HiSET® Tutorials are designed based off of the HiSET® Information Brief which includes the High School College and Career Readiness Statements to provide students a more successful and less stressful preparation effort as they work to demonstrate their college readiness on the HiSET® test

In each module, the Learn It and Try It make complex ideas accessible to students through focused content, guided analysis, and practice with personalized feedback so students are empowered to increase their Exam Readiness. The Review It offers an engaging and high impact video summary of key concepts and important to grasp connections. The Test It assesses students' mastery of the module's concepts, providing granular performance data to students and teachers, linking a student's performance to ACT key idea details and score ranges. To help students focus on the content most relevant to them, unit-level pretests and posttests can quickly identify where students are ready for test day and where they need to continue their review and practice.

This Tutorial is aligned with HiSET® Information Brief and High School College and Career Readiness Statements for Math, Science, Social Studies, Reading, Writing test sections.

1. NATURE OF SCIENCE

- **WHAT IS SCIENCE?**
  - **A.1** *Interpret observed data or information*
  - **C.4** *Judge the reliability of sources*
  - **A.2** *Apply scientific principles*

- **TYPES OF INVESTIGATIONS**
  - **B.2** *Identify reasons for a procedure and analyze limitations*
  - **B.1** *Discern an appropriate research question suggested by the information presented*
  - **C.1** *Distinguish among hypotheses, assumptions, data, and conclusions*
  - **B.3** *Select the best procedure*
  - **C.3** *Determine relevance for answering a question*

- **USING MODELS**
  - **C.2** *Judge the basis of information for a given conclusion*

2. MEASUREMENT AND DATA

- **TOOLS AND MEASUREMENT**
  - **C.2** *Judge the basis of information for a given conclusion*

- **DISPLAYING AND INTERPRETING DATA**
  - **B.1** *Discern an appropriate research question suggested by the information presented*
  - **A.1** *Interpret observed data or information*
  - **C.1** *Distinguish among hypotheses, assumptions, data, and conclusions*

3. NATURE OF LIFE

- **FROM ATOMS TO BIOSPHERE**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **CHARACTERISTICS OF LIFE**
  - **I.1** *Understand organisms, their environments, and their life cycles*

4. THE CHEMISTRY OF LIFE

- **BIOMOLECULES**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **ENZYMES**
  - **I.1** *Understand organisms, their environments, and their life cycles*

5. CELLS

- **CELL STRUCTURE**
  - **I.3** *Recognize the relationships between structure and function in living systems*

- **CELL NUTRITION AND TRANSPORT**
  - **I.3** *Recognize the relationships between structure and function in living systems*

6. CELL STRUCTURE

- **PROKARYOTIC AND EUKARYOTIC CELLS**
  - **I.3** *Recognize the relationships between structure and function in living systems*

- **PLANT AND ANIMAL CELLS**
  - **I.3** *Recognize the relationships between structure and function in living systems*
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

7. CELL FUNCTION

- **PASSIVE TRANSPORT**
  - **I.3** *Recognize the relationships between structure and function in living systems*

- **ACTIVE TRANSPORT**
  - **I.3** *Recognize the relationships between structure and function in living systems*

8. CELLULAR ENERGETICS

- **PHOTOSYNTHESIS**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **CELLULAR RESPIRATION**
  - **I.1** *Understand organisms, their environments, and their life cycles*

9. CELL GROWTH AND REPRODUCTION

- **THE CELL CYCLE**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **MITOSIS**
  - **I.1** *Understand organisms, their environments, and their life cycles*

10. DNA STRUCTURE AND FUNCTION

- **COMPONENTS OF DNA**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **THE GENETIC CODE**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **DNA REPLICATION**
  - **I.1** *Understand organisms, their environments, and their life cycles*

11. GENE EXPRESSION

- **TRANSCRIPTION**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **TRANSLATION**
  - **I.1** *Understand organisms, their environments, and their life cycles*

12. MUTATIONS

- **GENETIC CHANGES IN DNA**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **GENETIC CHANGES IN CHROMOSOMES**
  - **I.1** *Understand organisms, their environments, and their life cycles*

13. HEREDITY

- **MENDELIAN LAWS OF HEREDITY**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **MULTIPLE ALLELES AND ALLELES WITHOUT DOMINANCE**
  - **I.1** *Understand organisms, their environments, and their life cycles*

14. THE HUMAN BODY

- **ORGANS AND ORGAN SYSTEMS**
  - **I.4** *Understand the human body systems including the role of DNA, chromosomes, and specialized cells (e.g., compare the structures of different types of biomolecules, such as carbohydrates, lipids, and proteins)*

- **HUMAN ORGAN SYSTEMS**

- **I.4** *Understand the human body systems including the role of DNA, chromosomes, and specialized cells (e.g., compare the structures of different types of biomolecules, such as carbohydrates, lipids, and proteins)*

- **DISEASE AND HUMAN HEALTH**
  - **I.4** *Understand the human body systems including the role of DNA, chromosomes, and specialized cells (e.g., compare the structures of different types of biomolecules, such as carbohydrates, lipids, and proteins)*

15. REPRODUCTION

- **MEIOSIS**
  - **I.4** *Understand the human body systems including the role of DNA, chromosomes, and specialized cells (e.g., compare the structures of different types of biomolecules, such as carbohydrates, lipids, and proteins)*

- **SEXUAL AND ASEXUAL REPRODUCTION**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

16. EVOLUTION

- **MULTIPLE LINES OF EVIDENCE**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **THE FOSSIL RECORD**
  - **I.1** *Understand organisms, their environments, and their life cycles*

17. MECHANISMS OF EVOLUTION

- **NATURAL SELECTION**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **EVOLUTION OF SPECIES**
  - **I.1** *Understand organisms, their environments, and their life cycles*

18. CLASSIFICATION

- **TAXONOMY**
  - **I.1** *Understand organisms, their environments, and their life cycles*

- **THE SIX KINGDOMS**
  - **I.1** *Understand organisms, their environments, and their life cycles*

19. HOMEOSTASIS

- **HOMEOSTASIS AND DYNAMIC EQUILIBRIUM**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

- **FEEDBACK MECHANISMS IN ANIMALS**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

20. FUNCTIONS OF ANIMAL SYSTEMS

- **THE IMMUNE AND LYMPHATIC SYSTEMS**
  - **I.4** *Understand the human body systems including the role of DNA, chromosomes, and specialized cells (e.g., compare the structures of different types of biomolecules, such as carbohydrates, lipids, and proteins)*
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

- **THE NERVOUS SYSTEM**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*
  - **I.4** *Understand the human body systems including the role of DNA, chromosomes, and specialized cells (e.g., compare the structures of different types of biomolecules, such as carbohydrates, lipids, and proteins)*

21. FUNCTIONS OF PLANT SYSTEMS

- **PLANT TISSUES**
  - **I.3** *Recognize the relationships between structure and function in living systems*

- **PLANT RESPONSES**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

22. MATTER AND ENERGY

- **FOOD CHAINS AND WEBS**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

- **PYRAMIDS OF ENERGY, NUMBERS, AND BIOMASS**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

23. CYCLES IN NATURE

- **THE CARBON CYCLE**
  - **I.3** *Recognize the relationships between structure and function in living systems*

- **THE NITROGEN AND PHOSPHORUS CYCLES**
  - **I.3** *Recognize the relationships between structure and function in living systems*

24. ECOLOGY

- **INTERACTIONS IN ECOSYSTEMS**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

- **SUCCESSION AND ECOSYSTEM STABILITY**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

- **NATURAL IMPACTS ON ECOSYSTEMS**

- **NATURAL IMPACTS ON ECOSYSTEMS**
  - **I.2** *Understand the interdependence of organisms (e.g., interpret interactions among organisms, such as predation, mutualism, and competition)*

25. NATURE OF MATTER

- **WHAT IS MATTER?**
  - **II.4** *Understand the principles of matter and atomic structure (e.g., understand that the properties of elements are based on the patterns of electrons in the outermost energy level of atoms)*
  - **II.1** *Recognize physical properties such as volume, mass, color, and temperature*

- **ATOMIC STRUCTURE**
  - **II.1** *Recognize physical properties such as volume, mass, color, and temperature*
  - **II.4** *Understand the principles of matter and atomic structure (e.g., understand that the properties of elements are based on the patterns of electrons in the outermost energy level of atoms)*

26. DESCRIBING MATTER

- **THE PERIODIC TABLE**
  - **II.5** *Understand the principles of chemical reactions*

- **MIXTURES OF MATTER**
  - **II.5** *Understand the principles of chemical reactions*

27. CHANGES IN MATTER

- **PHYSICAL AND CHEMICAL CHANGES**
  - **II.5** *Understand the principles of chemical reactions*

- **CHANGES OF STATE**
  - **II.4** *Understand the principles of matter and atomic structure (e.g., understand that the properties of elements are based on the patterns of electrons in the outermost energy level of atoms)*

- **CHEMICAL EQUATIONS**
  - **II.5** *Understand the principles of chemical reactions*

28. FORCE AND MOTION

- **DESCRIBING FORCES**
  - **II.2** *Recognize concepts relating to the position and motion of objects (e.g., investigate how an object's motion changes when a net force is applied)*

- **DESCRIBING MOTION**
  - **II.2** *Recognize concepts relating to the position and motion of objects (e.g., investigate how an object's motion changes when a net force is applied)*

- **EFFECTS OF FORCES**
  - **II.2** *Recognize concepts relating to the position and motion of objects (e.g., investigate how an object's motion changes when a net force is applied)*

29. NONCONTACT FORCES

- **ELECTROMAGNETIC FORCES**
  - **II.2** *Recognize concepts relating to the position and motion of objects (e.g., investigate how an object's motion changes when a net force is applied)*

- **GRAVITATIONAL FORCE**
  - **II.2** *Recognize concepts relating to the position and motion of objects (e.g., investigate how an object's motion changes when a net force is applied)*

30. ENERGY

- **DESCRIBING ENERGY**
  - **II.2** *Recognize concepts relating to the position and motion of objects (e.g., investigate how an object's motion changes when a net force is applied)*

- **ENERGY TRANSFER AND TRANSFORMATION**
  - **II.3** *Understand principles of light, heat, electricity, and magnetism (e.g., demonstrate that moving electric charges produce magnetic forces)*

31. THERMAL ENERGY AND HEAT

- **THERMAL ENERGY AND TEMPERATURE**
  - **II.3** *Understand principles of light, heat, electricity, and magnetism (e.g., demonstrate that moving electric charges produce magnetic forces)*

- **HEAT AND THERMAL ENERGY**
  - **II.3** *Understand principles of light, heat, electricity, and magnetism (e.g., demonstrate that moving electric charges produce magnetic forces)*

- **ENERGY TRANSFER AND TECHNOLOGY**
  - **II.3** *Understand principles of light, heat, electricity, and magnetism (e.g., demonstrate that moving electric charges produce magnetic forces)*

32. WAVES

- **MECHANICAL WAVES**
  - **II.3** *Understand principles of light, heat, electricity, and magnetism (e.g., demonstrate that moving electric charges produce magnetic forces)*

- **ELECTROMAGNETIC WAVES**
  - **II.3** *Understand principles of light, heat, electricity, and magnetism (e.g., demonstrate that moving electric charges produce magnetic forces)*

- **INTERACTIONS OF WAVES AND MATTER**
  - **II.3** *Understand principles of light, heat, electricity, and magnetism (e.g., demonstrate that moving electric charges produce magnetic forces)*

33. PLANET EARTH

- **EARTH'S STRUCTURE AND CYCLES**
  - **III.1** *Recognize the properties of earth materials and the usefulness of some earth materials to humans*

- **OCEANS**
  - **III.2** *Understand Earth's systems, processes, geologic structures, and time (e.g., analyze the effects on areas impacted by natural events, such as tectonic movement or flooding)*

- **THE ATMOSPHERE**
  - **III.2** *Understand Earth's systems, processes, geologic structures, and time (e.g., analyze the effects on areas impacted by natural events, such as tectonic movement or flooding)*

34. WEATHER AND CLIMATE

- **SEVERE WEATHER**
  - **III.2** *Understand Earth's systems, processes, geologic structures, and time (e.g., analyze the effects on areas impacted by natural events, such as tectonic movement or flooding)*

- **CLIMATE**
  - **III.2** *Understand Earth's systems, processes, geologic structures, and time (e.g., analyze the effects on areas impacted by natural events, such as tectonic movement or flooding)*

35. HUMANS AND EARTH'S RESOURCES

- **NATURAL RESOURCES**
  - **III.1** *Recognize the properties of earth materials and the usefulness of some earth materials to humans*

- **IMPACTS OF HUMANS**
  - **III.1** *Recognize the properties of earth materials and the usefulness of some earth materials to humans*

36. OUR CHANGING PLANET

- **WEATHERING AND EROSION**
  - **III.2** *Understand Earth's systems, processes, geologic structures, and time (e.g., analyze the effects on areas impacted by natural events, such as tectonic movement or flooding)*

- **GEOLOGIC TIME**
  - **III.2** *Understand Earth's systems, processes, geologic structures, and time (e.g., analyze the effects on areas impacted by natural events, such as tectonic movement or flooding)*

- **EARTHQUAKES AND VOLCANOES**
  - **III.2** *Understand Earth's systems, processes, geologic structures, and time (e.g., analyze the effects on areas impacted by natural events, such as tectonic movement or flooding)*

37. THE SOLAR SYSTEM

- **SUN-EARTH-MOON SYSTEM**
  - **III.3** *Understand Earth's movements and position in the solar system*

- **OUR SOLAR SYSTEM**
  - **III.4** *Understand the sun, other stars, and the solar system (e.g., interpret data to identify the stages in the life cycle of a star)*

38. EXPLORING THE UNIVERSE

- **THE UNIVERSE**
  - **III.3** *Understand Earth's movements and position in the solar system*

- **OUR SUN AND OTHER STARS**
  - **III.4** *Understand the sun, other stars, and the solar system (e.g., interpret data to identify the stages in the life cycle of a star)*