

Pakistan School System- Oman
Syllabus / SLOs Coverage plan (2022-23)

| Grade: | IX | | | Subject: | Biology | | |
|--------|-------------------|---------------|------------------------------|------------|--|-----|--------|
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | April - 2022. | | | | | |
| 1 | 5 | 3 to 7 | INTRODUCTION TO BIOLOGY | .April-3 | 1.1.1 Definition of Biology. Introduction. | 4% | |
| | | | | .April-4 | 1.1.2 Divisions and Branches of Biology | | |
| | | | | .April-5 | 1.1.3 Relation of Biology to other sciences | | |
| | | | | .April-6 | 1.1.4 Quran instructs to reveal the study of Life | | |
| | | | | .April-7 | 1.2 The Levels of Organization | | |
| | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | April - 2022. | | | | | |
| 2 | 5 | 10 to 14 | SOLVING A BIOLOGICAL PROBLEM | .April-10 | 2.1 Biological Method | 8% | |
| | | | | .April-11 | 2.1.1 Scientific problem, Hypotheses, Deductions and Experiments | | |
| | | | | .April-12 | 2.1.2 Theory, Law and Principle | | |
| | | | | .April-13 | 2.1.3 Data organization and Data analysis | | |
| | | | | .April-14 | 2.1.4 Mathematics as an integral part of the Scientific Process | | |
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| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | April - 2022. | | | | | |
| 3 | 5 | 17 to 21 | BIODIVERSITY | .April- 17 | 3.1 Definition and Introduction of Biodiversity | 12% | |
| | | | | .April- 18 | 3.2 Aims and Principles of Classification | | |
| | | | | .April- 19 | 3.3 History of Classification Systems | | |
| | | | | .April- 20 | 3.3.1 Two-Kingdom Classification System | | |
| | | | | .April- 21 | 3.3.2 Three-Kingdom Classification System | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|---------|------|--------|---|--------|
| # | | April - 2022. | | | | | |

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| | 4 | 5 | 24 to 28 | BIODIVERSITY | .April- 24 | 3.3.3 | Five-Kingdom Classification System | 16% | | |
| | | | | | .April- 25 | 3.4 | The Five Kingdoms | | | |
| | | | | | .April- 26 | 3.5 | Binomial Nomenclature | | | |
| | | | | | .April- 27 | 3.5 | Binomial Nomenclature | | | |
| | | | | | .April- 28 | 3.6 | Conservation of Biodiversity | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|-------------|-------------------|--------|---|-----|--------|
| # | | May - 2022. | | | | | |
| 5 | 2 | 01 to 5 | CELLS AND TISSUES | .May-1 | 4.1 Microscopy and the Emergence of Cell Theory | 17% | |
| | | | | .May-2 | 4.1.1 Light microscopy and Electron microscopy | | |
| | | | | .May-3 | Eidul Fitr- Holidays | | |
| | | | | .May-4 | | | |
| | | | | .May-5 | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|-------------|-------------------|-----------|---|-----|--------|
| # | | May - 2022. | | | | | |
| 6 | 5 | 8 to 12 | CELLS AND TISSUES | .May - 8 | 4.1.2 History of the formulation of cell theory | 22% | |
| | | | | .May - 9 | 4.2 Cellular Structures and Functions | | |
| | | | | .May - 10 | 4.2.1 Structures and Functions of cell Organelles | | |
| | | | | .May - 11 | 4.2.1 Structures and Functions of cell Organelles | | |
| | | | | .May - 12 | 4.2.1 Structures and Functions of cell Organelles | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|-------------|-------------------|---|---|-----|--------|
| # | | May - 2022. | | | | | |
| 7 | 5 | 15 to 19 | CELLS AND TISSUES | .May- 15 | 4.2.1 Structures and Functions of cell Organelles | 24% | |
| | | .May- 16 | | 4.2.1 Structures and Functions of cell Organelles | | | |
| | | .May- 17 | | 4.2.1 Structures and Functions of cell Organelles | | | |
| | | .May- 18 | | 4.2.1 Structures and Functions of cell Organelles | | | |
| | | .May- 19 | | 4.2.1 Structures and Functions of cell Organelles | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|-------------|-------------------|----------|---|-----|--------|
| # | | May - 2022. | | | | | |
| 8 | 5 | 22 to 26 | CELLS AND TISSUES | .May- 22 | 4.2.2 Relationship between cell Function and cell Structure | 28% | |
| | | | | .May- 23 | 4.2.3 Difference between Prokaryotic and Eukaryotic cells | | |
| | | | | .May- 24 | 4.2.4 Relationship between cell Size and Shape and Surface Area to Volume ratio | | |
| | | | | .May- 25 | 4.3 Passage of Molecules Into and Out of Cells | | |
| | | | | .May- 26 | 4.3 Passage of Molecules Into and Out of Cells | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|------------------|------------|---------|--|-----|--------|
| # | | May/ June - 2022 | | | | | |
| 9 | 5 | 29 to 2 | CELL CYCLE | .May-29 | 4.3 Passage of Molecules Into and Out of Cells | 32% | |
| | | | | .May-30 | 4.3 Passage of Molecules Into and Out of Cells | | |
| | | | | .May-31 | 4.4 Tissues (types of Plant Tissues and types of Animal Tissues) | | |
| | | | | .June-1 | 4.4 Tissues (types of Plant Tissues and types of Animal Tissues) | | |
| | | | | .June-2 | 4.4 Tissues (types of Plant Tissues and types of Animal Tissues) | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|-----------------|-------------------|----------------|------------|------------|--|-----|--------|
| # | | June - 2022. | | | | | |
| 10 | 5 | 5 to 9 | CELL CYCLE | .June-5 | 4.4 Tissues (types of Plant Tissues and types of Animal Tissues) | 35% | |
| | | | | .June-6 | 4.4 Tissues (types of Plant Tissues and types of Animal Tissues) | | |
| | | | | .June-7 | 5.1 Cell Cycle (Interphase and Division) | | |
| | | | | .June-8 | 5.2 Mitosis | | |
| | | | | .June-9 | Phases of Mitosis | | |
| Summer Vacation | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | August - 2022. | | | | | |
| 11 | 3 | 2 to 4 | CELL CYCLE | .August-2 | Phases of Mitosis | 36% | |
| | | | | .August-3 | Phases of Mitosis | | |
| | | | | .August-4 | Phases of Mitosis | | |
| | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | August - 2022. | | | | | |
| 12 | 4 | 7 to 11 | CELL CYCLE | .August-7 | Ashoora -Holiday | | |
| | | | | .August-8 | Phases of Mitosis | 40% | |
| | | | | .August-9 | Significance of Mitosis | | |
| | | | | .August-10 | Significance of Mitosis | | |
| | | | | .August-11 | Significance of Mitosis | | |
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| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review | |
|------|-------------------|------------------|------------|---|----------------------------|-----|--------|--|
| # | | August - 2022. | | | | | | |
| 13 | 4 | 14 to 18 | CELL CYCLE | .August-14 | Independence day - Holiday | | | |
| | | .August-15 | | 5.3 Meiosis | | 44% | | |
| | | .August-16 | | Phases of Meiosis | | | | |
| | | .August-17 | | Phases of Meiosis | | | | |
| | | .August-18 | | Phases of Meiosis | | | | |
| | | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review | |
| # | | August - 2022. | | | | | | |
| 14 | 5 | 21 to 25 | CELL CYCLE | .August-21 | Phases of Meiosis | | 48% | |
| | | .August-22 | | Phases of Meiosis | | | | |
| | | .August-23 | | Significance of Meiosis | | | | |
| | | .August-24 | | 5.4 Necrosis and Apoptosis | | | | |
| | | .August-25 | | 5.4 Necrosis and Apoptosis | | | | |
| | | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review | |
| # | | Aug/ Sep - 2022. | | | | | | |
| 15 | 5 | 28 to 1 | ENZYMES | .August-28 | 5.4 Necrosis and Apoptosis | | 52% | |
| | | .August-29 | | 5.4 Necrosis and Apoptosis | | | | |
| | | .August-30 | | 6.1 Definition & Characteristics of Enzymes | | | | |
| | | .August-31 | | 6.2 Mechanism of Enzyme Action (Lock-n-Key Model) | | | | |
| | | .Sept:1 | | 6.2 Mechanism of Enzyme Action (Lock-n-Key Model) | | | | |
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| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|---------------|---|---|-----|--------|
| # | | Sept: - 2022. | | | | | |
| 16 | 5 | 4 to 8 | ENZYMES | .Sept:-4 | 6.2 Mechanism of Enzyme Action (Lock-n-Key Model) | 56% | |
| | | .Sept:-5 | | 6.2 Mechanism of Enzyme Action (Lock-n-Key Model) | | | |
| | | .Sept:-6 | | 6.2 Mechanism of Enzyme Action (Lock-n-Key Model) | | | |
| | | .Sept:-7 | | 6.2 Mechanism of Enzyme Action (Lock-n-Key Model) | | | |
| | | .Sept:-8 | | 6.2 Mechanism of Enzyme Action (Lock-n-Key Model) | | | |
| | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | Sept: - 2022. | | | | | |
| 17 | 5 | 11 to 15 | ENZYMES | Sept:- 11 | 6.2 Mechanism of Enzyme Action (Lock-n-Key Model) | 60% | |
| | | Sept:- 12 | | 6.3 Specificity of Enzymes | | | |
| | | Sept:- 13 | | 6.3 Specificity of Enzymes | | | |
| | | Sept:- 14 | | 6.3 Specificity of Enzymes | | | |
| | | Sept:- 15 | | 6.3 Specificity of Enzymes | | | |
| | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | Sept: - 2022. | | | | | |
| 18 | 5 | 18 to 22 | BIOENERGETICS | .Sept: 18 | 7.1 Introduction and the Role of ATP | 65% | |
| | | .Sept: 19 | | 7.2 Photosynthesis | | | |
| | | .Sept: 20 | | 7.2 Photosynthesis | | | |
| | | .Sept: 21 | | 7.2 Photosynthesis | | | |
| | | .Sept: 22 | | Introduction and Equation | | | |
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| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|---------------|-----------|--|-----|--------|
| # | | Sept: - 2022. | | | | | |
| 19 | 5 | 25 to 29 | BIOENERGETICS | .Sept: 25 | Role of Chlorophyll and Light | 68% | |
| | | | | .Sept: 26 | Role of Chlorophyll and Light | | |
| | | | | .Sept: 27 | Role of Chlorophyll and Light | | |
| | | | | .Sept: 28 | Limiting Factors in Photosynthesis | | |
| | | | | .Sept: 29 | Adaptations in Leaf Structure for Photosynthesis | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review | |
|------|-------------------|---------------|---------------|-----------|--|-----|--------|--|
| # | | October-2022. | | | | | | |
| 20 | 5 | 2 to 6 | BIOENERGETICS | .Oct: - 2 | 7.3 Respiration | 72% | | |
| | | | | .Oct: - 3 | Aerobic Respiration, Anaerobic Respiration | | | |
| | | | | .Oct: - 4 | Aerobic Respiration, Anaerobic Respiration | | | |
| | | | | .Oct: - 5 | Mechanism of Respiration (Glycolysis, Krebs Cycle, Electron Transport Chain) | | | |
| | | | | .Oct: - 6 | Mechanism of Respiration (Glycolysis, Krebs Cycle, Electron Transport Chain) | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|-----------|------------|--|-----|--------|
| # | | October-2022. | | | | | |
| 21 | 5 | 9 to 13 | NUTRITION | .Oct: - 9 | Mechanism of Respiration (Glycolysis, Krebs Cycle, Electron Transport Chain) | 76% | |
| | | | | .Oct: - 10 | 8.1 Introduction | | |
| | | | | .Oct: - 11 | 8.2 Nutrition in Plants | | |
| | | | | .Oct: - 12 | 8.2 Nutrition in Plants | | |
| | | | | .Oct: - 13 | 8.2 Nutrition in Plants | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|---------|------|--------|---|--------|
| # | | October-2022. | | | | | |

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| 22 | 5 | 16 to 20 | NUTRITION | .Oct: - 16 | 8.2.1 Nutrition and Nutrients (Plant Nutrients and Modes of Nutrition) | 78% | |
| | | | | .Oct: - 17 | 8.2.1 Nutrition and Nutrients (Plant Nutrients and Modes of Nutrition) | | |
| | | | | .Oct: - 18 | 8.2.2 Mineral Nutrition in Plants (Role of Nitrates and Magnesium and effects of their deficiencies) | | |
| | | | | .Oct: - 19 | 8.3 Nutrition in Man | | |
| | | | | .Oct: - 20 | 8.3.1 Major Components of Food (Carbohydrates, Proteins and Fats) | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|-----------|---|---|-----|--------|
| # | | October-2022. | | | | | |
| 23 | 5 | 23 to 27 | NUTRITION | .Oct: - 23 | 8.3.2 Effects of Vitamins (A, C and E) in terms of their; sources, metabolic functions and deficiencies | 80% | |
| | | .Oct: - 24 | | 8.3.3 Effects of Minerals (Calcium and Iron) in terms of their; sources, metabolic functions and deficiencies | | | |
| | | .Oct: - 25 | | 8.3.4 Effects of Water and Dietary fibers in terms of their; sources and metabolic functions | | | |
| | | .Oct: - 26 | | 8.3.5 Balanced Diet (Concept, Diet related to age, sex and activity) | | | |
| | | .Oct: - 27 | | 8.3.6 Problems related to Nutrition | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|----------------|-----------|-----------|--|-----|--------|
| # | | Oct/ Nov-2022. | | | | | |
| 24 | 5 | 30 to 3 | NUTRITION | .Oct:- 30 | 8.3.6.1 Protein Energy Malnutrition | 81% | |
| | | | | .Oct:- 31 | 8.3.6.1 Protein Energy Malnutrition | | |
| | | | | .Nov:- 1 | 8.3.6.2 Mineral Deficiency Diseases (Scurvy, Rickets, Night blindness) | | |
| | | | | .Nov:- 2 | 8.3.6.2 Mineral Deficiency Diseases (Scurvy, Rickets, Night blindness) | | |
| | | | | .Nov:- 3 | 8.3.6.2 Mineral Deficiency Diseases (Scurvy, Rickets, Night blindness) | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|-------------|---------|---------|---|---|--------|
| # | | Nov:- 2022. | | | | | |
| 25 | 5 | 6 to 10 | | .Nov- 6 | 8.3.6.3 Famine (Unequal distribution, Drought, Flooding, Increasing population) | | |

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|------|-------------------|-------------|-----------|-----------|---|-----|--------|
| | | | NUTRITION | .Nov- 7 | 8.3.6.3 Famine (Unequal distribution, Drought, Flooding, Increasing population) | 82% | |
| | | | | .Nov- 8 | 8.3.6.3 Famine (Unequal distribution, Drought, Flooding, Increasing population) | | |
| | | | | .Nov- 9 | 8.4.1 Ingestion, Digestion, Absorption, Assimilation and Egestion | | |
| | | | | .Nov- 10 | 8.4.1 Ingestion, Digestion, Absorption, Assimilation and Egestion | | |
| | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | Nov:- 2022. | | | | | |
| 26 | 5 | 13 to 17 | NUTRITION | .Nov: -13 | 8.4.2 Identification and Functions of the main regions of human Alimentary Canal | 83% | |
| | | | | .Nov: -14 | 8.4.2 Identification and Functions of the main regions of human Alimentary Canal | | |
| | | | | .Nov: -15 | 8.4.3 Role of liver in digestion, glucose and amino acid metabolism and formation of urea | | |
| | | | | .Nov: -16 | 8.4.3 Role of liver in digestion, glucose and amino acid metabolism and formation of urea | | |
| | | | | .Nov: -17 | 8.4.4 Absorption of Food (Structure of Villus, Role of capillaries and lacteals) | | |
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| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|------------------|---------|------------|------------------------|---|--------|
| # | | February-2023. | | | | | |
| 35 | 5 | 12 to 16 | | .Feb:- 12 | Revision / Test Series | | |
| | | | | .Feb:- 13 | Revision / Test Series | | |
| | | | | .Feb:- 14 | Revision / Test Series | | |
| | | | | .Feb:- 15 | Revision / Test Series | | |
| | | | | .Feb:- 16 | Revision / Test Series | | |
| | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | February-2023. | | | | | |
| 36 | 3 | 19 to 23 | | .Feb:- 19 | Revision / Test Series | | |
| | | | | .Feb:- 20 | Revision / Test Series | | |
| | | | | .Feb:- 21 | Revision / Test Series | | |
| | | | | .Feb:- 22 | Revision / Test Series | | |
| | | | | .Feb:- 23 | Revision / Test Series | | |
| | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | Feb/ Mar: -2023. | | | | | |
| 37 | 5 | 26 to 2 | | .Feb:- 26 | Revision / Test Series | | |
| | | | | .Feb:- 27 | Revision / Test Series | | |
| | | | | .Feb:- 28 | Revision / Test Series | | |
| | | | | .March:- 1 | Revision / Test Series | | |
| | | | | .March:- 2 | Revision / Test Series | | |
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| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|----------------|---------|--------------|------------------------|---|--------|
| # | | March: - 2023. | | | | | |
| 38 | 5 | 5 to 9 | | .March: - 5 | Revision / Test Series | | |
| | | | | .March: - 6 | Revision / Test Series | | |
| | | | | .March: - 7 | Revision / Test Series | | |
| | | | | .March: - 8 | Revision / Test Series | | |
| | | | | .March: - 9 | Revision / Test Series | | |
| | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | March: - 2023. | | | | | |
| 39 | 5 | 12 to 16 | | .March: - 12 | Revision / Test Series | | |
| | | | | .March: - 13 | Revision / Test Series | | |
| | | | | .March: - 14 | Revision / Test Series | | |
| | | | | .March: - 15 | Revision / Test Series | | |
| | | | | .March: - 16 | Revision / Test Series | | |
| | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | March: - 2023. | | | | | |
| 40 | 4 | 19 to 23 | | .March: - 19 | Revision / Test Series | | |
| | | | | .March: - 20 | Revision / Test Series | | |
| | | | | .March: - 21 | Revision / Test Series | | |
| | | | | .March: - 22 | Revision / Test Series | | |
| | | | | .March: - 23 | Pakistan Day- Holiday | | |
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| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
| # | | March: - 2023. | | | | | |

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|--------------------------------|---|----------|--|--------------|----------|--|--|
| 41 | 5 | 26 to 30 | | .March: - 26 | Revision | | |
| | | | | .March: - 27 | Revision | | |
| | | | | .March: - 28 | Revision | | |
| | | | | .March: - 29 | Revision | | |
| | | | | .March: - 30 | Revision | | |
| Pre- Board- IX- X - April-2023 | | | | | | | |