Série/Grade: Kinder 2

SPACES, TIMES, QUANTITIES, RELATIONSHIPS, AND TRANSFORMATIONS				
BNCC Campo de experiências / Faixas Etária	Indicadores - Ecologia	1º T	2º T	3º T
(EI02ET02) Observe, report, and describe incidents of everyday life and natural phenomena (sunlight, wind, rain, etc.). (EI01ET02) Explore cause-and-effect relationships (overflowing, dyeing, mixing, moving, and removing, etc.) in interaction with the physical world.	- Recognizes the characteristics of natural phenomena.	S	-	-
	- Identifies, with the support of the educator, the natural phenomena of the day.	S	-	-
	- Differentiates, with the support of the educator, the natural phenomena.	-	-	-
	- Describes natural phenomena.	-	-	-
(EI02ET03) Share, with other children, situations of caring for plants and animals in the institution's spaces and outside it. (EI01ET03) Explore the environment through action and observation, manipulating, experimenting, and making discoveries.	- Discovers, with the help of the educator, some animals and plants from the geographical area where he/she lives.	-	-	-
	- Identifies, with the help of the educator, images around him/her of various plants and animals from the area.	-	-	-
	- Names, with the help of the educator, some parts of plants.	-	-	,,
		-	-	-
(EI02ET04)Participate in simple investigations about living and non-living things to discover information and make predictions based on what he/she knows (gather information).	Observes and plays with some earth materials like sand and mud using the senses	-	-	-
	Names some properties of objects like color and size.	T/A	-	-
	Classify a set of objects in groups based on one physical attribute (shape or color).	-	-	-
	Draws, circles, or highlights specific groups according to the lesson theme. (Created by the teachers)	-	-	-
E/T = Ensinar/ Teach				
A = Avaliar/ Assess				
S = Suporte/Support				

Série/Grade: Kinder 3

SPACES, TIMES, QUANTITIES, RELATIONSHIPS, AND TRANSFORMATIONS				
BNCC Campo de experiências / Faixas Etária	Benchmarks - Ecology	1º trimestre	2º trimestre	3º trimestre
(EI02ET02) Observe, report, and describe incidents of everyday life and natural phenomena (sunlight, wind, rain, etc.). (EI01ET02) Explore cause-and-effect relationships (overflowing, dyeing, mixing, moving, and removing, etc.) in interaction with the physical world.	- Recognizes the characteristics of natural phenomena.	E/T	S	A
	- Identifies, with the support of the educator, the natural phenomena of the day.	E/T	E/T	S
	- Differentiates, with the support of the educator, the natural phenomena.	E/T	E/T	S
	- Describes natural phenomena.			
(EI02ET03) Share, with other children, situations of caring for plants and animals in the institution's spaces and outside it. (EI01ET03) Explore the environment through action and observation, manipulating, experimenting, and making discoveries.	- Discovers, with the help of the educator, some animals and plants from the geographical area where he/she lives.	E/T	S	S
	- Identifies, with the help of the educator, images around him/her of various plants and animals from the area.	A	S	S
	- Names, with the help of the educator, some parts of plants.	S	A	S
		E/T	S	A
(EI02ET04)Participate in simple investigations about living and non-living things to discover information and make predictions based on what he/she knows (gather information).	Observes and plays with some earth materials like sand and mud using the senses	S	S	S
	Names some properties of objects like color and size.			
	Classify a set of objects in groups based on one physical attribute (shape or color).			
	Draws, circles, or highlights specific groups according to the lesson theme. (Created by the teachers)			
Total de indicadores por trimestre nesta área				
Legenda:				
E/T = Ensinar/ Teach				
A = Avaliar/ Assess				
S = Suporte/Support				

Série/Grade: Kinder 4				
SPACES, TIMES, QUANTITIES, RELATIONSHIPS, AND TRANSFORMATIONS				
BNCC Campo de experiências / Faixas Etária	Indicadores - Ecologia	1º T	2º T	3º T
(EI04ET01) Formulates predictions and applies fundamental concepts and processes of scientific investigation to actively explore, investigate, collect data, conduct experiments, and solve problems.	Begins to look for cause and effect.	**T**	**T**	**A**
	Makes daily weather observations and records them pictorially.	**T**	**A**	**S**
	Observes objects in the sky during day and night sky (sun, moon and stars) and distinguishes some of their characteristics, supported by their teacher.	**A**	**S**	**S**
	Recognizes objects by their physical properties.	**T**	**S**	**A**
(EI04ET02) Participates in simple investigations about living and non-living things to discover information and make predictions based on what he/she knows (collect information)	Retells basic information learned about life science. (plants, animals, human body)	**T**	**S**	**A**
	Recognizes that “baby” plants and animals are similar but not identical to their parents and to one another.	**A**	**S**	**S**
	Uses senses to gather information about living and non-living things , such as size, shape, color and texture.	**T**	**A**	**S**
	Understands that plants and animals have different life cycle.	**T**	**A**	**S**
	Compares elements or characteristics of people, animals, objects, or places, using some concepts such as: size, shape, color, quantity, and utility.			
(EI04ET03) Records observations, manipulations, and measurements using multiple languages (drawing, numerical or spontaneous writing) on different supports.				
	Makes predictions about objects, organisms, or events in environment.	**T**	**S**	**A**
	Participates in activities related to preserving the environment, supported by his/her teacher.	**A**	**S**	**S**
	Understands changes in the physical properties (mixing different materials, prepare a recipe).	**T**	**S**	**S**
Total de indicadores por trimestre nesta área				
Legenda:				
E/T = Ensinar/ Teach				
A = Avaliar/ Assess				
S = Suporte/Support				

Série/Grade: Kinder 5

SPACES, TIMES, QUANTITIES, RELATIONSHIPS, AND TRANSFORMATIONS				
BNCC Campo de experiências / Faixas Etária	**Indicadores**	**1º Trimestre**	**2º Trimestre**	**3º Trimestre**
(EI05ET01) Formulates predictions and applies fundamental concepts and processes of scientific investigation to actively explore, investigate, collect data, conduct experiments, and solve problems.	Observes, categorizes, and describes sequences in scientific phenomena, e.g. life and water cycles.	S	T/A	S
	Retells information learned about life science. (plants, animals, human body).	T/A	S	S
	Recognizes the similarities and differences between a parent and a baby.	S	S	S
	Identifies different bodies of water. (ocean, lake, river).	S	T/A	S
	Describes and compares different landforms. (mountains, hills, land, valley).	S	S	S
	Recognizes basic elements of the solar system. (sun, planets, moon).	S	S	S
	Recognizes time patterns (such as day to night and night to day).	S	S	T/A
(EI05ET02) Participates in simple investigations about living and non-living things to discover information and make predictions based on what he/she knows (collect information).	Uses tools (magnifying glasses, magnets, eye droppers, etc.) and instruments for observing, measuring, and manipulating living and non-living in scientific activities (investigation).	T/A	S	S
	Describes a variety of living and non-living things and their basic needs of living things such as air, water, food, and light.	S	T/A	S
	Uses non-standard units of measurement to compare objects.	S	S	T/A
	Uses senses to gather information about living and non-living things, such as size, shape, color, texture, etc.	S	S	S
(EI05ET03) Records observations, manipulations, and measurements using multiple languages (drawing, numerical or spontaneous writing) on different supports.	Describes how different objects move.	S	S	S
	Classifies materials that float/sink in water.	T/A	S	S
	Recognizes that the shape of materials such as paper can be changed by cutting, tearing, crumpling, etc.	S	S	S
	Comments on changes when substances are mixed, shaken, or cooked (e.g., mixing paint, making butter from cream, cooking playdough).	S	T/A	S
	Classifies and describes objects made of different materials such as wood, paper, fabric, and metal.	S	S	T/A
	Describes states of matter (liquid, solid, and gas).	S	S	T/A

Legenda:
E/T = Ensinar/ Teach
A = Avaliar/ Assess
S = Suporte/Support

1º ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1º Trimestre	2º Trimestre	3º Trimestre
	UNIDADE TEMÁTICA MATTER AND ENERGY							
1	EF01CI01 = Compare the characteristics of different materials present in everyday objects, discussing their origin, the ways they are discarded and how they can be used more consciously.	Matter and its characteristics		- Becomes aware of the observable properties of different materials and mixtures, such as size, color, shape, texture,etc. - Compares the size, shape, and color of objects and animals - Lists and illustrates the characteristics of solids, liquids and gases. - Identifies changes in materials caused by heating and cooling (such as in water, ice, and vapor)		TA	TA	
	UNIDADE TEMÁTICA LIFE AND EVOLUTION							
2	EF01CI02 = Locate, name and graphically represent (through drawings) parts of the human body and explain its functions.	Human Body and Respecting the differences		- Names the different parts of the animal´s body, distinguishing the major organs and their importance in life. - Recognizes the senses(touch,smell, taste,sight, and hearing). - Analyzes how one's behavior may affect the feelings of other's and identifies appropriate behavioral adjustments.		TA	TA	
3	EF01CI03 = Discuss the reasons why the self-care habits (washing hands before eating, brushing the teeth, cleaning the eyes, nose and ears, etc.) are necessary for maintaining a healthy body.	Human Body and Respecting the differences		- Identifies habits to keep our body healthy. - Demonstrates the spread of germs and the importance of keeping clean. - Gives examples of proper hygienic procedures for protecting one's own health and preventing the transmission of diseases, such as washing hands with soap, using a tissue, sleeve sneezing, brushing and flossing teeth, avoiding the sharing of hats or hairbrushes, etc.			TA	TA
4	EF01CI04 = Compare physical characteristics among friends, recognizing diversity and the importance of appreciating, welcoming and respecting differences.	Human Body and Respecting the differences		- Identifies words and actions that hurt others. - Identifies and performs roles that contribute to one's classroom. - Identifies how others within one's school, home, and community are helpful. - Identifies how one helps others (feeding a pet, sharing, cleaning up when asked). - Expresses how one feels about helping others.			TA	TA
	UNIDADE TEMÁTICA EARTH AND UNIVERSE							
5	EF01CI05 = Values the diversity of living beings, and classifies them in terms of their characteristics, needs, and life cycles.	Living things in the environment		- Describes characteristics of plants and animals (size, shape, color, phase of living, habitat of development, etc.) that belong to the daily lifes e and relate them to the environment they live in. - Investigates the importance of water and light for the maintenance of plants life in general. - Identifies the main parts of a plant (roots, stems, leaves, flowers and fruits) and the function performed by each one, and analyse the relationships between the plants, the environment and the other living beings.		T	TA	
6	EF01CI06 = Select examples of how the succession of days and nights guide the pace of daily activities of human being and other living things.	Living things in the environment		- Identifies one common activity that occurs in the day and one that occurs at night. - Identifies daily activities in a 24-hour period, such as having breakfast and going to bed, and associate activities with morning and night. - Illustrates, with guidance and support,weather and temperature information, and terms such as: hot or cold, sunny or cloudy, calm or windy, and rainy or snowy, clear or foggy.		T	TA	TA

2º ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1º Trimestre	2º Trimestre	3º Trimestre
	UNIDADE TEMÁTICA - MATTER AND ENERGY							
1	EF02CI01 = Identify which materials (metal, wood, glass, and so on) are used in the objects that are part of our everyday life, how these objects are used and what kind of materials these objects were made in the past.	Properties and uses of materials		- Identifies different kinds of natural materials - Distinguishes between natural resources (water, wood, clay, metal, wool, etc.) and man-made materials (plastic, glass, paper, clothing, food, renewable and nonrenewable etc.) - dentifies different kinds of natural materials - Compares the desing process of some objects along the time (compares its materials, the steps and so on.). - Talks about toys and common appliances and what they do when they work, for example, movement or sound."		TA		
2	EF02CI02 = Suggest the use of different materials for the construction of everyday objects, considering some properties of these materials (flexibility, hardness, transparency, ...)	Properties and uses of materials		- Classifies different kinds of materials according to their physical properties, including shape, color, texture, hardness, opacity, flexibility, relative temperature, and whether the material is solid, liquid, or gas. - Identifies different kinds of natural materials and made by people. - Classifies different kinds of materials relating to temperature, and whether the material is solid, liquid, or gas.		TA		
3	EF02CI03 = Discuss the necessary precautions to prevent domestic accidents (sharp and flammable objects, electricity, cleaning products, medicines, etc.)	Domestic accident prevention		- Differentiates between risky and safe activities at home and at school, and recognizes basic preventive measures in specific situations, such as the use of sunglasses and sun block to prevent sunburns, safe ways and equipment to handle hot objects and materials, avoidance of moving objects, etc. - Demonstrate the ability to avoid domestic health accidents. - Explains safe and unsafe play that you see on the playground - Explains why, how, and when you need to call 190 - Recognizes basic preventive measures in specific situations, such as the use of sunglasses and sunblock to prevent sunburns, safe ways and equipment to handle hot objects		TA		
	UNIDADE TEMÁTICA - LIFE AND EVOLUTION							
4	EF02CI04 = Describe characteristics of plants and animals (size, shape, color, life style, place where they develop, etc.) that are part of our daily lives and relate them to the environment in which they live.	Living things and their environments and Plants		- Describes how plants grow and change throughout their life cycle, from birth (germination, pollination by air and animals), development and growth, reproduction (...), to death - Represents the life cycle of several plants, such as bean plants and flowers. - Describes characteristic of animais (environment, shape, and so on)			TA	
5	EF02CI05 = Investigate the importance of water and light for the maintenance of life and plants.	Living things and their environments and Plants		- Explains the significance of the responsible use of natural resources, such as water, and their interrelationships with plants, animals, and human beings (including uses like health maintenance). - Identifies how air, water, light, food and space are needs of living things. - Plants and conducts an investigation to determine if plants need sunlight and water to grow.			TA	
6	EF02CI06 = Identify the main parts of a plant (root, stem, leaves, flowers and fruit) and the role played by each of them, and analyze the relationship among plants, the environment and other living beings.	Living things and their environments and Plants		- Identifies and describes the main parts of plants and the function related to them. - Represents through drawings, pictures that in a particular habitat some organisms can survive well, some less well, and some cannot survive at all. - Determines how different parts of a living thing work together to make the organism function.			TA	
	UNIDADE TEMÁTICA - EARTH AND UNIVERSE							
7	EF02CI07 = Describe the positions of the Sun at different times of the day and associate them with the size of the shadow projection.	Sun's movement and The Sun as a source of light and energy		- Becomes aware of the fact that the Earth moves around the Sun and that this movement determines the weather and the seasons. - Recognizes the size and shape of shadows change during the day. - Recognizes the changing position of the Sun causes shadows to change. - Correlates longer shadows with the Sun's position lower on the horizon. - Correlates shorter shadows with the Sun's position higher in the sky. - Identifies how is the weather like.				TA
8	EF02CI08 = Compare the effect of solar radiation (heating and reflection) on different types of surfaces (water, sand, soil, dark, light and metallic surfaces, etc.)			- Recognizes and classifies the different types surfaces (water, sand, soil, and so on) - Diagrams and explains how changes in temperature affect states of matter. EF02CI08.3 Describes how radiation reflects off a surface or less equally in all directions. - Identifies the kinds of land as well as bodies of water.				TA

2° ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1° Trimestre	2° Trimestre	3° Trimestre
9	EF02CI09 = Identify the natural disasters as well as the Earth changing after all (volcanoes, hurricanes, floods, thunderstorms, snowstorms).			- Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the Earth. - Develop a model to represent the shapes and kinds of land and bodies of water in an area. - Obtain information to identify where water is found on Earth and that it can be solid or liquid. - Use information from several sources to provide evidence that Earth events can occur quickly or slowly. - Develop a simple sketch, drawing or physical model to illustrate how a natural disaster occurs. - Obtain information to identify safety measures during dangerous situations.				TA

3º ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1º Trimestre	2º Trimestre	3º Trimestre
	UNIDADE TEMÁTICA MATTER AND ENERGY							
1	EF03CI01 = Produce different sounds from the vibration of different objects and identify variables that influence this phenomenon.	Sound Production		- Relate sounds to their sources of vibrations (for example: a musical note produced by a vibrating guitar string, the sounds of a drum made by the vibrating drum head). - Explains vibration as a regular back and forth motion. - Compares the sounds of different objects. - Explains how sound is made. - Plan and conduct an invaestigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. - Ask questions to determine cause and effect relationships of eletric or magnetic interactions between two objects not in contact with each other.		TA		
2	EF03CI02 = Experiment and report what happens with the passage of light through transparent objects (glasses, glass windows, lenses, prisms, water, and so on), in contact with polished surfaces (mirrors) and at the intersection with opaque objects (walls, plates, people and other everyday objects).	Effects of light on materials		- Identifies what happens when the light bounces off transparent objects. - Identifies what happens when the light bounces off opaque objects. - Compares and contrasts what happens when light rays strike transparent objects and polished surfaces.		TA		
3	EF03CI03 = Discuss necessary habits to maintain hearing and visual health considering the conditions of the environment in terms of sound and light.	Hearing and visual health		- Explains how your ear hears the sound. -Identifies the main sections of the ear. - Describes ways to keep your ears and eyes safe and healthy. - Identifies the main parts of the eyes.		TA		
	UNIDADE TEMÁTICA LIFE AND EVOLUTION							
4	EF03CI04 = Identify characteristics about the way of life (what they eat, how they reproduce, how they move, etc.) of the commonest animals in the surrounding environment.	Animal characteristics and development		- Explains how the distinct structures and body systems in living organisms serve specific functions in growth, survival, reproduction, and so on. - Identifies how different body parts help some animals meet their needs. - Investigates about different animal characteristics, responses to the environment, and group behaviors. - Describes animals characteristics, responses to the environment, and group behaviors. - Associates the contribution of technology with the improvement in solving problems and activities in everyday life - Applies the steps of the scientific method including drawing conclusions to confirm or disprove the hypothesis. - Develops abilities to ask questions and seek answers in the classroom and outdoor investigations.			TA	
5	EF03CI05 = Describe and communicate changes that have occurred since birth in animals from different environments (terrestrial and aquatic), including the human being.	Animal characteristics and development		- Classifies the life cycle stages of aquatic and terrestrial animals. - Relates infancy, childhood, adolescence, adulthood, and old age to their respective physical and mental changes. - Develops models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. - Analyzes and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms." - Develops models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death."			TA	
6	EF03CI06 = Compare some animals and organize groups based on common external characteristics (presence of feathers, fur, scales, beak, claw, antennae, paws, etc.)	Animal characteristics and development		-Lists and identifies the external features of animals. - Classifies the animals into groups according to their external features. - Differentiates how animals use body parts to protect themselves.			TA	
	UNIDADE TEMÁTICA EARTH AND UNIVERSE							

3º ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1º Trimestre	2º Trimestre	3º Trimestre
7	EF03CI07 = Identify characteristics of the Earth (such as its spherical shape, the presence of water, soil, etc.), based on observation, manipulation and comparison of different forms of representation of the planet (maps, globes, photographs, etc.).	Earth features		- Differentiates landforms and bodies of water on Earth, such as mountains, islands, plateaus, hills, plains, oceans, rivers, lakes, ponds, streams, and glaciers, and recognizes that nearly all of Earth's available water is in the ocean, most fresh water is in glaciers or underground, and only a tiny fraction is in streams, lakes, wetlands, and in the atmosphere. - Creates a visual representation of the Sun and planets. - Scientists record patterns of the weather across different times and areas so they can make predictions abhout what kind of weather might happen next. - Patterns of change can be used to make predictions. - Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. - A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impact.				TA
8	EF03CI08 = Observe, identify and record the daily periods (day and / or night) and that the Sun, other stars, Moon and planets are visible in the sky.	Sky observation		- Recognizes the major components and patterns observed in the earth/moon/sun system. - Illustrates, with guidance, the distribution of the solar system, including its main components. - Describes the objects that make up the solar system and understand that planets orbit the sun.				TA
9	EF03CI09 = Compare different soil samples around the school based on characteristics such as color, texture, smell, particle size, permeability, and so on.).	Land use		- Identifies the different types of soils and recognizes their differences. - Examines properties of soils, including color and texture, capacity to retain water and ability to support the growth of plants.				TA
10	EF03CI10 = Identify the different uses of the soil (planting and extraction of materials, for example), recognizing the importance of the soil for agriculture and for life.	Land use		- Investigates the relationship between plants and soil. - Relates the uses of the soil to its importance for meeting the human needs. - Correlates the importance of the soil cultivation and the human being.				TA

4º ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1º Trimestre	2º Trimestre	3º Trimestre
	UNIDADE TEMÁTICA MATTER AND ENERGY							
1	EF04CI01 = Identify mixtures in daily life, based on their observable physical properties and the recognition of their composition.	Mixtures		- Defines some daily mixtures based on their composition. - Compare and contrast a variety of mixtures and solutions such as rocks in sand, sand in water, or sugar in water. - Recognizes that mixtures are a blending of two or more materials, and that some mixtures can be separated using filters - Demonstrates that some mitures maintain physical properties of their ingredients such as iron filings and sand and sand and water.				
2	EF04CI02= Test and report transformations in everyday materials when exposed to different conditions (heating, cooling, light and humidity).	Reversible and Non Reversible changes		- Construct simple tables, charts, bar graphs, and maps to organize, examine and evaluate data. - Compares and contrasts a variety of mixtures, including solutions.				
3	EF04CI03 = Conclude that some changes caused by heating or cooling are reversible (such as changes caused by the physical state of the water) and others are not (such as cooking the egg, burning the paper, and so on.)	Reversible and Non Reversible changes		- Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. - Compares through experiments the result from a physical and a chemical change.				
	UNIDADE TEMÁTICA LIFE AND EVOLUTION							
4	EF04CI04 = Analyze and build simple food chains, recognizing the position occupied by living things in these chains and the role of the Sun as a primary source of energy in food production.	Chains and Microorganisms		Compares the elements of a food chain, including producers, consumers (primary or herbivores [plant eaters], secondary or primary carnivores [who eat herbivores], tertiary or secondary carnivores [who eat primary carnivores]), and decomposers. - Describes the flow of energy through food web, beggining with the Sun, and predict how changes in the ecosystem affect the food web. - Constructs a food chain and explains how energy flows through the chain.				
5	EF04CI05 = Describe and highlight similarities and differences between the cycle of matter and the flow of energy among the living and non-living things of an ecosystem.	Chains and Microorganisms		- Compare and contrast the flow of matter and the flow of energy through an ecosystem. - Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. - Explain how organisms interact with other components of an ecosystem.				
6	EF04CI06 = Relate the participation of fungi and bacteria in the decomposition process, recognizing the environmental importance of this process.	Chains and Microorganisms		- Explain the roles played by fungi and bacteria in decomposition and recycling process - Describes the role of decomposer organisms in nutrient recycling and their importance in maintaining the flow of energy through an ecosystem - Relates the presence of soil-dwelling organisms to soil quality."				
7	EF04CI07 = Verify the participation of microorganisms in the production of food, fuels, medicines, and so on.	Chains and Microorganisms		- Analyses the importance of using microorganisms in the food industry and medicine. - Associates the effects of various fuel microorganism activities				
	UNIDADE TEMÁTICA EARTH AND UNIVERSE							
8	EF04CI010 = Identify the cardinal directions, based on recording different positions according to the Sun and the shadow of a stick (gnomon)	Cardinal directions; Calendar; Cyclical phenomena and Culture		- Collect and analyze data to identify sequences and predict patterns of change in shadows, season and the observable appearance of the Moon over time. - Identifies cardinal directions.				
9	EF04CI11 = Compare the indications of the cardinal directions as a result of observing the shadows of a stick (gnomon) with those using a compass.	Cardinal directions		- Uses a compass to test the accuracy of where students placed objects to mark directions. - Operates a vertical stick or flagpole, the students can track the shadows cast and see how the cast shadows change throughout the school year.				
10	EF04CI12 = Associate the cyclical movements of the Moon and the Earth with regular periods of time and the use of this knowledge to build calendars in different cultures.	Calendar; Cyclical phenomena and Culture		- Identifies objects (e.g., moon, stars, meteors) in the sky and their patterns of movement and explain that light and heat comes from a star called the sun. - Obtains, evaluates, and communicates information to model the effects of the position and motion of the Earth and the moon in relation to the sun as observed from the Earth.				

11	EF04CI13 = Analyze patterns in nature and how natural events help change and shape the earth.	Calendar; Cyclical phenomena and Culture		- Identifies patterns in Earth's shaping that explain the changes in landscape overtime - Analyzes and interprets data from maps, and other sources, to describe patterns of Earth's features. - Generates and compares multiple solutions to reduce the impacts of natural Earth processes on humans. - Identifies cause and effect relationship to explain changes. - Make observations and measurements to provide evidence of the effects of weathering or the rate of erosion - Associates a variety of hazards as a result of natural processes(e.g earthquakes, hurricanes, tsunamis, volcanic eruption) - Defines steps to reduce natural hazards impacts. - Classifies types of bodies of water and understands their characteristics "				

5º ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1º Trimestre	2º Trimestre	3º Trimestre
	UNIDADE TEMÁTICA - MATTTER AND ENERGY							
1	EF05CI01= Explore phenomena of everyday life that show physical properties of materials, such as density, thermal and electrical conductivity, responses to magnetic forces, solubility, responses to mechanical forces, and so on.	Matter Physical Properties		- Explores phenomena of everyday life that show physical properties of materials. - Classifies matter based on measurable , testable, and observable physical properties (solid liquid osr gas), including mass, magnestism, physical state (solid, liquid or gas), relative density (sinking and floating using water as a reference point) in water. - Examines diverse mixtures and solvents, including water, and analyze their physical properties (such as solubility) and changes (such as filtration, decantation, evaporation, boiling, and chlorination). - Identify the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample. - Explain the effects of the transfer of heat that occurs between objects at different temperatures.		TA		
2	EF05CI02= Apply the knowledge about changes in the physical state of water to explain the hydrological cycle and analyze its implications for agriculture, climate, electricity generation, the provision of potable water and the balance of regional (or local) ecosystems.	Water cycle		- Explains changes in the physical state of water. - Explains the hydrological cycle and analyze its implications for everyday life - Analyses how people have access to safe drinking water. - Values the function of the physical state of water in an ecosystem (such as climate regulation, water supply, photosynthesis, control of the energy flow, etc.),				
3	EF05CI03= Select arguments that justify the importance of vegetation cover for the maintenance of the water cycle, the conservation of soils, water courses and the quality of atmospheric air.	Water cycle		- Explains and illustrates the continuous movement of water above the surface of the Earth through the processes of the water cycle. - Arguments on the interrelations, composisions and presence of water for a clean atmospheric air.		TA		
4	EF05CI04= Identify the main uses of water and other materials in daily activities to discuss and propose sustainable ways of using these resources.	Consumption and Sustainability		- Analyzes the effects of the exploitation of diverse natural resources on the environment and on close surroundings. - Explains the steps humans can take to protect the environment from water pollution. - Explains how the Sun and the ocean interact in the water cycle. - Creates and proposes sustainable solutions to reduce the effects of the environment´s damage and pollution. - How innovations will advance water sustainability and resilience worldwide.		TA		
5	Build collective proposals for more conscious consumption and create technological solutions for the proper disposal and reuse or recycling of materials consumed at school and / or in everyday life.	Recycling		- Evaluates personal water consumption in order to design an action plan to reduce human's negative effect in the environment. - Explains the importance of innovation and technology to prevent scarcity of water and the role it plays in safe and efficient water. - Detects water scarcity in his/her environment and other contexts, and proposes solutions to preserve it, such as recycling and purification of water.		TA		
	UNIDADE TEMÁTICA - LIFE AND EVOLUTION							
6	EF05CI06 = Select arguments that justify why the digestive and respiratory systems are considered co-responsible for the body's nutrition process, based on the identification of the functions of these systems.	Body and Nutrition		- Demonstrates deep knowledge of the body systems (digestive, respiratory and circulatory system); and applies this knowledge to talk about care and preventive actions. - Examines the journey of food through the digestive system, and provides details of how it nourishes the whole body. - Develops an overall view of the human body and the interactions of its systems.			TA	
7	EF05CI07= Justify the relationship between the functioning of the circulatory system, the distribution of nutrients throughout the body and the elimination of waste produced.	Digestive, Respiratory and Circulatory Systems		- Demonstrates the route of the circulatory system, and explains how is the distribution of nutrients through the body. - Indentifies and knows the location and function of the major body organs and systems			TA	
8	EF05CI08 = Organize a balanced menu based on the characteristics of the food groups (nutrients and calories) and individual needs (activities performed, age, gender, and so on) to maintain a healthy body.	Eating habits		-Proposes solutions for a healthy body and lifestyle, and explains how life choices can impact the body and mind. - Presents arguments on the importance of nutrition for health, considering the Eatwell Plate, a balanced diet, carbohydrates, fats, cholesterol, vitamins, minerals, malnutrition and its consequences, body mass index, etc.			TA	
	UNIDADE TEMÁTICA - EARTH AND UNIVERSE							

5º ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1º Trimestre	2º Trimestre	3º Trimestre
9	EF05CI11 = Recognize Earth's major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans).	Earth Materials and Systems		- Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. - Recognizes and describes Earth's systems, their interactaction and how do they affect Earth's materials and processes. - Describes and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. - Obtains and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. - Describes how interactions of Earth's systems result in weather patterns known as monsoons.				TA
10	EF05CI12 = Comprehend the gravitational force of Earth acting on an object near or further away from the Earth's surface.	Optical instruments		- Supports an argument that the gravitational force exerted by Earth on objects is directed down. - Plans and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. - Identifies differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth - Represents data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. - Relates gravitational force to the motions of Earth, the sun, and the moon in space. - Explains how gravity causes the formation of craters on the moon. - Uses technology to map the location and size of craters on the moon. - Demonstrates that Earth rotates on its axis once every 24 hours to cause the day/night cycle. - Analyzes how Earth, sun, and moon move in space and as a system. - Recognizes that the orbit of Earth around the sun causes observable patterns such as the sequence of seasons over time. - Describes how the number of hours of daylight changes with the seasons. - Describe how Earth's orbit around the sun causes observable patterns in the positions of the stars at different times of the year. - Analyzes the moon's motions, including rotation, orbiting of Earth, and apparent movement across the sky. - Explains why moon phases occur and describe eache of its phases. - Identifies patterns in photographs that indicate the presence of a crater on the surface of the moon.				TA
11	EF05CI13 = design and build devices for distant observation (telescope, periscope...) for magnified object observation (magnifying glasses, microscopes), or image rcording (cameras), and discuss the socia uses of the devices.			- Explore the functionality and uses of optical instruments. - Understand how devices like telescopes, microscopes, and magnifying glasses work. - Comprehend the contributions of optical instruments to observing and understanding the natural world. - Design as an experiment optical instruments.				TA
12	EF05CI14 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	Prototype		- Generates and compares multiple possible solutions to a problem. - Conducts short research projects that build knowledge through investigation of different aspects of a topic. - Draws evidence from literary or informational texts to support analysis, reflection, and research. - Uses appropriate tools strategically. - Uses models to describe phenomena.				TA

6º ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1º Trimestre	2º Trimestre	3º Trimestre
	UNIDADE TEMÁTICA - Energy and matter							
1	(EF06CI01) To classify a mixture as homogeneous or heterogeneous between two or more substances (water and salt, water and oil, water and sand, and etc.).	Homogeneous and heterogeneous mixtures.		- Describes the difference between homogeneous and heterogeneous mixtures. - Relates solutions and solubility. - Investigates mixtures with experiments in the lab. - Understands the different states of matter and how temperature and pressure affects it. - Observes, compares and registers in the notebook the characteristics and properties of different materials using the notes about types of mixtures classification.		T		
2	SKILL - (EF06CI02) To identify evidences about chemical transformations due to different mixtures that may originate new products (mixtures to bake a cake, for example). Identificar evidências de transformações químicas a partir do resultado de misturas de materiais que originam produtos diferentes dos que foram misturados (mistura de ingredientes para fazer um bolo, mistura de vinagre com bicarbonato de sódio etc.).	Homogeneous and heterogeneous mixtures.		- Defines characteristics of physical and chemical changes. - Investigates physical and chemical changes in the lab. - Correlates physical and chemical changes in daily life situations.		TA		
3	SKILL - (EF06CI03) To select the most suitable methods for separating different substances from a heterogeneous system by choosing the best available option (e.g. producing salt, oil distillery, and others).	Separating mixtures		- Identify what mixtures are and how some mixtures can be separated using magnetism and filtration. - Describe the process of evaporation and filtration.		TA		
4	SKILL - (EF06CI04) To associate the synthesis of new drugs with other synthetic materials towards scientific and technological development, recognizing the benefits and evaluating environmental and social impacts.	Synthetic materials		- Describe how humans use raw materials to synthesize new things. - Relate how raw materials extraction affects the environment. - Propose more environmental friendly strategies. - Understand the bioethics concepts associated with new drugs and other materials synthesis.		ST		
	UNIDADE TEMÁTICA - Life and evolution							
7	SKILL - (EF06CI05) To explain the basic organization of cells and their roll as a structural e functional unity for all living beings.	Cell as an unity for life		- Identify the basic structures of a cell. - Identify and describe the prokaryotic and eukaryotic cells. - Compare an animal and a plant cell.			TA	
8	SKILL - (EF06CI06) To understand, by the analysis of drawings and/or physical and digital models, that all organisms are a complex array of systems with different levels of organization.	Cell as an unity for life		- Understand and describe the bacteria. - Analyze and explain the plants. - Understand the main characteristics of invertebrate animals.			TA	
9	SKILL - (EF06CI07) To explain the roll of the nervous system in coordinating motor and sensorial actions of our body, based on the analysis of its basic structures and functions.	Interaction between the nervous and locomotive system.		- Describe the nervous system and the body's senses. - Identify and analyse nerves, nerve cells, and the spinal cord. - Describe and explain the synapsis process. - Understands the function of the spinal cord.			TA	
10	SKILL - (EF06CI09) To understand the structure, support and movement of animals are a result of how our bones, muscles and nervous systems work together.	Interaction between the nervous and locomotive system.		- Identify the skeleton function. - Describe the main characteristics of the bones. - Describe the main characteristics of the muscles. - Identify the functions of the nervous system. - Describe how a neuron works.			TA	
11	SKILL - (EF06CI10) To explain how the functioning of our nervous system may be affected by psicoactive drugs.	Interaction between the nervous and locomotive system.		- Identify how different drugs can affect our brain. - Identify the difference between chemical and physical addiction. - Describes the hazards that can be caused by drugs.			TA	
12	SKILL - (EF06CI08) Explain the importance of sight (image caption and interpretation) during organism interaction with the environment, based on the human eye functions; select proper lenses to correct viewing defects.	Vision Corrective lenses		- Describes the vision mechanism. - Explains the role of light and its importance for vision. - Compare the vision in humans with other animals and living beings. - Compares the vision in humans with how a camera works.			TA	
	UNIDADE TEMÁTICA - Universe							
14	SKILL - (EF06CI11) To identify the different layers that makes our planet Earth (including the internal layers and atmosphere), and its main characteristics.	Shape, structure and earth movements		- Describe some processes which can cause rapid and slow changes to Earth´s surface. - Identify the Earth's parts and layers.				TA
15	SKILL - (EF06CI12) To identify the different types of rocks, related to fossil formation, and sediment rocks from different geological periods.	Shape, structure and earth movements		- Identify the three main types of rocks (igneous, metamorphic and sedimentary). - Understand what fossils are and how they are created. - Understand the relevance of fossil studies to the understandment on life's evolutionary history.				TA
16	SKILL - (EF06CI13) To select arguments and evidences that shows the spherical aspect of Earth.	Shape, structure and earth movements		- Identify the different evidences that shows the spherical aspect of Earth.				TA
17	SKILL - (EF06CI14) To infer that the changes on the shadow of a stick during the day in different periods of the year are an evidence of the movements related to how the Earth moves around the sun, that may be explained by Earths' rotation, translation, and its rotation axis.	Shape, structure and earth movements		- To draw conclusions from at least one experiment that shows how Earth's movement around the Sun and itself.				TA

7° ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1° Trimestre	2° Trimestre	3° Trimestre
	UNIDADE TEMÁTICA - AREA - Energy and matter							
1	SKILL - (EF07CI01) To discuss the application, throughout history, of simple machines and to propose solutions and inventions for daily mechanical tasks.	Simple machines		- Describe what simple machines are and how relevant they were for the development of the human species. - Propose solutions to daily tasks based on the concept of simple machines.		TA		
2	SKILL - (EF07CI02) To understand the difference between heat, warm and thermal sensation in different situations of daily thermodynamic balance.	Heat transfer		- Describe what heat is and how heat energy can be transferred. - Understands what thermodynamic balance is and its implications.		TA		
3	SKILL - (EF07CI03) To use the acquired heat transfer knowledge to justify the use of some materials (conductors and insulators) in our daily life, explaining the functioning of some equipment (e.g. thermal bottle, sun panels, and etc.) and/or to build technological solutions upon that knowledge.	Thermodynamic balance and life on Earth		- Perform an experiment in the lab to observe whether metal or plastic is a better conductor of heat. - Select the most suitable materials for different conditions.		TA		
4	SKILL - (EF07CI04) To evaluate the role of thermodynamic balance in sustaining life on Earth, for thermal machines to function, and other daily scenarios. Avaliar o papel do equilíbrio termodinâmico para a manutenção da vida na Terra, para o funcionamento de máquinas térmicas e em outras situações cotidianas.	Thermodynamic balance and life on Earth		- Understands how heat energy is transferred through convection and radiation. - Investigate about other forms of energy that can change and give off heat. - Understands the human species' role on the Earths' thermodynamic balance.		TA		
5	SKILL - (EF07CI05) To discuss the use of different fuels and thermal machines throughout history, to evaluate advances, economical questions, and environmental/social issues caused by the production and use of these materials and machines.	Fuels history and thermal machines.		- Understands the historical aspects regarding fossil fuel and thermal machines. - Reflects and concludes that fossil fuels need to be wisely used. - Reflect about the uses of oil and natural gas.		S		
6	SKILL - (EF07CI06) To discuss and to assess economical, cultural, and social changes, both in our daily and work life, due to the development of new material and technologies (e.g. automation and computerization).	Simple machines		- Discuss the technological tendencies that drive our species development. - Discuss the necessary skills to face the new challenges that our daily and work life will meet.		S		
	UNIDADE TEMÁTICA - AREA - Life and evolution							
8	SKILL - (EF07CI07) To name the main brazilian ecosystems, regarding the landscape, ammount of water, type of soil, light availability, temperature, and etc., correlating those aspects to biotic factors.	Ecosystem diversity		- Identifies the main brazilian ecosystem and its most important aspects.				TA
9	SKILL - (EF07CI08) To assess how the impacts caused by natural phenomenas or changes in the physical, biological or social components of an ecosystem affects species, threatening or provoking their extinction, changing habits, migration, and etc.	Natural phenomena and environmetnal impacts.		- Recognizes how natural phenomena are related to environmental impacts.				TA
10	SKILL - (EF07CI09) To understand how the health condition of communities, cities or states works, based on the analysis and comparison of health indicators (e.g. childs death rate, sanitation, and water spread diseases, and others) and the results of health public policiy.	Public health indicators and programs. Programas e indicadores de saúde pública		- Recognizes basic health indicators and most relevant diseases in the Federal District.				TA
11	SKILL - (EF07CI10) To argue about the relevance of vaccination for public health, based on information about how it acts on our organism, their historic role for maintaining individual and collective health to diseases eradication.	Public health indicators and programs		- Understands the relevance of vaccines to public health. - Understands the effect of vaccines in our organisms.				TA
12	SKILL - (EF07CI11) To historically analyze the use of technology, including digital, in the different dimensions of human life, considering environmental and quality of life indicators.	Public health indicators and programs		-Understands the benefits and hazards related to the use of technology.				TA
	UNIDADE TEMÁTICA - AREA - Universe							
13	SKILL - (EF07CI12) To demonstrate that air is a mixture of gases, identifying its composition, and discuss natural or man-made phenomena that can alter this composition.	Air composition		- Understand that the air is a composition of gases. - Discuss in a debate the natural and human activities that change Earth ś atmosphere.			TA	
14	SKILL - (EF07CI13) To describe the natural mechanism regarding greenhouse effects, its fundamental role for lifes development on Earth, discuss human actions responsible for its artificial increase (burning of fossil fuels, deforestation, fires etc.) and select and implement proposals for reversing this scenario.	Greenhouse effect		- Describe the natural mechanism of the greenhouse effect and its importance to life on Earth. - Identify how human activities are responsible for its artificial alteration.			TA	
15	SKILL - (EF07CI14) To explain the relevance of the ozone layer for life on Earth, identifying factors that increase or decrease its presence in the atmosphere, and discuss individual and collective proposals for its preservation.	Ozone layer		-Analyse the importance of the ozone layer for life on Earth. - Reflect how human activities affect the ozone layer. - Investigate forms of preservation the ozone layer.			TA	
16	SKILL - (EF07CI15) To understand natural phenomena (such as volcanoes, earthquakes and tsunamis) and justify the rare occurrence of these phenomena in Brazil, based on the tectonic plate model.	Natural phenomena (volcanoes, earthquake, and tsunamis)		- Describe and identify the parts of an earthquake. - Elaborate a comparative chart of landslides and tsunamis.			TA	
17	SKILL - (EF07CI16) To understand the shape of Brazilian and African coasts based on continentals drift theory	Tectonic plates and continental drift		- Identify the Earth's destructive and constructive processes. - Analyse and describe the movement of tectonic plates.			TA	

8° ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1° Trimestre	2° Trimestre	3° Trimestre
	UNIDADE TEMÁTICA - AREA - Energy and matter							
2	SKILL - (EF08CI01) To identify and classify different sources (renewable and non-renewable) and types of energy used in homes, communities or cities.	Sources and types of evergy		- Identify and analyse renewable, nonrenewable, and inexhaustible energy resources. - Analyse and conclude that fossil fuels need to be wisely used. - Investigate about nuclear energy and nuclear power plants.		TA		
3	SKILL - (EF08CI03) To classify residential electrical equipment (shower, iron, lamps, TV, radio, refrigerator, etc.) according to the type of energy transformation (from electrical to thermal, light, sound and mechanical energy, for example).	Energy transformation		- Understand the different uses of electricity in our house and daily life. - Categorizing different energy types and transformations.		TA		
4	SKILL - (EF08CI04) To estimate the consumption of household appliances from the power data (described on the equipment itself) and average time of use to assess the impact of each equipment on monthly household consumption.	Electric energy consumption and measurement		- Identify the International Standard (IS) unit for measuring electricity. - Use the acquired information for developing sustainable behaviour. - Calculate energy consumption according to the International Standard System.		TA		
5	SKILL - (EF08CI02) To build electrical circuits with batteries, wires and lamps or other devices and compare them to residential electrical circuits.	Electric circuits		- Understand what electrical circuits are and the dangers associated with its misuse. - Build an electric circuit, explaining its main steps.		TA		
6	SKILL - (EF08CI05) To offer collective actions to optimize the use of electricity in your school and / or community, based on the selection of equipment according to sustainability criteria (energy consumption and energy efficiency) and responsible consumption habits.	Electric energy and conscious use.		- Identify environmental friendly actions and promote responsible consumption habits.		TA		
7	SKILL - (EF08CI06) To discuss and evaluate power generation plants (thermoelectric, hydroelectric, wind, etc.), their similarities and differences, their socio-environmental impacts, and how this energy arrives and is used in your city, community, home or school.	Electric energy and conscious use.		- Discuss about biomass, wind, solar, and geothermal energy. - Reflect about the uses of oil and natural gas.		TA		
	UNIDADE TEMÁTICA - AREA - Life and evolution							
10	SKILL - (EF08CI07) To compare different reproductive processes in plants and animals in relation to adaptive and evolutionary mechanisms.	Reproductive mechanisms		- Recognizes different sexual and asexual reproductive processes with an emphasis on animals.			TA	
15	SKILL - (EF08CI08) To analyze and explain the changes that occur at puberty considering the role of sex hormones and the nervous system.	Reproductive mechanisms		- Explains the changes that occur at puberty, considering the role of sex hormones and the nervous system.			TA	
16	SKILL - (EF08CI09) To compare the mode of action and the effectiveness of different contraceptive methods and justify the need to share responsibility in choosing and using the most appropriate method for preventing early and unwanted pregnancies and Sexually Transmitted Diseases (STDs).	Sexuality		- Understands the social purpose of contraceptive methods and how only a few can prevent STD's and unwanted pregnancies.			TA	
17	SKILL - (EF08CI10) To identify the main symptoms, modes of transmission and treatment of some STDs (with emphasis on AIDS), and discuss prevention strategies and methods.	Sexuality		- Identifies the main symptons, modes of transmission and treatment of some STDs (with emphasis on AIDS), and discuss prevention strategies and methods.			TA	
18	SKILL - (EF08CI11) To select arguments that highlight the multiple dimensions of human sexuality (biological, sociocultural, affective and ethical).	Sexuality		- Recognizes the multiple dimensions of human sexuality.			TA	
	UNIDADE TEMÁTICA - AREA - Universe							
11	SKILL - (EF08CI12) To explain, through the construction of models and observation of the Moon in the sky, the occurrence of its phases and eclipses, based on the relative positions between Sun, Earth and Moon.	Sun, Earth and Moon systems		- Identify the different Moon's phases. - Understand how they appear, based on Earth's and Moon's movements around the Sun.				TA
12	SKILL - (EF08CI13) To represent the Earth's rotation and translation movements and analyze the role of Earth's inclination and rotation axis in relation to its orbit in the occurrence of the seasons, and using three-dimensional models.	Sun, Earth and Moon systems		- Identify the different seasons our planet have. - Understand how opposing seasons occur between the Southern and Northern hemispheres. - Understand the difference between the terms solstice and equinox.				TA
13	SKILL - (EF08CI14) To relate regional climates to atmospheric and oceanic circulation patterns and uneven warming caused by the shape and movements of the Earth.	Climate		- Identify biotic and abiotic factors that play a role on determining the climate in different regions.				TA
19	SKILL - (EF08CI15) To identify the main variables involved in weather forecasting and simulate situations in which they can be measured.	Natural phenomena		- Recognizes the main variables involved in weather forecasting and simulate situations in which they can be measured.				TA
20	SKILL - (EF08CI16) To discuss initiatives that contribute to reestablishing environmental balance based on the identification of regional and global climate changes caused by human intervention.	Sustentability		- To propose relevant strategies towards a more sustainable behaviour.				TA

9º ANO ENSINO FUNDAMENTAL							
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem	1º Trimestre	2º Trimestre	3º Trimestre
	UNIDADE TEMÁTICA/ AREA Energy and Matter						
1	(EF09CI01) To investigate changes in the physical state of matter and explain these transformations based on the submicroscopic constitution model.	Matter structure		- Explain changes in physical state of the matter - Relates changes in the physical state to temperature and pressure - Understands the relationship between the physical state of matter and atoms		TA	
2	(EF09CI02) To compare quantities of reagents and products involved in chemical transformations, establishing the proportion between their masses.	Quantitative aspects of chemical transformations		- Know how to read a chemical reaction -Differentiate reagents and products in a solution - Balance a chemical equation		TA	
3	(EF09CI03) To identify models that describe the structure of matter (constitution of the atom and composition of simple molecules) and recognize its historical evolution.	Quantitative aspects of chemical transformations		- Recognizes an atom structural model - Compares the different atomic models and understands their importance through scientific history - Identify the atoms components, like eletrons, protons and neutrons		TA	
4	(EF09CI04) To plan and execute experiments that show that all colors of light can be formed by the three primary colors of light and that the color of an object is also related to the color of the light that illuminates it.	Colors and light		- Recognizes primary colors (S) - Understands that the Sun is white and its light can be divided (S) - Knows the concepts of reflection and refraction of light - Understands that light is a wave		TA	
5	(EF09CI05) To investigate the main mechanisms involved in the transmission and reception of image and sound that have revolutionized human communication systems.	Transmission and reception of image and sound		- Comprehends how waves are transmitted and transferred - Investigates the history of audio and image electronics		TA	
6	(EF09CI06) To classify electromagnetic radiation by its frequencies, sources and applications, discussing and evaluating the implications of its use in remote control, cell phone, X-ray, microwave oven, photocells etc.	Electromagnetic radiation		- Learns different types of waves - Grasps the the properties of waves, like frequency and wavelength - Compares different types of waves, including its origins and uses		TA	
7	(EF09CI07) To discuss the role of technological advances in the application of radiation in diagnostic medicine (X-ray, ultrasound, nuclear magnetic resonance) and in the treatment of diseases (radiotherapy, laser optical surgery, infrared, ultraviolet, etc.).	Radiation and its applications in human health		- Learn the history of radiation discovery - Understand radiation's risks - Investigate radiation's uses through history and in the modern world		TA	
	UNIDADE TEMÁTICA/ AREA Life and evolution						
8	(EF09CI08) To associate gametes with the transmission of hereditary characteristics, establishing relationships between ancestors and descendants.	Heredity		- Comprehend the gametes to heredity characteristic transmission and recognize the principles of heredity, setting relationships between ancestrals and descendents			TA
9	(EF09CI11) To discuss the evolution and diversity of species based on the performance of natural selection on variants of the same species, resulting from the reproductive process.	Heredity and Evolution theories		- Analize Mendel's ideas about heredity factors, gametes, segregation and fecundation in the transmission of heredity transmission in different organisms. - Distinguish Lamarck and Darwin evolutionary ideas published in scientific and historical texts, identifying similarities and differences among these ideas and their importance to explain the biological diversity - Think over relevant information about living organisms variation and discuss the evolution and species diversity based on the action of natural selection and the variables found in the same species, resulting from an evolutive process			TA
10	(EF09CI12) To justify the importance of conservation units for the preservation of biodiversity and national heritage, considering the different types of units (parks, reserves and national forests), human populations and the activities related to them.	Biodiversity preservation		- Establish relations with the importance of conservation units, biodiversity preservation, and national patrimony, considering human population and river basins.			TA
11	(EF09CI13) To propose individual and collective initiatives to solve environmental problems in the city or community, based on the analysis of successful consumption and sustainable actions	Biodiversity preservation		- Draw up a list and propose individual and group initiatives to solve community or city environmental problems based on the analysis and well succeed conscious sustainable and consumption actions.			TA
	UNIDADE TEMÁTICA/ AREA Universe						
12	(EF09CI14) Describe the composition and structure of the Solar System (Sun, rocky planets, gas giant planets and smaller bodies), as well as the location of the Solar System in our Galaxy (the Milky Way) and in the Universe (just one galaxy out of billions).	Composition, structure and location of the Solar System in the Universe		- Analyse what stars are and some characteristics of the sun. - Describe the asteroids and the asteroid belt. - Understand that the Earth is not static in the universe just like the other celestial bodies. - Describe the different types of planets found in our solar system.	TA		
13	(EF09CI15) Relate different readings of the sky and explanations about the origin of the Earth, the Sun or the Solar System to the needs of different cultures (agriculture, hunting, myth, spatial and temporal orientation, etc.)	Astronomy and culture		- Understand about constellations and how stars appear to move.	TA		
14	(EF09CI16) To select arguments about the viability of human survival outside of Earth, based on the conditions necessary for life, the planets characteristics, distances and time involved in interplanetary and interstellar travel.	Human life outside of planet Earth		- Elaborate and select arguments about human survival feasibility out of Earth. - Estabilish relations between technological advances conquered by humanity along with spatial exploration and its interferences in human life style.	TA		

9° ANO ENSINO FUNDAMENTAL								
	Habilidade BNCC	Objeto de conhecimento		Objetivos de aprendizagem		1° Trimestre	2° Trimestre	3° Trimestre
15	(EF09CI17) To analyze the evolutionary cycle of the Sun (birth, life and death) based on what we know about the stages of stars evolution of different dimensions and the effects of this process on our planet.	Composition, structure and location of the Solar System in the Universe		- Identify and reflect about solar eruptions. - Understand the finitude of the sun and its impacts on planet Earth.		TA		