LESSON 12.1: SCIENCE	
TOPIC	Classification
OBJECTIVES	➢ Pupils will collect items from the surrounding environment ➢ Pupils will be able to classify items in different ways.
MATERIAL	Small nylon bags (or other containers) for collecting items
SONG 5 minutes	Waƙar Ina da Rai
INTRODUCTION 5 minutes	1) Say: ❯ **Today we are going to talk about the environment. The word "environment" means everything around us.** ❯ **Look around. What do you see in the environment?**
COLLECTION OF ITEMS FROM THE ENVIRONMENT 5 minutes	1) Say: ❯ **Today we are going to collect small items from the environment. You may collect anything small that is easy to carry and that does not belong to another person. For example, you may find small stones, leaves, sticks, paper, string, or other items.** 2) Put learners in groups of 5 or 6. There should be at least one older learner in each group. Give each group a bag or container. Ask each group to collect ten different items, then return to class.
CLASSIFICATION OF ITEMS 5 minutes	1) Call one group to the front of the classroom. Ask them to show the items they collected. Then ask the group to organize similar items together (by size, by color, by texture, by plant and non-plant, etc). 2) Ask all learners to sit in their small groups and organize the items they collected. Learners may organize items any way they wish. Circulate to assist the groups. 3) Ask the class to combine all of their collected items together at the front of the classroom. Call a learner to the front to try to put similar items together. Then call another learner to classify them in a different way.
CLOSING 5 minutes	1) Say: ❯ **What did we do today in class?** ❯ **Today we learned to put similar items together. This is known as "classification." The same items can be classified in different ways. Tomorrow we will continue practicing classification.**

LESSON 12.2: SCIENCE	
TOPIC	Classification of Living and Non-Living
OBJECTIVES	➢ Pupils will be able to classify things into living and non-living. ➢ Pupils will be able to draw living and non-living things
MATERIAL	1) Picture cards: goat, chicken, ant, tree, flower, shoe, pencil, cup 2) Notebooks and pencils for the learners
SONG Minti 5	Waƙar Ina da Rai
INTRODUCTION Minti 5	1) Say: ⟩ **What did we learn in yesterday's class?** ⟩ **Yesterday, we learned to group similar items together. This is called classification.** ⟩ **Today, we are going to talk about the classification of living and non-living things.**
LIVING / NON-LIVING FLASH CARDS Minti 15	1) Hold up flash cards one by one. Ask learners to identify what they see in the picture, identify whether it's living or non-living, and explain how they know. 2) Ask learners to discuss what living things do (grow, breathe, eat, etc). 3) Call learners to the front of the room to sort the pictures into living and non-living.
LISTS OF LIVING AND NON-LIVING THINGS Minti 25	1) Ask learners to sit in small groups. Make sure there is at least one advanced learner in each group. Ask each group to make a list of living things and non-living things. 2) Ask groups to share their lists with the wider class. 3) If time remains, ask childen to draw a living and non-living item that they can see in the vicinity.
CLOSING AND PROJECT ASSIGNMENT Minti 10	1) Explain to learners that they will do an experiment. Each small group will receive a stone and a seed. They should plant each in separate containers, and water each every day. Then after a week, they will report what happened.

LESSON 13.1: SCIENCE	
TOPIC	Plants and animals
OBJECTIVES	➢ Pupils will report on their projects ➢ Pupils will make a list of attributes of living things
MATERIAL	1) Picture cards: cow, chicken, ant, tree, flower, corn 2) Large pieces of paper for children to write on
SONG Minti 5	Waƙar Ina da Rai
INTRODUCTION TO PLANTS AND ANIMALS Minti 15	1) Say: ʃ **Last week we talked about living and non-living things. What distinguished living and non-living?** 2) Explain that we can further divide living things into plants and animals. Show picture cards and ask children to identify whether it is a plant or an animal. 3) Say: ʃ **What does a cow need to survive?** (Food, water, air, shelter) ʃ **What does a tree need to survive?** (Water, air, sunlight) ʃ **Do you notice any similarities in what what plants and animals need?**
CARING FOR PLANTS ANIMALS Minti 35	1) Ask children how they would care for a goat or a chicken. List their responses on the board. 2) Ask children how they would care for a corn field. List their responses on the board. 3) Put children in small groups. Give each group a large piece of paper. Ask them to make a "How to Care For" chart for an animal or a crop. Then ask children to present their charts to the class.
CLOSING 5 minutes	1) Say: ʃ **Are there similarities in what plants and animals need?** ʃ **Plants and animals need water and air and nutrition. We will continue learning about this tomorrow.** ʃ **Tomorrow you should also bring the seeds and stone you planted.**

LESSON 13.2: SCIENCE	
TOPIC	Respiration, Nutrition, and Unit Summary
OBJECTIVES	➢ Pupils will understand the importance of respiration and nutrition ➢ Pupils will report on their projects ➢ Pupils will summarize aspects of living things
MATERIALS	➢ Uprooted plant ➢ Learners' plant projects
INTRODUCTION 5 minutes	1) Say: ⟩ **Last class, we talked about the differences and similarities between plants and animals. What ways are plants and animals similar?** (For example, both grow and both need water). ⟩ **What ways are plants and animals different?** (For example, plants don't move).
RESPIRATION AND NUTRITION Minti 15	1) Say: ⟩ **Do animals and people need air to survive? How long can you hold your breath?** Call pupils to the front of the room and count how many seconds they can hold their breath. Then explain that living things cannot live without air for very long. ⟩ **Do plants also need air?** ⟩ **Plants need air to survive too, even though we can't see them breathe. Plants absorb carbon dioxide from the air through tiny openings in their leaves.** 2) Say: ⟩ **Animals, people and plants need to eat. What kind of food do you need to be healthy?** ⟩ **How do plants absorb food and water?** ⟩ **Plants absorb water and nutrients through their roots. Roots absorb nutrients in the soil. Putting manure in soil adds extra nutrients for plants.** Show an uprooted plant. Ask a volunteer pupil to show where the roots are. Then ask the pupil to identify the leaves and stem.
PLANT AND ANIMAL WALK 15 minutes	Take learners on a walk through the school vicinity. Ask them to observe different animals and their features. For example, ask them to note the animals that have feathers or fur, hooves or a beak. Ask them to name different plants and their features.You may also point to items such as stones and or vehicles, and ask if they are living or non-living.

PROJECT SHARING Minti 15	1) Say: ⁾ **Last week, you started a project in groups. You planted a seed and a stone, and agreed to water them every day.** ⁾ **Does anyone have a plant to share?** ⁾ **Why can we expect to see changes in the seed but not the stone?** ⁾ **Is a stone living thing? Why or why not?** (Learners should explain that it does not breathe, it does not need water, it does not need nutrition, therefore it is not living).
READ ALOUD STORY 10 minutes	Read aloud the following story and ask comprehension questions. ⁾ **Hudu da biredi** *Hudu yaro ne mai hazaqa wurin karatu. Ko wane lokaci Hudu na son ace shi ne a gaba wurin iya a karatu. Kowa ya san shi da son biredi kwarai. Har ya ke ganin ya kamata ya shuka biredi don ya huta da Neman kudin sayen biredi. Don wani lokaci yana son cin biredi amma sai Baban shi yace bai da kuxi ya bari sai gobe ko wani lokaci. Wannan yasa Hudu ya yanke shawarar ya shuka biredi don in yayi 'ya'ya ya huta da siya. Hudu ys shuka biredi a bayan gidansu. Kullum Hudu zai xibi ruwa ya zuba wa shukarsa. Amma yau wata guda Kenan shukarsa bata fito ba. Hudu ya shiga damuwa. Ya tambayi Innarsa kozata taimaka mishi biredinsa ya fito. Innarsa tace masa "ya za a yi biredi ya fito? ai abubuwa masu kwayane kwai suke fito in an shukasu. Ta ci gaba da cewa kamar su gero da dawa da masara da sauransu. Hudu bai ji daxi ba sam ya so ace biredinsa ya girma. Ganin haka Innarsa ta siyo masa biredi ya ji dadin haka sosai.*

TSARIN KOYAR DA DARASI NA 26.1: SECURITY	
TOPIC	Security
OBJECTIVES	➢ Pupils will be able to identify safe and unsafe situations ➢ Pupils will identify how to improve safety around their school
MATERIALS	1) Paper and writing implements
INTRODUCTION 10 minutes	Say: ⁃ **Today we will talk about violence and safety. To live good lives, we all have to think about how to live safely and avoid violence.** ⁃ **What does it mean to you to feel safe?** ⁃ **Have you ever felt unsafe in the school or outside?** ⁃ **Have you seen your peers face danger in or outside of school?**
SECURITY SCENARIOS 10 minutes	Explain to learners that you will describe different scenarios. After each scenario, learners must tell you if the situation is safe or unsafe. If it is safe, learners should say why. If it is unsafe, learners should describe how the situation could be improved. ⁃ Scenario 1: A 7-year-old boy walks with his younger brother along a busy road. They walk very close to the cars. ⁃ Scenario 2: A 15-year-old girl walks with her three younger siblings to school. She makes sure they walk close to her and away from the cars. ⁃ Scenario 3: Children at a school drink standing water instead of fresh water from a well or borehole. ⁃ Scenario 4: An 8-year-old girl hawks on busy roads, walking in between the cars. ⁃ Scenario 5: Older learners in a school hit and scare the younger learners. ⁃ Scenario 6: Older learners in a school make sure that everyone feels comfortable and welcome.
ROAD SAFETY 20 minutes	Explain to learners that they will now do an exercise in road safety. Take learners to a nearby road. Ask learners to practice looking both ways before crossing. Identify the safest place on the road to walk, and explain that learners should always walk in groups. Provide other safety tips (as applicable).
GOAL SETTING 20 minutes	Write the following points on the board: ⁃ *Identify two unsafe places/activities around your school.* ⁃ *Suggest what you can do to be safe from those places/activities*. Ask learners to work in groups write answers to the two statements. They should present their answers to the group.

TSARIN KOYAR DA DARASI NA 26.2: SECURITY

TOPIC	Security
OBJECTIVES	➢ Pupils will discuss security challenges at the school ➢ Pupils will create a class charter to keep everyone safe
MATERIAL	1) Cardboard and markers 2) Tape or string
INTRODUCTION 10 minutes	1) Ask children what ideas were discussed in the last lesson. 2) Say: **Today we will talk about safety in our own lives.**

PERSONAL SECURITY ASSESSMENT: 10 minutes

1) Say: **I am going to read a series of statements about violence and safety. For each statement, I want you to think about whether it is true for you. After I read the statement, I will ask you to raise your hand to indicate if it is true all the time, some of the time, or rarely/never.**

Allow pupils to practice voting on an example statement, such as, "I help my mother at home."

2) Now we are going to vote on statements about security. Everyone should close their eyes as I read these statements. That way, everyone can vote honestly.

	Yes	Sometimes	No
1. Generally, we feel safe at school			
2. There are some places in our school where we don't feel safe			
3. In general, we feel safe on our way to and from school			
4. There are some places on the way to and from school where we don't feel safe			
6. Adults at school, including teachers, help children to feel safe			
7. Children at school help other children to feel safe			
8. Girls and boys at our school feel equally safe			
9. Children with disabilities and children without disabilities feel equally safe at our school			
11. Every child has the right to be safe			

DISCUSSION: 10 minutes	1) Without naming any names, discuss the results of the survey and ask children to think of solutions. For example, say: **I noticed many people did not feel safe on the way to school. How could safety be improved?** 2) As children respond, list their ideas on the blackboard.
CREATION OF CLASS CHARTER 25 minutes	1) Say: - **We are now going to create a class charter. A charter is a promise that everyone in the class agrees to keep. We have just thought of many ideas to keep people in our class and school safe. Now, let's work in groups to choose some of those ideas for our class charter.** 2) Guide pupils to work in groups and identify 5 of the ideas they choose to adopt. Ensure that each group appoints a leader to present their chosen commitments. 2) After the group work, allow each group to present its choice of commitments and mark them with a "star" ★ on the board (a commitment can have as many stars based on the frequency of group choices). 3) Lead pupils in identifying 5 ideas with the highest number of stars. Write on a cardboard: *This class promises to…* Then call pupils with good handwriting to each write one of the 5 chosen ideas on the cardboard. 4) Ask each pupil to sign his or her name on the charter. Then use tape or string to hang it on the wall.
CLOSING 5 minutes	Say: - **What have you learned about violence and safety?** - **Does every child have the right to be safe?** - **How can our charter keep us all safe?**

TSARIN KOYAR DA DARASI NA 27.1: SCIENCE	
TOPIC	Hygiene
OBJECTIVES	➢ Pupils will be able to classify the various types of hygiene. ➢ Pupils will demonstrate how to clean their environment
MATERIALS	1) Broom or a rake 2) Paper and writing implements
SONG 5 minutes	Waƙar Tsafta
INTRODUCTION 5 minutes	1) Say: ⁾ **Today we are going to talk about hygiene. The word "hygiene" means cleanliness.** ⁾ **Who can give examples of what it means to be clean?**
GROUP WORK ON EXAMPLES OF HYGIENE 20 minutes	1) Write the 5 types of hygiene on the board. Ask learners to think of examples of each type of hygiene. Then write their answers on the board (examples below). Personal hygiene: wash hands with soap; brushing teeth Environmental hygiene: sweeping; disposing of rubbish Food Hygiene: cover food plates; wash fruit Safe water: choose clean sources of water Sanitation: use latrines or separate spaces 2) Put learners into 5 groups. There should be at least one advanced learner in each group. Give each group one type of hygiene. Ask the group to draw a picture that represents their type of hygiene. When groups finish, they should present their picture to the large group and explain why it represents good hygiene.
HYGIENE PRACTICE 20 minutes	1) Say: **Now we are going to practice environmental hygiene.. We can care for our environment by sweeping, disposing of rubbish, and making sure waste water is disposed of.** Show learners how to check for a clean environment, and then fix any issues. For example, if the environment is dirty, they can sweep it, or they can pick up litter. If latrines are available nearby, show learners how to properly clean them, or discuss the proper location for relieving oneself. 2) Make sure that learners wash their hands after cleaning.
CLOSING 5 minutes	Say: ⁾ **What are the 5 types of hygiene we talked about?** ⁾ **How did we make sure that our environment is clean?**

TSARIN KOYAR DA DARASI NA 27.2: SCIENCE	
TOPIC	Types of Hygiene
OBJECTIVES	➢ Pupils will demonstrate good handwashing techniques ➢ Pupils will describe how to source clean water
MATERIAL	1) 2 bowls of clean water 2) Soap 3) Cup of clean water 4) Piece of dirty litter
SONG Minti 5	Waƙar Tsafta
INTRODUCTION Minti 5	1) Say: ❯ **What are the five types of hygiene we discussed yesterday?** ❯ **Yesterday, we learned about how to clean our environment. Today, we are going to discuss personal hygiene and safe water.**
HANDWASHING Minti 10	1) Ask learners to examine their fingernails and determine if they are dirty. Explain that keeping nails short helps keep them clean. 2) Choose two pupils with dirty hands and ask them to each stand next to a bowl of water. Ask one pupil to wash their hands in the first bowl, using water only. Ask the other pupil to wash their hands in a second bowl, using soap and water. 3) Ask learners to compare the color of the water in both bowls. Ask the pupil did not use soap to wash their hands again, this time with soap. Check the color of the water again. 4) Ask learners about the advantages of using soap. Say: **Using soap gets rid of dirt; not using soap means the dirt stays on our hands.** 5) Ask learners what would happen if they all used the same bowl of water to wash their hands. Say: **If we all used the same bowl, the water would become so dirty it wouldn't clean our hands. Therefore, you should use fresh water to clean your hands.** 6) Say: **When is it especially important to wash our hands?** (example answers: before eating, after using the latrine, after touching a sick person, etc).

CLEAN WATER Minti 25	1) Show learners a glass of clean water and ask if anyone would like to drink it. Then put a piece of dirty litter in the glass. Ask learners again if they would like to drink the water. 2) Ask the following questions: a. Why do you no longer want to drink the water? b. What do we need to do to make sure the water we drink is clean? 3) Take the pupils around to check the school or community water point or drinking water facility. Discuss the following: **c. Is the water point well-maintained? Is there any stagnant water around the water point?** **d. Is the water safe to drink? How do you know?** **e. We should always drink water from a safe source, like a clean well.** 4) Read aloud the following story on clean water. Then ask the comprehension questions. A hanya, Amina ta hadu da Nana ta debo ruwan sha a rafi. "Ni ina debo ruwan sha a famfon burtsatse," in ji Amina. "Ai kuwa ruwan famfon burtsatse ruwa ne mai Ni ina debo ruwan sha a famfon burtsatse, in ji Amina. "Ai kuwa ruwan famfon burtsatse ruwa ne mai tsafta" Nana ta amsa. Nana ta kai ruwan gida domin bai wa shuka. Daga nan suka tafi tare, domin su debo ruwan burtsatse. Say: **In this story, where was Nana going to get her water?** **What advice does Amina give Nana?** **Why is it better to get water from a well instead of a stream?**
CLOSING Minti 10	Say: **What will happen if we don't take care of our hygiene?** (Answer: we'll fall sick). **What are good practices that we learned for practicing good hygiene?**

TSARIN KOYAR DA DARASI NA 38.1: SCIENCE	
TOPIC	Soil
OBJECTIVES	➢ Learners will be able to describe three types of soil
MATERIALS	1) 3 jars 2) Stones of different sizes 3) Water 4) 3 types of soil 5) 3 types of plants 6) Curved glass (not sharp) for magnification
INTRODUCTION 10 minutes	Say: - **Today we are going to talk about soil. What is soil?** (Example answers: a complex mix of materials; minerals, air, water and organic matter) - **What things can we get from the soil?** (Example answers: Food, clothing, building materials, etc; most resources can be traced back to animals or plants and thus to soil). - **Why might we call soil the foundation of life?** (Example answer: everything we eat, drink, and use comes from soil, is grown on soil, is filtered through soil, is built on soil, etc). - **Are there different types of soil?** (Answer: yes, there is sandy, loamy and clay).
SOIL AND FILTRATION 20 minutes	1) Say: **There are 3 types of soil: sandy, loamy and clay. Sandy soil feels gritty, has lots of air space, and does not hold water well. Loamy soil is a mixture of composed mostly of sand, silt and a smaller amount of clay. Clay soil feels very sticky because it is made of very small particles. It does not have much air space or room for water.** 2) Show 3 different types of soil. Ask learners to come to the front of the room. They should describe the color, scent, and texture of the soil. They should describe the size of the particles and try to determine what type of soil it is. If available, provide learners with a piece of bent glass (not sharp) that can magnify the size of the soil particles. 3) Demonstrate the types of soil with 3 jars. Fill the first jar with large stones, the second jar with medium stones, and the third jar with small stones. Pour water into each container and ask learners to observe how long it takes to fill the bottom of the jar. The water will quickly filter to the bottom of the jar with big stones and slowly to the bottom of the jar with small stones.

SOIL AND PLANTS 20 minutes	1) Say: **Why do you think there are different sized particles in soil? Soil composition and particle size depends on the materials (such as rocks, plants and minerals) as well as environmental conditions (wind, moisture, etc).** 2) Say: **Why do you think it's important to understand particle size and water filtration?** 3) Say: **Different amounts of water exist in soil depending on the amount and regularity of rainfall. Different plants require different amounts of water, and they have adapted different root systems.** 4) Show three different types of plants (for example, a bean plant, a desert shrub, and a flower) that still have soil clinging to their roots. 5) Ask learners to look at the root system of each plant and determine whether the roots look the same or different. Then ask learners to look at the dirt clinging to the roots to see if the soil is the same or different.
CONCLUSION 10 minutes	) Say: **What are the three types of soil we talked about today?**) Say: **Where do you think we can find sandy soil? What uses do we have for sandy soil? What kinds of plants grow in sandy soil?**) Say: **Where do you think we can find loamy soil? What uses do we have for loamy soil? What kinds of plants grow in loamy soil?**) Say: **Where do you think we can find clay soil? What uses do we have for clay soil? What kinds of plants grow in clay soil?**

TSARIN KOYAR DA DARASI NA 38.2: SCIENCE	
TOPIC	Soil
OBJECTIVES	➢ Pupils will be able to assess different types of soil
MATERIALS	1) Soil Observation Chart
INTRODUCTION 10 minutes	Say: ⁾ **What were the three types of soil that we discussed in our last class?** ⁾ **What are the features of sandy soil?** ⁾ **What are the features of loamy soil?** ⁾ **What are the features of clay soil?** ⁾ **Remember that the size of the soil particles affects how the soil can filter or absorb water. It also affects what kinds of plants can grow there.**
GETTING TO KNOW YOUR SOIL 40 minutes	1) Write the Soil Observation Chart on the board (see next page). Ask learners to copy it into their exercise books. 2) Ask learners to work in groups and pairs. They should go outside and find 3 types of soil, then write their analysis in the chart they copied. 3) Ask learners to show their findings to the class.
CONCLUSION 10 minutes	Say: **Let's review. Why is soil important to human beings?** (Example answers: we build our houses on soil, we grow our food on soil, material for clothing depends on plants and animals that need soil; soil filters our water). Say: ⁾ **What kinds of soil did we learn about?** (sandy, loamy, clay) ⁾ **What distinguishes these types of soil?** (particle size; space between particles; types of matter in the soil, etc) ⁾ **What kinds of plants might grow in each type of soils? How could plant variation affect human life in different places?** (the type of soil can affect the kinds of crops that can grow in certain places and what kinds of resources are available for people). ⁾ **Soil is the foundation of life because almost every material we need is somehow connected to the soil.**

SOIL OBSERVATION CHART		
Sample number _____		
Color:	**Smell:**	**Feel:**
Picture:		
____ Sandy	**____Loamy**	**_____ Clay**
Sample number _____		
Color:	**Smell:**	**Feel:**
Picture:		
____ Sandy	**____ Loamy**	**____ Clay**
Sample number _____		
Color:	**Smell:**	**Feel:**
Picture:		
____ Sandy	**____ Loamy**	**____ Clay**

TSARIN KOYAR DA DARASI NA 39.1: SCIENCE	
TOPIC	Review
OBJECTIVES	➢ Pupils will create posters to show what they have learned in science
MATERIALS	1) Blank flip chart paper 2) Markers, crayons or colored pencils
INTRODUCTION 10 minutes	Say: ⁾ **We have covered several important topics about science and life skills this year. Today we are going to review them.** ⁾ **What is the difference between living and nonliving?** (living things grow, breathe and eat, while nonliving things do not) ⁾ **What are the five types of hygiene that we discussed?** (personal, environmental, food, safe water, sanitation). **Who can give an example of each type of hygiene?** ⁾ **What is the importance of using soap?** ⁾ **What are the three types of soil that we learned about?** (sandy, loamy, clay). **Why do we want to know about different types of soil?** (Different types of soil affect what kinds of plants and resources can thrive).
SCIENCE POSTERS 35 minutes	1) Put learners into groups of 4-5. Make sure there is an advanced learner in each group. 2) Assign each group one of the following topics. Ask each group to make a colorful poster to illustrate or describe their topic. ⁾ Living and nonliving ⁾ 5 types of hygiene ⁾ 3 Types of soil 3) After each group has finished, ask them to present their poster to the class.
CLASS CHARTER 10 minutes	Say: ⁾ **Earlier this year, we discussed the importance of school safety, and we made a charter to discuss our commitments to safety.** ⁾ **What does it mean to you to feel safe?** ⁾ **What commitments to safety did we make in our charter? Have we fulfilled our commitments?** ⁾ **Is there a charter commitment that needs more work"?**
CLOSING 5 minutes	Say: **Tomorrow, you will take a short test to show what you have learned in science. Therefore, it is very important that you bring a pencil and paper tomorrow!**

TSARIN KOYAR DA DARASI NA 39.2: SCIENCE	
TOPIC	Assessment
OBJECTIVES	➢ Pupils will demonstrate what they have learned during the year about science and life skills
MATERIALS	1) Extra pencils and paper for the learners
INTRODUCTION 15 minutes	Say: ⟩ **We have learned many topics during science and life skills this year. Today you will have the opportunity to write about what you have learned.** Ask learners to sit apart from one another so that everyone is taking their own test. Make sure that all learners have pencils and paper. Distribute extra pens and pencils as necessary. Write: 1) Describe the difference between living and nonliving, and give an example of each. 2) Describe the importance of using soap. 3) Name the 5 types of hygiene, and give examples of each. 4) Name the three types of soil and describe why it is helpful to understand the differences. 5) Describe what it means to be safe.
Assessment 40 minutes	Say: **Number your paper 1 through 5, then respond to each question. You may supplement your writing with pictures if you wish.** Circulate through the room to ensure that learners are on task and working individually.
Conclusion 5 minutes	Collect the completed tests from the learners. Say: ⟩ **You have now completed your science lessons for this year! Congratulations on your hard work!**