#### **General Science 11**

# Quarter 1 (Physics)

### WEEK 1: Physics in Daily Life and Motion

| Day # | Focused Topic                       | Activity   |
|-------|-------------------------------------|--|
| 1     | Physics and Daily Living            | Identify various ways physics enhances our quality of life.      |
| 2     | Translational vs. Rotational Motion | Compare and contrast linear and angular motion.                  |
| 3     | Demonstrating Motion                | Demonstrate relationships between linear and angular quantities. |
| 4     | Human Movement and Ergonomics       | Apply motion to exercises and ergonomic design.                  |

## WEEK 2: Machines and Hydraulic Systems

| Day # | Focused Topic                    | Activity  |
|-------|----------------------------------|---|
| 5     | Designing Efficient Machines     | Design simple and compound machines.                          |
| 6     | Understanding Machine Efficiency | Explain characteristics of efficient machines.                |
| 7     | Hydraulic Systems                | Explain how hydraulic systems enhance machines.               |
| 8     | Applications of Fluid Principles | Identify applications of Archimedes' and Pascal's principles. |

## **Day 9: SUMMATIVE ASSESSMENT 1**

Covers Weeks 1–2 (Days 1–8): Motion and Machines

#### **WEEK 3: Buoyancy and Electricity**

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|-------|---------------------------|--|
| Day # | <b>Focused Topic</b>      | Activity   |
| 10    | Buoyancy and Floating     | Model how shape, mass, and volume affect floating. |
| 11    | Electrical Hazards        | Discuss practices to avoid electrical dangers.     |
| 12    | Energy Efficiency         | Propose ways to reduce energy loss and wastage.    |
| 13    | Electricity in Society    | Analyze generation and consumption patterns.       |

#### WEEK 4: Light and Sound

| Day # | Focused Topic                       | Activity  |
|-------|-------------------------------------|---|
| 14    | Light and Sound Properties          | Discuss properties of light and sound in tech and health. |
| 15    | Light and Sound Innovations         | Identify tools like LEDs, lasers, and soundproofing.      |
| 16    | Integration: Motion and Machines    | Review and integrate motion-related concepts.             |
| 17    | Integration: Fluids and Electricity | Synthesize electricity and fluid principles.              |

## **Day 18: SUMMATIVE ASSESSMENT 2**

Covers Weeks 3–4 (Days 10–17): Buoyancy, Electricity, Light & Sound

### **WEEK 5: Synthesis and Planning**

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|-------|------------------------------|--|
| Day # | Focused Topic                | Activity   |
| 19    | Review: Light and Sound      | Peer teaching and concept mapping.                 |
| 20    | Group Integration Task       | Analyze a real-world energy system.                |
| 21    | Planning the Final Task      | Blueprint a model with applied physics principles. |
| 22    | Task Design and Materials    | Finalize planning and assign roles.                |

## WEEK 6: Prototyping and Dry Run

| Day # | Focused Topic                    | Activity                                  |
|-------|----------------------------------|---|
| 23    | Model Building                   | Start building the performance task.      |
| 24    | Function Testing & Peer Critique | Rehearse and finalize group presentation. |

## Day 25 (start of Week 7): SUMMATIVE ASSESSMENT 3

Covers Weeks 5–6 (Days 19–24): Integration and Model Planning

## **WEEKS 7–8: PERFORMANCE TASK**

| Week | Focused Task          | Activity  |
|------|-----------------------|---|
| 7    | Finalization of Model | Apply feedback, finalize construction, and documentation.                   |
| 8    | Presentation          | Present model explaining scientific principles and real-world applications. |

## Quarter 2 (Chemistry)

## **WEEK 1: Chemists and Their Contributions**

| Day # | Focused Topic                 | Activity (DepEd Competency as-is)  |
|-------|-------------------------------|--|
| 1     | Louis Pasteur's Contributions | Use information from secondary resources to report how Louis Pasteur combined research from the fields of chemistry and biology, which has helped scientists to understand the cause of some diseases and prevent infection. |
| 2     | Impact on Disease Prevention  | Analyze how Pasteur's discoveries changed medical practices.   |
| 3     | Application to Modern Science | Investigate a local example of chemical discovery in health or agriculture.  |
| 4     | Reflection and Review         | Present key insights from research.  |

# WEEK 2: Chemical Substances in Household and Personal Care Products

| Day# | Focused Topic           | Activity (DepEd Competency as-is)  |
|------|-------------------------|--|
| 5    | Identifying Ingredients | Construct a table using product labels that describe the function of the different |
|      | , , ,                   | substances (elements or compounds) present in household products.                  |
| 6    | Benefits and Risks      | Explain the benefits and potential risks of using and disposing of household and   |
|      |                         | personal care products, by considering their chemical composition, environmental   |
|      |                         | impact, and human health effects.  |

**Budget of Work** 

| 7 | Agency Guidelines (DTI, FDA, DENR) | Evaluate how policies regulate chemical use and disposal.   |
|---|------------------------------------|---|
| 8 | Reporting and Summary              | Create a chart or infographic synthesizing product effects. |

### **Day 9: SUMMATIVE ASSESSMENT 1**

Covers Weeks 1–2 (Days 1–8): Chemist Contributions & Household Chemical Analysis

### WEEK 3: Chemical Reactions in Everyday Life

| Day # | Focused Topic                              | Activity (DepEd Competency as-is)  |
|-------|--|--|
| 10    | Common Reaction Types                      | Explain some of the common types of chemical reactions and provide examples for the following: decomposition, acid on carbonates, acids on metals, and combustion. |
| 11    | Identifying Daily Reactions                | Identify the type of chemical reactions that occur in our daily activities, including baking, cleaning, and burning.   |
| 12    | Equations in Bio & Environmental Processes | Use chemical equations to show biological and environmental processes such as photosynthesis and respiration.  |
| 13    | Metabolism in the Body                     | Describe the chemical reactions that take place in our body cells, which are referred to as metabolism, and explain their significance.                            |

WEEK 4: Solutions and Their Environmental Impact

| Day # | Focused Topic                           | Activity (DepEd Competency as-is)   |
|-------|---|---|
| 14    | Characteristics of Solutions            | Explain the characteristics of solutions and their examples in household products, industry, and environmental science.   |
| 15    | Safe Handling of Chemicals              | Apply best practices in the proper handling, storage, and disposal of chemicals.  |
| 16    | Saltwater Effect on Plants (Experiment) | Investigate how much salt dissolved in water will prevent the growth of a simple garden plant.  |
| 17    | Impact on Ecosystems                    | Create a table to show how solutions of saltwater and wastewater can affect local ecosystems and recommend ways to minimize their negative impact on the environment. |

## **Day 18: SUMMATIVE ASSESSMENT 2**

Covers Weeks 3-4 (Days 10-17): Reactions & Solutions

**WEEK 5: Integration and Review** 

| Day # | Focused Topic       | Activity   |
|-------|---------------------|--|
| 19    | Reaction Mapping    | Create a visual chart linking chemical reactions to everyday events.                   |
| 20    | Ecosystem Chemistry | Analyze a community case study on water contamination or acid rain.                    |
| 21    | Agency Roles        | Discuss the importance of DOST, FDA, DENR in regulating chemicals.                     |
| 22    | Group Reporting     | Group presentation summarizing one issue related to chemical safety or sustainability. |

**WEEK 6: Performance Task Preparation** 

| Day# | Focused Topic        | Activity  |
|------|----------------------|---|
| 23   | Task Planning        | Look for household or personal care products and identify their active ingredients.             |
| 24   | Mini Research Begins | Begin researching each active ingredient: brief description, other uses, and potential impacts. |

# Day 25 (start of Week 7): SUMMATIVE ASSESSMENT 3

Covers Weeks 5–6 (Days 19–24): Integration and Performance Task Planning

## **WEEKS 7–8: PERFORMANCE TASK**

**Task:** Investigate a household or personal care product. Identify its active ingredient, describe its uses, and evaluate its potential impact on human health and the environment.

| Week | Focused Task          | Activity  |
|------|-----------------------|---|
| 7    | Research and Drafting | Finalize background, research citations, and infographics/posters or presentations. |
| 8    | Presentation          | Present findings to class or science panel; reflect on real-life relevance.         |

## Quarter 3 (Biology)

# **WEEK 1: Unifying Themes of Life Science**

| Day # | Focused Topic             | Activity (DepEd Competency as-is)  |
|-------|---------------------------|--|
| 1     | Life as Systems           | Explain using photographs or videos of simple plants or animals as examples how  |
|       |                           | life forms operate as systems of related parts working together.                 |
| 2     | Structure and Function    | Create a diagram to show the relationship between the structural components of a |
|       |                           | biological system and their functions.   |
| 3     | Levels of Organization    | Illustrate and compare cell, tissue, organ, and system relationships.            |
| 4     | Mini-Project Presentation | Present diagrammed examples of systems working together.                         |

**WEEK 2: Cells and Energy** 

| Day # | Focused Topic                  | Activity (DepEd Competency as-is)  |
|-------|--------------------------------|--|
| 5     | Nutrient Absorption            | Describe how cells obtain nutrients from food and convert them into energy |
|       | -                              | through cellular processes to sustain life in plants and animals.          |
| 6     | Photosynthesis and Respiration | Show how cells use glucose for energy via chemical equations.              |
| 7     | Organelles and Their Role      | Use analogy or roleplay to present organelle functions.                    |
| 8     | Synthesis Worksheet            | Organize energy process flow in cell systems.                              |

### **Budget of Work**

#### **Day 9: SUMMATIVE ASSESSMENT 1**

Covers Weeks 1–2 (Days 1–8): Unifying Themes & Cellular Processes

**WEEK 3: Organ Systems Working Together** 

| Day # | Focused Topic                 | Activity (DepEd Competency as-is)   |
|-------|-------------------------------|---|
| 10    | Plant Organs and Transport    | Explain how various plant organs interact to facilitate the transport of materials  |
|       |                               | throughout the plant system.  |
| 11    | Effects of System Failure     | Describe how a damaged part in a system affects the organism using the case of a torn ACL and an asthma attack.                                   |
| 12    | Nervous and Endocrine Systems | Explain how the nervous and endocrine systems work together to regulate body temperature in response to stimuli.                                  |
| 13    | Immune and Lymphatic Systems  | Explain how vaccines work by relating to the functions of the immune and lymphatic systems in protecting an organism against infectious diseases. |

**WEEK 4: Climate Change and Ecosystems** 

| Day # | Focused Topic          | Activity (DepEd Competency as-is)   |
|-------|------------------------|---|
| 14    | Climate Change Defined | Describe what is meant by the term 'climate change'.  |
| 15    | Biological Response    | Describe how biological systems respond to climate change and contribute to understanding its effects on living organisms in the Philippines. |
| 16    | Impact on Ecosystems   | Explain how climate change impacts Philippine ecosystems.   |
| 17    | Reflection Poster      | Visualize changes in local biodiversity due to climate effects.   |

## **Day 18: SUMMATIVE ASSESSMENT 2**

Covers Weeks 3-4 (Days 10-17): Organ Systems & Climate Change

**WEEK 5: Adaptation and Biodiversity** 

| Day# | Focused Topic                | Activity (DepEd Competency as-is)  |
|------|------------------------------|--|
| 19   | Mitigation Strategies        | Propose ways to adapt and mitigate the impacts of climate change on local biodiversity.                            |
| 20   | Local Examples of Adaptation | Community-based strategy brainstorming or interview.   |
| 21   | Overpopulation Effects       | Analyze information from secondary sources to evaluate the adverse effects of overpopulation locally and globally. |
| 22   | Video Analysis               | Watch and analyze a documentary on population growth or biodiversity collapse.                                     |

**WEEK 6: Integration and Task Planning** 

| Day # | Focused Topic           | Activity  |
|-------|-------------------------|---|
| 23    | Synthesis of Key Themes | Create a concept map linking cell systems, organ systems, climate change, and |
|       |                         | human impact.   |
| 24    | Task Planning           | Brainstorm and draft initial ideas for performance task using chosen format   |
|       |                         | (podcast, infographic, vlog, etc.).   |

# Day 25 (start of Week 7): SUMMATIVE ASSESSMENT 3

Covers Weeks 5-6 (Days 19-24): Biodiversity & Adaptation

#### **WEEKS 7–8: PERFORMANCE TASK**

Task: Create a multimodal presentation (e.g., forum, infographic, podcast, vlog, etc.) to effectively communicate key concepts about

the effects of climate change on the local ecosystem in the learners' community.

| Week | Focused Task                      | Activity  |
|------|-----------------------------------|---|
| 7    | Research and Content Finalization | Students conduct research, storyboard, and script their message.                    |
| 8    | Presentation and Reflection       | Present project and conduct peer evaluation and reflection on impact and clarity of |
|      |                                   | message.  |

## **Quarter 4 (Earth and Space Science)**

WEEK 1: Earth's Uniqueness and Conditions for Life

| Day# | Focused Topic           | Activity (DepEd Competency as-is)   |
|------|-------------------------|---|
| 1    | Why Earth Supports Life | Explain the characteristics of Earth that support life in comparison with the other |
|      |                         | planets of the Solar System.  |
| 2    | Greenhouse Effect       | Describe how the greenhouse effect regulates Earth's temperature, making it         |
|      |                         | suitable for life.  |
| 3    | Formation of the PH     | Demonstrate how the Philippine archipelago was formed.                              |
| 4    | PH Landforms and Life   | Explain using suitable resources the unique landforms, climate, and life forms of   |
|      |                         | the Philippines.  |

WEEK 2: Earth Materials and Geologic Hazards

| Day # | Focused Topic              | Activity (DepEd Competency as-is)  |
|-------|----------------------------|--|
| 5     | Rocks, Minerals, and Soils | Describe the distinctive properties and local availability of earth materials, including rocks, minerals, and soils. |
| 6     | Use of Earth Materials     | Show how they are harnessed to support human activities and industries.  |
| 7     | Geologic and Hydro Hazards | Describe geological and hydrometeorological hazards such as volcanic eruptions, earthquakes, typhoons, etc.          |
| 8     | Slow Geologic Processes    | Identify and explain slowly acting processes such as erosion and saltwater intrusion.                                |

## **Budget of Work**

#### **Day 9: SUMMATIVE ASSESSMENT 1**

Covers Weeks 1–2 (Days 1–8): Earth's Uniqueness, PH, and Earth Materials

**WEEK 3: Human Impacts on Landforms and Water** 

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|-------|---|---|--|
| Day # | Focused Topic                             | Activity (DepEd Competency as-is)   |  |
| 10    | Landform Changes Over Time                | Use evidence from secondary resources to describe how human activities have contributed to the modification of landforms and bodies of water of the Philippines since the Neolithic Period. |  |
| 11    | Case Studies on Modifications             | Analyze mining, quarrying, deforestation, and irrigation changes.   |  |
| 12    | Timeline of Changes                       | Construct a visual timeline from prehistory to modern-day impacts.  |  |
| 13    | Effects on Ecosystems                     | Identify cascading impacts of land changes on biodiversity.   |  |

## WEEK 4: Disaster Risks, PAGASA & PHIVOLCS Tools

| Day # | Focused Topic                  | Activity (DepEd Competency as-is)  |
|-------|--------------------------------|--|
| 14    | Risk Assessment                | Assess geological and hydrometeorological hazards in terms of risks and                                |
|       |                                | prevention and mitigation strategies.  |
| 15    | PAGASA's iHEAT Map             | Describe how the PAGASA iHEAT maps provide Filipinos with knowledge to take proactive safety measures. |
| 16    | Disaster Mitigation Tools      | Explore how PHIVOLCS tools are used for volcano/earthquake alerts.                                     |
| 17    | Evaluating Tools and Practices | Compare effectiveness of available disaster risk tools.  |

## **Day 18: SUMMATIVE ASSESSMENT 2**

Covers Weeks 3–4 (Days 10–17): Human Impacts & Hazard Monitoring Tools

**WEEK 5: DRRM and Preparedness Planning** 

| Day # | Focused Topic                | Activity (DepEd Competency as-is)  |
|-------|------------------------------|--|
| 19    | Family Preparedness Planning | Develop family preparedness plans to prepare for, respond to, and recover from |
|       |                              | hazards.   |
| 20    | Community DRRM Plans         | Develop community-based disaster risk reduction and management plans.          |
| 21    | Plan Simulation and Feedback | Mock drills and feedback loop on preparedness planning.                        |
| 22    | Peer Review and Improvement  | Review each group's plan based on clarity, feasibility, and accuracy.          |

**WEEK 6: Integration and Performance Task Prep** 

| Day # | Focused Topic             | Activity  |
|-------|---------------------------|---|
| 23    | Role of PAGASA & PHIVOLCS | Evaluate their contributions in national disaster risk reduction efforts.           |
| 24    | Performance Task Planning | Draft brochure plan promoting PAGASA and PHIVOLCS' importance to local communities. |

### Day 25 (start of Week 7): SUMMATIVE ASSESSMENT 3

Covers Weeks 5–6 (Days 19–24): DRRM Strategies & Institutional Roles

# **WEEKS 7–8: PERFORMANCE TASK**

**Task:** Create a brochure to promote the importance of PAGASA and PHIVOLCS to the local community in understanding and mitigating geological and hydrometeorological hazards.

| Week | Focused Task              | Activity  |
|------|---------------------------|---|
| 7    | Brochure Development      | Finalize layout, messaging, and design.   |
| 8    | Presentation and Critique | Present brochure to class and reflect on clarity, accuracy, and real-life usefulness. |