

Week	Lesson	Strand	Sub strand	Lesson Learning Outcomes	Learning Experiences	Key Inquiry Question(s)	Learning Resources	Assessment	Reflection
1	1	Life Science	1.1 Introduction to General Science	By the end of the lesson, the learner should be able to:a) explain the meaning of General Science as an integrated learning area;b) categorize scientific disciplines (biology, chemistry, physics);c) appreciate General Science as a lens for understanding the world.	The learners will be guided to:i) brainstorm definitions in groups;ii) use textbook to classify sciences;iii) share how science explains daily phenomena.	How does General Science help us understand the world?	Textbook; mind map paper	Definition accuracy with CC: Citizenship; PCI: Socio-Economic and Environmental Issues	
1	2	Life Science	1.1 Introduction to General Science	By the end of the lesson, the learner should be able to:a) outline five ways General Science improves life, environment, and technology;b) link to health, agriculture, and innovation;c) value scientific thinking in decision-making.	The learners will be guided to:i) research using digital/print sources;ii) create a 'Science in My Life' poster;iii) present to class.	How is General Science useful in daily life?	Research devices; poster materials	Poster rubric with CC: Digital literacy; PCI: Socio-Economic and Environmental Issues	
1	3	Life Science	1.1 Introduction to General Science	By the end of the lesson, the learner should be able to:a) identify ten career paths in General Science;b) match careers to disciplines (e.g., ecologist = biology);c) express interest in science-based professions.	The learners will be guided to:i) interview a scientist (live/virtual);ii) complete a career interest card;iii) draw a personal career roadmap.	What science career could you pursue?	Career cards; roadmap template	Career matching with CC: Self-efficacy; PCI: Socio-Economic and Environmental Issues	
1	4	Life Science	1.1 Introduction to General Science	By the end of the lesson, the learner should be able to:a) analyse the principle of inference in science;b) distinguish observation from conclusion;c) demonstrate logical reasoning in data interpretation.	The learners will be guided to:i) conduct a simple mystery box activity;ii) record observations and inferences;iii) discuss how scientists use evidence.	How do scientists draw conclusions from data?	Mystery boxes; observation sheets	Inference accuracy with CC: Critical thinking; PCI: Socio-Economic and Environmental Issues	
1	5	Life Science	1.2 The Cell	By the end of the lesson, the learner should be able to:a) compare light and electron microscopes;b) explain resolution and magnification differences;c) value technological advancement in biology.	The learners will be guided to:i) watch microscope comparison video;ii) complete a Venn diagram;iii) discuss: 'Why can't we see organelles with light microscopes?'	What tools allow us to see the invisible world of cells?	Video; Venn diagram	Diagram rubric with CC: Digital literacy; PCI: Environmental conservation	
2	1	Life Science	1.2 The Cell	By the end of the lesson, the learner should be able to:a) describe plant and animal cell structures under electron microscope;b) label nucleus, mitochondria, chloroplasts;c) appreciate cellular complexity.	The learners will be guided to:i) study electron micrographs;ii) label organelles on diagrams;iii) compare to light microscope images.	What makes plant and animal cells different?	Micrographs; labeling worksheet	Labeling accuracy with CC: Learning to learn; PCI: Safety and security	
2	2	Life Science	1.2 The Cell	By the end of the lesson, the learner should be able to:a) explain functions of cell organelles;b) link structure to function (e.g., mitochondria = energy);c) respect the cell as life's basic unit.	The learners will be guided to:i) match organelles to functions in a card sort;ii) create a 'Cell City' analogy;iii) present to class.	How do cell parts work together to sustain life?	Organelle cards; analogy worksheet	Analogy rubric with CC: Creativity; PCI: Environmental conservation	
2	3	Life Science	1.2 The Cell	By the end of the lesson, the learner should be able to:a) draw and label	The learners will be guided to:i) use reference images;ii) draw	How can you accurately	Drawing paper; coloured pencils	Diagram rubric with CC: Creativity; PCI: Safety	

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				plant and animal cells as seen under electron microscope;b> include scale and key features;c> demonstrate scientific accuracy.	detailed diagrams;iii> peer-review for accuracy.	represent a cell?		and security	
2	4	Life Science	1.2 The Cell	By the end of the lesson, the learner should be able to:a> construct a concept map of levels of cell organisation;b> sequence: organelle → cell → tissue → organ → system;c> value hierarchical organisation in living things.	The learners will be guided to:i> use string and cards to model hierarchy;ii> draw a concept map;iii> relate to human body systems.	How are living things organised from smallest to largest?	Concept map template; string cards	Map accuracy with CC: Learning to learn; PCI: Environmental conservation	
2	5	Life Science	1.2 The Cell	By the end of the lesson, the learner should be able to:a> model a plant or animal cell using local materials;b> ensure structural accuracy;c> showcase creativity in science.	The learners will be guided to:i> build 3D cell models;ii> label parts;iii> present with explanation.	How can you bring a cell to life in 3D?	Recyclables; glue; labels	Model rubric with CC: Creativity; PCI: Environmental conservation	
3	1	Life Science	1.3 Nutrition in Animals	By the end of the lesson, the learner should be able to:a> describe chemical and mechanical digestion in each gut region;b> identify enzymes (amylase, pepsin, lipase);c> appreciate digestive coordination.	The learners will be guided to:i> watch digestion animation;ii> complete a gut-zones worksheet;iii> discuss: 'Why can't we digest cellulose?'	How does your body break down food?	Animation; worksheet	Worksheet accuracy with CC: Digital literacy; PCI: Safety and security	
3	2	Life Science	1.3 Nutrition in Animals	By the end of the lesson, the learner should be able to:a> explain adaptations of digestive organs;b> link villi to absorption, stomach to acid;c> value body design for function.	The learners will be guided to:i> examine gut cross-sections (images);ii> create adaptation flashcards;iii> present key links.	How is the digestive system adapted to its job?	Images; flashcards	Flashcard rubric with CC: Communication; PCI: Safety and security	
3	3	Life Science	1.3 Nutrition in Animals	By the end of the lesson, the learner should be able to:a> perform food tests for starch, protein, fats;b> record colour changes accurately;c> value empirical evidence in science.	The learners will be guided to:i> conduct Benedict's, Biuret, iodine tests;ii> log results;iii> discuss real-life applications (food labeling).	How can you test what's in your food?	Test kits; samples	Lab observation with CC: Unity; PCI: Safety and security	
3	4	Life Science	1.3 Nutrition in Animals	By the end of the lesson, the learner should be able to:a> model the human digestive system;b> use tubes, bottles, and local materials;c> demonstrate peristalsis and enzyme action.	The learners will be guided to:i> build a working model;ii> simulate digestion;iii> present to class.	How can you simulate digestion in a model?	Craft materials; water	Model rubric with CC: Creativity; PCI: Safety and security	
3	5	Life Science	1.4 Transport in Plants	By the end of the lesson, the learner should be able to:a> describe water and mineral absorption by roots;b> identify root hair cells;c> appreciate plant-soil interactions.	The learners will be guided to:i> observe root specimens;ii> draw root hair cells;iii> discuss: 'Why do plants need minerals?'	How do plants drink and eat?	Root samples; microscope	Drawing rubric with CC: Digital literacy; PCI: Environmental issues	
4	1	Life Science	1.4 Transport in Plants	By the end of the lesson, the learner should be able to:a> explain translocation of sucrose in phloem;b>	The learners will be guided to:i> watch translocation animation;ii> create a	How do plants move food from leaves to roots?	Animation; chart paper	Chart rubric with CC: Learning to learn; PCI: Environmental issues	

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				contrast with xylem transport;c> value plant vascular systems.	comparison chart;iii> discuss sugar movement in fruits.				
4	2	Life Science	1.4 Transport in Plants	By the end of the lesson, the learner should be able to:a> investigate factors affecting transpiration;b> test wind, light, humidity;c> model scientific inquiry.	The learners will be guided to:i> set up potometer experiments;ii> record water loss;iii> graph results.	What makes plants lose water faster?	Potometers; data sheets	Experiment report with CC: Citizenship; PCI: Safety and security	
4	3	Life Science	1.4 Transport in Plants	By the end of the lesson, the learner should be able to:a> describe the importance of transpiration;b> link to cooling and mineral uptake;c> promote plant care in community.	The learners will be guided to:i> discuss transpiration benefits;ii> create 'Water Plants Daily' posters;iii> share in school garden.	Why is plant sweating good for them?	Poster materials; discussion prompts	Poster rubric with CC: Patriotism; PCI: Environmental issues	
4	4	Life Science	1.5 Respiration	By the end of the lesson, the learner should be able to:a> compare aerobic and anaerobic respiration;b> write word equations;c> value energy release for life.	The learners will be guided to:i> use Venn diagram;ii> calculate energy yields;iii> discuss: 'Why do muscles burn during exercise?'	How do cells release energy from food?	Venn template; equation cards	Diagram accuracy with CC: Communication; PCI: Financial literacy	
4	5	Life Science	1.5 Respiration	By the end of the lesson, the learner should be able to:a> calculate respiratory quotient (RQ);b> interpret RQ to identify substrate;c> apply to diet and metabolism.	The learners will be guided to:i> solve RQ problems;ii> analyse sample data;iii> discuss: 'What does RQ tell about an athlete?'	How can you tell what fuel your body is using?	Problem sets; calculator	Problem-solving rubric with CC: Learning to learn; PCI: Financial literacy	
5	1	Life Science	1.5 Respiration	By the end of the lesson, the learner should be able to:a> investigate anaerobic respiration using yeast;b> measure CO2 production;c> value fermentation in food.	The learners will be guided to:i> set up yeast + sugar in flasks;ii> collect gas in test tubes;iii> test with limewater.	How do yeast make bread rise?	Yeast; sugar; limewater	Lab observation with CC: Learning to learn; PCI: Financial literacy	
5	2	Life Science	1.5 Respiration	By the end of the lesson, the learner should be able to:a> make yogurt or porridge using fermentation;b> follow safe food practices;c> demonstrate value addition.	The learners will be guided to:i> prepare yogurt from milk;ii> document process;iii> taste and reflect (non-alcoholic).	How can science improve food?	Milk; cultures; thermometers	Project rubric with CC: Peace; PCI: Financial literacy	
5	3	Life Science	1.6 Plant growth and development	By the end of the lesson, the learner should be able to:a> distinguish growth from development;b> give examples (height vs. flowering);c> appreciate plant life cycles.	The learners will be guided to:i> research using digital sources;ii> create a T-chart;iii> present findings.	What's the difference between growing and developing?	Digital devices; T-chart	Chart rubric with CC: Communication; PCI: Cyber security	
5	4	Life Science	1.6 Plant growth and development	By the end of the lesson, the learner should be able to:a> describe causes of seed dormancy;b> explain how fire or scarification breaks it;c> value adaptation in nature.	The learners will be guided to:i> discuss local seeds (acacia, bean);ii> research dormancy mechanisms;iii> design a 'Wake Up Seeds' poster.	Why don't all seeds sprout immediately?	Seed samples; poster materials	Poster rubric with CC: Self-efficacy; PCI: Cyber security	
5	5	Life Science	1.6 Plant growth and development	By the end of the lesson, the learner should be able to:a> investigate conditions for germination;b> test water, air, warmth;c> model scientific method.	The learners will be guided to:i> set up seed experiments;ii> observe daily;iii> record in journals.	What do seeds need to sprout?	Seeds; cotton; jars	Journal rubric with CC: Learning to learn; PCI: Cyber security	

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6	1	Life Science	1.6 Plant growth and development	By the end of the lesson, the learner should be able to:a> differentiate epigeal and hypogeal germination;b> identify cotyledon position;c> appreciate plant diversity.	The learners will be guided to:i> plant bean (epigeal) and maize (hypogeal);ii> observe and sketch;iii> compare.	Why do some seeds pull leaves underground?	Seeds; sketch paper	Sketch rubric with CC: Self-efficacy; PCI: Cyber security	
6	2	Life Science	1.6 Plant growth and development	By the end of the lesson, the learner should be able to:a> distinguish primary and secondary growth;b> link to apical vs. lateral meristems;c> value tree rings for age.	The learners will be guided to:i> examine wood cross-sections;ii> count rings;iii> discuss growth patterns.	How do trees get taller and wider?	Wood slices; hand lens	Observation checklist with CC: Communication; PCI: Cyber security	
6	3	Life Science	1.6 Plant growth and development	By the end of the lesson, the learner should be able to:a> describe roles of growth hormones (auxins, gibberellins);b> explain phototropism and geotropism;c> apply to farming.	The learners will be guided to:i> watch tropism videos;ii> design a plant maze;iii> predict growth direction.	How do plants know which way to grow?	Video; maze template	Prediction rubric with CC: Digital literacy; PCI: Cyber security	
6	4	Life Science	1.7 Microorganisms	By the end of the lesson, the learner should be able to:a> identify bacteria, viruses, fungi;b> describe shapes (rods, spheres);c> value microbial diversity.	The learners will be guided to:i> view microbe images;ii> create a microbe ID chart;iii> discuss: 'Are all microbes harmful?'	What tiny life forms live around us?	Microbe images; chart paper	ID chart with CC: Digital literacy; PCI: Socio-economic issues	
6	5	Life Science	1.7 Microorganisms	By the end of the lesson, the learner should be able to:a> explain transmission of pathogens;b> link to water, air, contact;c> promote hygiene practices.	The learners will be guided to:i> map transmission routes;ii> role-play handwashing;iii> design a 'Stop Germs' campaign.	How do diseases spread, and how can we stop them?	Transmission cards; soap	Campaign rubric with CC: Communication; PCI: Socio-economic issues	
7	1	Life Science	1.7 Microorganisms	By the end of the lesson, the learner should be able to:a> describe prevention and control methods;b> include vaccination, sanitation;c> value public health.	The learners will be guided to:i> research control methods;ii> create a community health poster;iii> present to class.	How can communities stay healthy?	Research devices; poster materials	Poster rubric with CC: Digital literacy; PCI: Socio-economic issues	
7	2	Life Science	1.7 Microorganisms	By the end of the lesson, the learner should be able to:a> investigate mold growth on bread;b> test variables (moisture, light);c> practice safe lab procedures.	The learners will be guided to:i> set up mold experiments;ii> observe daily;iii> record with sketches.	What conditions help mold grow?	Bread; bags; journals	Lab journal with CC: Digital literacy; PCI: Socio-economic issues	
7	3	Life Science	1.7 Microorganisms	By the end of the lesson, the learner should be able to:a> sensitise community on food preservation;b> demonstrate drying, salting;c> model peer education.	The learners will be guided to:i> prepare preserved samples;ii> create flyers;iii> share with school kitchen.	How can we reduce food waste using science?	Food samples; flyers	Sensitisation rubric with CC: Communication; PCI: Socio-economic issues	
7	4	Life Science	1.1–1.7 Synoptic Review	By the end of the lesson, the learner should be able to:a> connect all Life Science themes;b> create a 'Web of Life' concept map;c> appreciate integration of biology concepts.	The learners will be guided to:i> review sub-strands;ii> draw master map;iii> present key links.	How are cells, digestion, transport, and microbes connected?	Large paper; markers	Map rubric with CC: Learning to learn; PCI: Socio-Economic and Environmental Issues	

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7	5	Life Science	1.1–1.7 Synoptic Review	By the end of the lesson, the learner should be able to:a> complete a diagnostic quiz;b> identify gaps;c> set goals.	The learners will be guided to:i> take a 25-question quiz;ii> mark in pairs;iii> reflect.	What have you learned about Life Science?	Quiz paper; answer key	Quiz with CC: Critical thinking; PCI: Socio-Economic and Environmental Issues	
8	1	Life Science	1.1 Introduction to General Science	By the end of the lesson, the learner should be able to:a> host a 'Science Career Fair';b> invite professionals;c> inspire peers.	The learners will be guided to:i> plan event;ii> send invites;iii> host sessions.	How can science open your future?	Event planner; guest list	Fair rubric with CC: Citizenship; PCI: Socio-Economic and Environmental Issues	
8	2	Life Science	1.2 The Cell	By the end of the lesson, the learner should be able to:a> create a cell museum exhibit;b> include models, diagrams, functions;c> educate visitors.	The learners will be guided to:i> curate displays;ii> write labels;iii> guide tours.	How can you teach others about cells?	Display materials; labels	Exhibit rubric with CC: Creativity; PCI: Environmental conservation	
8	3	Life Science	1.3 Nutrition in Animals	By the end of the lesson, the learner should be able to:a> deliver a 'Healthy Digestion' talk;b> include food tests and organ functions;c> promote nutrition.	The learners will be guided to:i> prepare 3-minute talk;ii> use visuals;iii> present to class.	How can you eat for a healthy gut?	Talk guide; visuals	Presentation rubric with CC: Communication; PCI: Safety and security	
8	4	Life Science	1.4 Transport in Plants	By the end of the lesson, the learner should be able to:a> lead a school garden watering schedule;b> apply transpiration knowledge;c> model environmental stewardship.	The learners will be guided to:i> design watering plan;ii> implement;iii> monitor plant health.	How can science help our school garden thrive?	Garden tools; schedule	Plan rubric with CC: Citizenship; PCI: Environmental issues	
8	5	Life Science	1.5 Respiration	By the end of the lesson, the learner should be able to:a> debate: 'Anaerobic respiration is more useful than aerobic';b> use evidence from food and industry;c> value scientific discourse.	The learners will be guided to:i> prepare arguments;ii> hold structured debate;iii> reflect.	Which type of respiration is more useful?	Debate guidelines; evidence cards	Debate rubric with CC: Critical thinking; PCI: Financial literacy	
9	1	Life Science	1.6 Plant growth and development	By the end of the lesson, the learner should be able to:a> launch a 'Grow a Plant' project;b> track growth over weeks;c> apply hormone knowledge.	The learners will be guided to:i> plant seeds;ii> measure daily;iii> journal observations.	How can you grow the tallest plant?	Seeds; rulers; journals	Project rubric with CC: Learning to learn; PCI: Cyber security	
9	2	Life Science	1.7 Microorganisms	By the end of the lesson, the learner should be able to:a> write a public health advisory on hygiene;b> include transmission and prevention;c> display in school.	The learners will be guided to:i> draft advisory;ii> peer-edit;iii> post on noticeboards.	How can good hygiene stop disease?	Advisory template; markers	Advisory rubric with CC: Communication; PCI: Socio-economic issues	
9	3	Life Science	1.1–1.7 Synoptic Review	By the end of the lesson, the learner should be able to:a> take a term exam;b> demonstrate mastery;c> reflect on performance.	The learners will be guided to:i> complete a 40-minute exam;ii> include diagrams, data, explanations;iii> review next lesson.	How well do you understand Life Science?	Exam paper; rubric	Exam assessment with CC: Critical thinking; PCI: Socio-Economic and Environmental Issues	
9	4	Life Science	1.1–1.7 Synoptic Review	By the end of the lesson, the learner should be able to:a> revise exam answers in groups;b> correct errors;c> build resilience.	The learners will be guided to:i> mark using rubric;ii> discuss mistakes;iii> set goals.	What can you learn from your errors?	Answer key; reflection sheet	Revision rubric with CC: Learning to learn; PCI: Socio-Economic and Environmental Issues	

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9	5	Life Science	1.1–1.7 Synoptic Review	By the end of the lesson, the learner should be able to:a> compile a Life Science portfolio;b> include models, reports, reflections;c> self-assess.	The learners will be guided to:i> select best work;ii> write cover letter;iii> submit.	How have you grown as a scientist?	Portfolio folder; rubric	Portfolio assessment with CC: Self-efficacy; PCI: Learning to learn	
10	1	Life Science	1.2 The Cell	By the end of the lesson, the learner should be able to:a> create a digital cell story;b> narrate organelle roles;c> showcase digital literacy.	The learners will be guided to:i> use Canva or PowerPoint;ii> create animated story;iii> share link.	If a cell could talk, what would it say?	Devices; story template	Story rubric with CC: Digital literacy; PCI: Environmental conservation	
10	2	Life Science	1.3 Nutrition in Animals	By the end of the lesson, the learner should be able to:a> design a school lunch menu based on digestion;b> include enzymes and nutrients;c> promote healthy eating.	The learners will be guided to:i> plan a balanced menu;ii> justify choices;iii> present to class.	How can science improve school meals?	Menu planner; nutrition chart	Menu rubric with CC: Creativity; PCI: Safety and security	
10	3	Life Science	1.4 Transport in Plants	By the end of the lesson, the learner should be able to:a> model xylem and phloem with straws and tubing;b> demonstrate water and sugar flow;c> explain to peers.	The learners will be guided to:i> build functional model;ii> simulate transport;iii> present.	How do you show plant plumbing?	Straws; food colouring; tubes	Model rubric with CC: Creativity; PCI: Environmental issues	
10	4	Life Science	1.5 Respiration	By the end of the lesson, the learner should be able to:a> calculate RQ for different foods;b> propose diets for athletes;c> apply science to real life.	The learners will be guided to:i> use sample data;ii> solve problems;iii> present diet plan.	How can respiration science improve sports performance?	Data sheets; diet planner	Problem-solving rubric with CC: Learning to learn; PCI: Financial literacy	
10	5	Life Science	1.6 Plant growth and development	By the end of the lesson, the learner should be able to:a> investigate effect of light on germination;b> design controlled experiment;c> write lab report.	The learners will be guided to:i> set up light vs. dark groups;ii> observe for 5 days;iii> conclude.	Does light affect seed sprouting?	Seeds; boxes; journals	Lab report with CC: Learning to learn; PCI: Cyber security	
11	1	Life Science	1.7 Microorganisms	By the end of the lesson, the learner should be able to:a> test effectiveness of hand sanitizers;b> use agar plates (simulated);c> promote hygiene.	The learners will be guided to:i> simulate germ transfer;ii> compare clean vs. sanitized;iii> graph results.	Which hand cleaner works best?	Simulation kit; data sheet	Simulation rubric with CC: Digital literacy; PCI: Socio-economic issues	
11	2	Life Science	1.1 Introduction to General Science	By the end of the lesson, the learner should be able to:a> write a letter to a scientist;b> ask questions about their work;c> model scientific curiosity.	The learners will be guided to:i> draft a letter;ii> peer-edit;iii> mail (if possible).	What would you ask a real scientist?	Letter template; envelope	Letter rubric with CC: Communication; PCI: Socio-Economic and Environmental Issues	
11	3	Life Science	1.2 The Cell	By the end of the lesson, the learner should be able to:a> create a 'Cell Organelle Superhero' comic;b> assign powers based on functions;c> entertain and educate.	The learners will be guided to:i> design superhero (e.g., 'Mitochondria Man');ii> draw comic strip;iii> share.	If cell parts were superheroes, who would they be?	Comic template; markers	Comic rubric with CC: Creativity; PCI: Environmental conservation	
11	4	Life Science	1.3 Nutrition in Animals	By the end of the lesson, the learner should be able to:a> host a 'Digestive System Day';b> include models, food tests, talks;c> celebrate learning.	The learners will be guided to:i> prepare stations;ii> invite guests;iii> run activities.	How can you share digestion knowledge with others?	Station materials; rubric	Event rubric with CC: Communication; PCI: Safety and security	

