problems where the independent variable is limited to integers | Sustainable Farming Assessment | B, C, D | Balanced |
| February 20 –  May 4 | Unit 6: Geometry and Trigonometry | Knowledge and Understanding, Communication and Real world problems | AII.3 | Logic | Equivalence, change and justification | Scientific and technical innovation | Show how rotation relates to displacement and use this knowledge to answer timeless questions  Understand why triangles are ubiquitous | Unit Test  Determine the probability of each hand in poker | A, C, D | Open minded |
| May 7 – June 1 | Unit 7: Statistics & Probability | Knowledge and understanding | AII.11 | Logic | Generalization | Identities and Relationships | Determining the probability of random events is determined by the change in the number of possibilities Understand how samples can be used to generalize about larger populations | How Much Time Do we Have Assessment  Air Passenger Numbers  Statistics and Probability Test | A, C, D | Principled |
| June 2 - June 15 | Exam Review | Knowledge and understanding |  |  |  |  |  |  | A | Caring |

**Support of Personal Project: *(Develop a narrative description of the ways in which your class supports the skills students will need to complete the Personal Project from spring of their freshman year through fall of their sophomore year. Areas to consider include but are not limited to the development of students’ autonomy, self-confidence, reflection, perseverance, time-management and organization, and research.)***

|  |  |
| --- | --- |
| **Global Context** | **Description** |
| Identities and Relationships | *Who am I?  Who are we?* |
| Orientation in Space and Time | *What is the meaning of “where” and “when”?* |
| Personal Expression | *What is the nature and purpose of creative expression?* |
| Scientific and Technical Innovation | *How do we understand the world in which we live?* |
| Globalization and Sustainability | *How is everything connected?* |
| Fairness and Development | *What are the consequences of our common humanity?* |