

SCUOLA PRIMARIA : SCIENZE (INGLESE)

COMPETENZA CHIAVE EUROPEA : use and application of knowledge and methodologies that explain the natural world.	TRAGUARDI PER LO SVILUPPO	OBIETTIVI DI APPRENDIMENTO			PRINCIPI METODOLOGICI
COMPETENZE SPECIFICHE		CLASSE PRIMA	CLASSE SECONDA	CLASSE TERZA	
<p><u><i>Develops the basic process skills of Science:</i></u></p> <p>Observing, classifying, measuring, questioning, manipulating, experimenting, interpreting, inferring, predicting, hypothesizing, communicating and recording.</p>	<p>OBJECTS AND MATERIALS</p> <ul style="list-style-type: none"> The student develops an attitude of curiosity and ways of looking at the world that impel him to seek explanations of what he sees happen. 	<ul style="list-style-type: none"> Explores simple objects in the immediate surroundings. Observes the basic qualities, properties and functions of simple objects through drawings, charts and visual support. Discovers how liquids, food, forces, movement, heat, electricity are used in everyday life. Begins to understand the importance of good recycling habits. 	<ul style="list-style-type: none"> Explores simple objects, their qualities and properties through direct observation, to observe their functions and uses through direct interaction; Classifies objects according to their properties; Describes simple phenomena of everyday life connected to liquids, food, forces, movement, heat, electricity, etc. Understands the different recyclable materials 	<ul style="list-style-type: none"> Explores simple objects, their qualities and properties through direct observation, to recognize their functions and uses through direct interaction; Classifies objects according to their properties; Recycles materials and understands the importance for the environment Identifies tools and units of measure appropriate to the problem situations under consideration and grade-level math to treat the data; Recognizes natural and man-made materials; Describes simple phenomena of everyday life connected to liquids, food, forces, movement, electricity, heat, etc. 	<ul style="list-style-type: none"> Visual Literacy - graphic organizers, use of charts, graphs & figures, video & multimedia support. Guided discovery Modeling Bridging Problem Solving Contextualization – meaning-based context and universal themes. Interpersonal Strategies - group projects & cooperative learning, partner learning, Think/Pair/Share. Structure – consistent routines, road maps. Topic specific Language Development – scaffolding /building the students background knowledge.

<p><u>Applies scientific knowledge and skills:</u></p> <p><i>Fosters the ability to ability to apply scientific knowledge and skills to practical situations and problem solving.</i></p>	<p>OBSERVATION AND EXPERIMENTATION IN THE FIELD</p> <ul style="list-style-type: none"> • With the guidance of the teacher and in collaboration with classmates (or individually), uses the scientific method to carry out simple experiments. • Identifies similarities and differences. • Records, charts, labels, creates models, organizes information. • Communicates findings in a variety of ways (orally and written) using appropriate/specific vocabulary/language. • Uses variety of resources (own experience, others, reading texts) 	<ul style="list-style-type: none"> • Classifies living and non-living things in their surrounding environment. • Begins to understand the basic needs of living things. • Classifies animals into their simple categories. • Discovers the basic life cycles of plants and animals. • Understands that daytime and nighttime are connected to the movement of the Earth. • Identifies the differences in temperature and weather through the seasons. 	<ul style="list-style-type: none"> • Observes the significant moments in the life of plants and animals, experimenting through hands-on activities. • Identifies the parts of plants and their different roles, how they grow and their basic needs. • Becomes familiar with the periodicity of celestial phenomena (day / night, paths of the sun, seasons). 	<ul style="list-style-type: none"> • Observes the significant moments in the life of plants and animals, experimenting through hands-on activities. • Identifies similarities and differences in the development paths of plant and animal organisms. • Observes the different characteristics of soil and water through outdoor activities. • Observes and interprets the natural changes in the environment (caused by sun, weather, water, etc.) and those caused by man (urbanization, farming, industrialization, etc..). • Becomes familiar with the variability of climate (winds, clouds, rain, etc..) And the periodicity of celestial phenomena (day / night, paths of the sun, seasons, the earth's revolution, the Solar System). 	<ul style="list-style-type: none"> • Visual Literacy - graphic organizers, use of charts, graphs & figures, video & multimedia support. • Guided discovery • Modeling • Bridging • Problem Solving • Contextualization – meaning-based context and universal themes. • Interpersonal Strategies - group projects & cooperative learning, partner learning, Think/Pair/Share. • Structure – consistent routines, road maps. • Topic specific Language Development – scaffolding /building the students background knowledge.

<p><u><i>Understands the principles of physical, life and earth science.</i></u></p> <p>Develops an understanding of the individual's place in the natural world and the inter-relationships between systems.</p>	<p>HUMAN BEINGS, LIVING THINGS, AND THE ENVIRONMENT</p> <ul style="list-style-type: none"> Acquires proper health and environmental personal habits Develops self-confidence/respect, exploring and beginning to understand the organization of the human body. 	<ul style="list-style-type: none"> Understands that the human body is alive with different parts and functions. Begins to understand that human beings have basic needs to survive. Begins to understand the importance of a healthy diet and regular exercise. 	<ul style="list-style-type: none"> Becomes aware of the human body and its senses and discovers the difference between human and animal senses. Becomes aware of the human body's needs to stay healthy and to grow – food and drink, exercise and diet, the food pyramid. Observes the differences and similarities between human beings and animals and between living and non-living things. Observes the plants and animals around us – our environment. 	<ul style="list-style-type: none"> Observes and become aware of how the body works, of how it moves and how it grows, with a special emphasis on bones and the skeleton, muscles, exercise and movement. Understands the importance of good nutrition through a balanced diet, of other behaviors that favor a healthier life, such as exercise and dental hygiene. Observes the different diets and teeth of other animal species in relation to the habitats in which they live. Discovers, through observation, the importance of living in a healthy environment and the damage done by pollution. 	<ul style="list-style-type: none"> Visual Literacy - graphic organizers, use of charts, graphs & figures, video & multimedia support. Guided discovery Modeling Bridging Problem Solving Contextualization – meaning-based context and universal themes. Interpersonal Strategies - group projects & cooperative learning, partner learning, Think/Pair/Share. Structure – consistent routines, road maps. Topic specific Language Development – scaffolding /building the students background knowledge.

COMPETENZA CHIAVE E UROPEA <i>inserire competenza relativa alla disciplina</i>	TRAGUARDI PER LO SVILUPPO	OBIETTIVI DI APPRENDIMENTO		PRINCIPI METODOLOGICI
COMPETENZE SPECIFICHE		CLASSE QUARTA	CLASSE QUINTA	
<p>Develop the process skills of science: observing, classifying, drawing, labeling, measuring, questioning, manipulating, experimenting, interpreting, inferring, predicting, hypothesising, communicating and recording.</p> <p>Foster the ability to apply scientific knowledge and skills to practical situations and problem solving.</p> <p>Develop an understanding of the individual's place in the natural world and the inter-relationships between systems.</p>	<p>Objects, Materials and Transformations Fosters a spirit of curiosity and scientific inquiry</p>	<ul style="list-style-type: none"> • Identify/Explore main properties of matter (solids, liquids, and gases) • To recognize differences and classify matter (solids, liquids and gases) • To describe changes that occur when matter [for example, water] are heated or cooled or mixed with other matter. • To observe simple instruments used to measure matter • To observe/describe simple physical and chemical changes. 	<ul style="list-style-type: none"> • To describe simple phenomena connected to energy • To learn/observe that energy is transferred • To identify/explore simple properties of energy (light and sound) • To understand how energy travels (light and sound) • To learn about energy and safety. • To make simple connections of everyday life to energy and all living things 	

Observe and Experiment in the Field

- With the guidance of the teacher and in collaboration with classmates (or individually), uses the scientific method to carry out simple experiments.
- Identifies similarities and differences.
- Records, charts, labels, creates models, organizes information.
- Communicates findings in a variety of ways (orally and written) using appropriate/spec ific vocabulary/langu age.
- Uses variety of resources (own experience, others, reading texts, ICT)

- Plan and prepare for experiments (have materials, be prepared)
- Follow Procedures, Perform and Record Findings
- Reflect/Interpret on the effectiveness of actions performed and draw conclusions
- Communicate Findings in a variety of ways
- Make models in order to discover the attributes of the real thing
- Proceed with regular observations using instruments such as the naked eye, a magnifying glass, a microscope, etc.
- Use instruments (balance, measuring cup, cylinders) to measure quantities such as size, weight and look for patterns in data
- Analyze data by making charts, tables, graphs
- Observe that things can change
- Use school garden to identify and make connections
- Manipulate materials through teacher direction and free discovery (Work hands on with soil, insects, fungi, plants, etc.)
- Compare and contrast information collected

- Plan and prepare for experiments (have materials, be prepared)
- Follow Procedures, Perform and Record Findings
- Reflect/Interpret on the effectiveness of actions performed and draw conclusions
- Communicate Findings in a variety of ways
- Make models in order to discover the attributes of the real thing
- Proceed with regular observations using instruments such as the naked eye, a magnifying glass, a prism, a microscope, etc.
- Describe/Investigate functions and structures of organs of body systems
- Identify common things that can be considered to be systems (plant, transportation system, human beings)
- Analyze/records data by making charts, tables, graphs
- Observe that things can change
- Manipulate materials through teacher direction and free discovery (Work hands on with batteries, wires, circuits)
- Use the body and senses for observation
- Compare and contrast information collected

	<p>Man, Living Things, The Environment</p> <ul style="list-style-type: none"> • Acquires proper health and environmental personal habits • Develops self-confidence/ respect exploring and beginning to understand the organization of the human body. 	<ul style="list-style-type: none"> • To understand the importance of a healthy diet, exploring digestion and food groups • To understand all living things are made of cells- discover, describe, and identify plant and animal cells • To learn living things are grouped in different kingdoms. • To investigate the features of living things (animals, plants and fungi) • To recognize and identify the needs of all animals • To understand how animals and plants in are suited to their environment. • To investigate adaptations in terms of animal body parts and behaviors • To recognize the needs of plants • To identify the parts of plants and their role/connection to the environment • To investigate environments and ways in which these affect all living things and the systems they belong to 	<ul style="list-style-type: none"> • To understand body organization in terms of cells, tissue, organs, systems • Build awareness of choices that affect our systems and our overall health • To learn about/identify different body systems • Understand the parts and functions of each system • To understand how the systems work together (skeletal system works with the muscular system) • To continue studies on how organisms function-- from plant to human reproduction. • To learn about the different parts and functions of the eye and the ear • To make connections between the energy and the sense organs 	
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