



SCIENCE

Grade 4

**Three-Term Budget Of Work (BOW)
for Learning Competencies**

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Three-Term Budget Of Work For Learning Competencies

First Term	
Content Standard	- Science inventions have brought about major changes to our daily lives. - Chemical properties of materials determine their uses. - Communication skills and open mindedness are needed in solving environmental issues. - Animals and plants have systems that function to keep them alive. - Animals and plants live in habitats that meet their basic needs.
Performance Standard	By the end of the term, learners describe chemical properties of materials and changes to them. They demonstrate an understanding that science processes can solve everyday problems and use creativity and determination to provide examples. They exhibit objectivity and open-mindedness in gathering information related to environmental issues and concerns in the community. They identify that plants and animals have systems whose function is to keep them alive. They observe, describe, and create representations to show how living things interact with their habitat, survive, and reproduce in specific environments.
Week	Learning Competency
1 to 2	Science Inventions - Use information from secondary sources to identify a famous Filipino and/or foreign scientist and their invention/s. - Use information from the home or the local community to identify a science invention and explain its impact on their everyday life.

3 to 5	Materials and their Uses - Describe the chemical properties of materials, such as they can be burnt, react with other materials, or are degradable or biodegradable. - Describe changes in properties of materials when exposed to certain changes in temperature, such as changes when wood or coal are burned. - Demonstrate ways to minimize harmful changes in materials, such as restriction of burning of waste materials, and care in handling reactive materials.
6 to 7	Gathering Scientific Information - Identify issues and concerns in the local community and how they could be addressed by science, such as the treatment of waste. - Apply science process skills and attitudes in conducting a guided survey about environmental issues and concerns including grouping and classifying, communicating, and open mindedness.
8 to 9	Systems in Plants and Animals - Describe in simple terms how the following human body systems work: muscular, skeletal, digestive, circulatory, and respiratory. - Observe the root and shoot system in plants and describe why they are important.
10 to 11	Plants and Animals and their Habitats - Use a drawing or diagram to classify some Philippine animals and plants, based on their habitat: some live on land (terrestrial), live in water (aquatic) or fly in the air (aerial). - Make a list or draw up a table with examples of animals and plants in a particular habitat, such as a garden, rice field, seashore, and mangrove swamp.
Suggested Activities	Scientist–Invention Profile Card – Learners use secondary sources to create a short profile of a Filipino/foreign scientist and their invention with key facts and contributions. Community Invention Impact Interview – Learners gather information at home/community about one common invention and write a brief explanation of its impact on daily life.

	• Material Properties Sorting Lab – Learners classify materials based on chemical properties (burnable, reactive, biodegradable) using teacher-provided samples or picture cards. • Heat Change Observation Activity – Learners observe teacher-led demonstrations or safe simulations of how temperature changes material properties and record before-and-after descriptions. • Safe Practices and Waste Management Action Plan – Learners develop a simple action plan showing ways to minimize harmful material changes (e.g., avoiding burning waste, safe handling). • Community Environmental Issues Survey – Learners conduct a guided survey on local environmental concerns, then group and classify responses using a simple tally table. • Living Things Systems and Habitat Mapping – Learners complete labeled diagrams of human body systems and plant root/shoot systems, then classify Philippine plants and animals by habitat using a table.
Suggested Performance Tasks	• Create a simple model, illustration or write a story about a favorite science invention that you use in everyday life. • Plan and produce a sample of useful fertilizer from household waste. • Create a poster exhibit with labeled diagrams explaining the five human body systems, the root and shoot systems, and a habitat-based classification chart (terrestrial, aquatic, aerial) of Philippine plants and animals with a table of examples from one chosen habitat.

Second Term	
Content Standard	- Animals have life cycles that include development and reproduction. - Animals can be grouped according to the food that they eat. - Food chains show a series of living things that depend on each other for food. - Using drawings, tables, and flowcharts is an important skill in learning science concepts and in learning about science processes. - Pushes and pulls can change the position and shape of objects. - Science processes help in observing and predicting how things move. - Gathering scientific information helps explain the behavior of objects and materials. - Magnets affect some objects and materials without touching them.
Performance Standard	By the end of the term, learners use flow charts to compare the different stages in the life cycle of animals and show the feeding relationship among different organisms within a given environment. They use simple equipment and processes to measure and record data related to movement and describe and predict the way things around them move using more scientifically technical language and concepts, such as speed and force. They demonstrate an understanding that science processes are used to gain deeper understanding about forces and energy that cannot be seen directly, including the properties of magnet, light, sound, and heat.
Week	Learning Competency
1	Life Cycles of Animals Use flow charts to compare the different stages in the life cycle of animals, such as a butterfly, frog, chicken, and human.
2	Animals and the Food they Eat Use information from secondary sources to group animals according to the food they eat. Some are:

	a. plant eaters (herbivores), b. meat eaters (carnivores), and c. plant and meat-eaters (omnivores)
3	Food Chains • Draw a simple food chain using living things from the Philippines and label them as herbivores, carnivores, and omnivores.
4 to 9	Forces and Movement and Observing, Measuring, and Predicting • Participate in guided activities to discover and predict how rigid and soft objects can be moved and/or changed in shape. • Determine how forces can change the shape of objects such as when they are pushed, pulled, stretched, bent, twisted, or squeezed. • Measure accurately the distance and time when things move using simple equipment. • Identify how far an object moves in a given time is called speed. • Construct and label simple graphs of different speeds including stationary and uniform speeds, both fast and slow. • Participate in guided activities to demonstrate that pushes and pulls can be used to change the speed and direction of an object including making it go faster, turn it to a different direction, slow it down, and stop it.
10 to 11	Magnets and Observing, Measuring, and Predicting • Carry out guided investigations to identify the properties of magnets, including how they affect other magnets and objects made of different materials. • Identify examples of how objects can affect other objects even when they are not in contact with each other, such as magnets attracting other objects, light from the sun affecting our eyes, and skin, and loud noises hurting our ears.
Suggested Activities	• Life Cycle Flowchart Comparison – Learners create and compare flowcharts of the stages of a butterfly, frog, chicken, and human using pictures and key stage labels. • Diet Grouping Research Cards – Learners use short secondary-source info cards

	to classify animals as herbivores, carnivores, or omnivores and justify their grouping. • Philippine Food Chain Strip-Building – Learners arrange local organism strips into a correct food chain and label each as herbivore, carnivore, or omnivore. • Push–Pull Deformation Stations – Learners rotate through stations using rigid and soft objects to test pushing, pulling, stretching, bending, twisting, and squeezing, then record observed shape changes. • Distance–Time Motion Measurement Drill – Learners measure distance and time of a moving object (toy car/ball) using a meterstick and stopwatch, then compute speed. • Speed Graphing Workshop – Learners plot and label simple graphs showing stationary, uniform, fast, and slow speeds using their collected data. • Magnet Investigation and Non-Contact Effects Demo – Learners test materials for magnetism, observe magnet–magnet interactions, and demonstrate non-contact effects using magnets (and brief examples of light and sound).
Suggested Performance Tasks	• Produce a mini “Philippine Animals Survival Booklet” that compares animal life cycles using flow charts, classifies animals by what they eat using researched information, and includes one illustrated food chain using local organisms labeled as herbivores, carnivores, and omnivores. • Develop a poster to show some sources and uses of heat energy in your home or neighborhood. • Design and test a “push–pull challenge course” where a toy car must speed up, slow down, stop, and change direction, then measure distance and time and compute speed.

Third Term	
Performance Standard	By the end of the term, learners apply their observation skills and objectivity to identify where energy is evident in their local communities and how it is used by people. They use simple equipment to identify how types of soil hold water to support the growth of plants. They use instruments and secondary sources to measure and describe the characteristics of weather and use the information to make predictions about weather patterns in their local area. They demonstrate appreciation for the dangers of extreme weather events and use safe practice to protect themselves if they are caught in bad weather. Learners use personal observations and reliable secondary information sources to describe the Sun and explain its importance to life on Earth.
Content Standard	• Energy is present whenever there is movement, sound, light, or heat. • Soil and water resources are needed by plants and animals to live and grow. • Characteristics of the weather can be observed and measured. • The Sun is a ball of hot gases about 100 times the size of Earth, which radiates light energy needed by living things.
Week	Learning Competency
1 to 2	Sound, Light, and Heat Energy • Identify that energy is something that can cause change including light, sound, and heat energy. • Observe and identify sources and uses of light, sound, and heat energy at school, at home and in the local community.
3 to 6	Soils • Participate in guided activities using simple equipment to compare different types of soil including sandy, clay, silt, and loam, including comparing the ability of the soils to hold water. • Recognize that water is one of the basic needs of plants and animals. • Participate in a guided investigation to identify the effect of different types of soil on the growth of

	plants.
6 to 9	Characteristics of Weather - Identify some of the basic characteristics used to describe the weather, such as air temperature, air pressure, wind speed, wind direction, humidity, rain, and cloud cover. - Use weather instruments to measure and record some of the characteristics of weather during a school day. - Examine a local weather chart to make simple interpretations about the local weather and how it might change and describe and practice safety precautions to use during poor or extreme weather conditions.
10 to 11	Characteristics of the Sun - Describe some of the overall characteristics of the Sun, such as its composition, its size, and the main energy it radiates. - Describe the changes in the direction and length of shadows from a shadow stick and use the information to infer why the Sun changes position during a day. - Make suggestions about the importance of the Sun to living things for a group or class discussion and confirm and record ideas by referring to trustworthy secondary sources of information.
Suggested Activities	Energy Causes Change Sorting Task – Learners sort everyday scenarios into light, sound, or heat energy and identify the change caused in each situation. Community Energy Sources Photo Walk – Learners document (photo/drawing) sources and uses of light, sound, and heat at home/school and present findings in a simple table. Soil Texture and Water-Holding Test – Learners compare sandy, clay, silt, and loam using simple equipment and record which soil holds the most water. Plant Growth Soil Investigation – Learners plant seeds in different soil types, observe growth over days, and record results in a simple observation log. Weather Characteristics Charting Activity – Learners complete a weather chart by identifying and describing air temperature, wind, humidity, rain, and cloud cover using provided examples.

	• School-Day Weather Instrument Log – Learners use weather instruments to measure and record weather data at set times during the day and summarize patterns. • Shadow Stick Observation and Sun Inference – Learners measure shadow direction and length at different times, graph or record results, and infer how the Sun’s position changes during the day.
Suggested Performance Tasks	• Work collaboratively in a small group to create a safety guide (poster, brochure, or digital infographic) that explains how to stay safe around intense light and loud sound, including at least 3 ways to protect the eyes and 3 ways to protect the ears, and a short explanation of how each safety measure reduces harm. • Work in groups to use weather instruments to measure and record key weather characteristics during a school day and summarize the results in a simple weather log. • Interpret a local weather chart and create a short weather forecast and safety advisory for poor or extreme weather conditions. • Design and construct a simple sundial using available materials, test it at different times of the day, and record and compare the sundial time with a clock time to show how it can indicate the time of day.