

Curriculum Description: Grade 3 Science

Our Exploring Science Curriculum for Grade 3 students presents an engaging and interactive approach to learning that fosters curiosity, critical thinking, and a passion for discovery. Catering to the inquisitive nature of 8-9 year olds, this course is designed to introduce young learners to the basic principles of science across diverse fields, including biology, chemistry, physics, and earth science.

Throughout this course, students will explore a variety of concepts, such as life cycles of plants and animals, properties of matter, forces and motion, and Earth's natural resources. The course contains an array of exciting modules, each carefully designed to align with national science education standards. Course Highlights:

1. Life Science: Students will delve into the world of living organisms, learning about different species, plant and animal life cycles, adaptation, and habitats.
2. Physical Science: Young learners will gain insights into the fascinating world of matter and energy, understanding the basic principles of force, motion, and the properties of different materials.
3. Earth & Space Science: Future astronauts will explore the Earth's diverse habitats, natural resources, weather patterns, as well as gain a basic introduction to our solar system.
4. Science & Engineering: Building on their natural inclination to explore, students will be introduced to the basics of scientific inquiry and engineering design through practical experiments and activities.

Every module incorporates interactive lessons, hands-on activities, and meaningful experiments that facilitate experiential learning. Our emphasis on inquiry-based learning encourages students to ask questions, formulate hypotheses, conduct experiments, and make observations, thereby deepening their understanding of scientific concepts and process.

At the end of this course, students will be equipped with a foundational understanding of science, a sense of wonder about the natural world, and the skills to pursue further scientific exploration.

This course is more than just facts and figures - it's about igniting a lifelong passion for learning and discovery in the wonderful world of science.

In order to teach the skills in this subject, the course uses a variety of teaching techniques to insure the mastery of the mentioned skills. In addition, there will be a focus on the correct applications of the mentioned skills and acquired knowledge. The various teaching techniques will encompass: video narration, video lectures, AI, Microlearning, advanced graphics and animations, interactive exercises, games, interactive explanations, various evaluation methods, and internet exams.

Please note: This course meets all national standards for Grade 3 Science education, in USA, Jordan and other similar educational curriculum.

Below are highlights of the curriculum content, curriculum chapters, and science skills that are covered in the course.

#	Chapter	Skill
1	Chapter One: Matter & its Changes	• Specifying the properties of matter in the solid phase • specifying the properties of matter in the liquid phase • specifying the properties of matter in the gas phase • explaining how to use a balance scale to measure the mass of materials • specifying the units for measuring mass, specifying the tools for measuring mass • distinguishing between the units of measuring mass • clarifying the relationship between the kilogram and gram • clarifying the relationship between mass and size for objects made of the same material • clarifying the relationship between mass and size for objects made of different materials • classifying matter changes into physical or chemical changes • understanding physical changes, understanding chemical changes • providing examples of physical changes, providing examples of chemical changes • classifying physical changes as either beneficial or harmful, classifying chemical changes as either beneficial or harmful
2	Chapter Two: Plant Parts & their Functions	• Specifying the functions of the roots, specifying the kinds of roots • specifying the functions of the stem, specifying the kinds of stems • providing examples of plants with edible roots, providing examples of plants with edible stems • specifying the importance of leaves, specifying the parts of leaves • specifying the kinds of leaves, specifying the parts of the flower • providing examples of plants whose leaves are edible • specifying the part that is responsible for providing the plant with nutrition • understanding how plants make their own food, highlighting the importance of plant parts in making plant food

		specifying the importance of plants to animals and humans, specifying the importance of animals and humans to plants
3	Chapter Three: Force & Machines	- Specifying the types of force, specifying the sources of force - providing examples of force and its sources, - highlighting the effect of force on static objects - highlighting the effect of force on moving objects - highlighting the effect of mass on force - highlighting the effect of force on an object's speed - classifying machines as simple or complex - understanding simple machines, providing examples of simple machines, specifying the types of simple machines (lever, pulley, inclined surface, wheel) - understanding inclined surfaces, providing examples of inclined surfaces in our lives - understanding levers, providing examples of levers in our lives, specifying the benefits of levers (accuracy in work, minimizing effort, safety at work) - understanding wheels, providing examples of wheel uses in our lives - understanding pulleys, providing examples of uses of pulleys in our lives
4	Chapter Four: The Universe & Life	- Understanding the Sun, specifying the properties of the Sun, specifying the importance of the Sun in our lives - the definition of a planet, understanding the solar system, specifying the planets in the solar system - specifying the properties of planet Earth, specifying the reasons why planet Earth has life on it - The definition of the moon, specifying the properties of the moon, explaining why the moon's shape changes, mentioning the phases of the moon (new moon, crescent moon, etc.) - specifying the times for the moon's phases, explaining how night and day happen, specifying the importance of night and day in our lives
5	Chapter Five: Water	- Classifying water sources as either surface water or groundwater - understanding surface water, understanding groundwater - providing examples of surface water sources, providing examples of groundwater sources - providing examples of how humans store rainwater

		• classifying water as freshwater or saltwater, understanding freshwater • understanding saltwater, specifying the properties of saltwater and freshwater • explaining how saltwater can become drinkable • explaining the natural water cycle • explaining the processes involved in the natural water cycle (evaporation, condensation, precipitation, collection) • specifying the types of precipitation (rain, snow, hail)
6	Chapter Six: Earth Sciences	• Specifying the three layers of the Earth (crust, mantle, core), specifying the properties of the Earth's crust • specifying the properties of the mantle, specifying the properties of the core • understanding earthquakes, explaining how earthquakes can shape the Earth's surface • mentioning the safety protocols that must be followed during an earthquake • understanding volcanoes, classifying volcanoes based on their activity (active, dormant, extinct), explaining how volcanoes can shape the Earth's surface • explaining how running water can shape the Earth's surface • specifying the importance of rainwater in shaping the Earth's surface • mentioning the ways in which running water can affect the Earth's surface (erosion, transport, sedimentation) • explaining how wind can change the Earth's surface (erosion) • understanding sand dunes, explaining how sand dunes are created • specifying how humans can change the Earth's surface (carving, drilling, etc.) • specifying how animals can change the Earth's surface • specifying how plants can change the Earth's surface
7	Chapter Seven: Animals	• Understanding classification of animals • clarifying the importance of classifying animals into groups • classifying animals into groups (mammals, birds, reptiles, amphibians, fish) • specifying the common traits between groups of living organisms • specifying the properties of mammals

		• specifying the properties of birds • specifying the properties of reptiles • specifying the properties of amphibians • specifying the properties of fish
8	Chapter Eight: The Relationship Between Living Organisms and the Environment	• Specifying the natural factors that affect the environment • specifying the effect of natural factors on the environment • understanding adaptation, classifying how living organisms adapt to their environment as either physical adaptation or behavioral adaptation • clarifying how living organisms can adapt to their environments using physical adaptation • clarifying how living organisms can adapt to their environments using behavioral adaptation