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|  | **GRADE 4** | **AGRICULTURE AND NUTRITION** |  |  |  |

**WEEK 1: LESSON 1**

**Strand:** Conservation of Resources

**Sub Strand**: Soil Conservation

**Specific Learning Outcomes:**

By the end of the lesson, students should be able to:

- Identify suitable materials for making compost manure.

- Use digital devices to observe pictures of materials used to make compost manure.

- Appreciate the importance of compost manure in farming.

**Key Inquiry Question:**

- Which locally available materials can we use to make compost manure?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Digital devices (tablets or computers)

**Organisation of Learning:**

**Introduction (5 minutes)**

- Begin with a quick review of the previous lesson focused on soil and its importance in agriculture.

- Ask students to share what they remember about soil conservation, guiding them to connect these concepts to compost manure.

**Lesson Development (25 minutes)**

**Step 1:** Group Discussion

- Divide students into small groups.

- Ask each group to brainstorm materials they think can be used to make compost manure.

- After 5 minutes, invite each group to share their ideas with the class. Write their suggestions on the board.

**Step 2:** Digital Exploration

- Instruct students to use digital devices to view pictures of compost materials.

- Provide links to several websites or databases that showcase materials such as vegetable scraps, leaves, and grass clippings.

- Allow students to discuss and compare what they see with their list from Step 1.

**Step 3:** Importance of Compost

- Lead a class discussion about why compost manure is important for farming.

- Ask guiding questions such as: "How does compost help plants grow?" and "What are the benefits of using compost for the soil?"

- Write down students' contributions and emphasize key points.

**Step 4:** Reflection and Sharing

- Ask students to individually reflect on the importance of composting in farming and how they can contribute to soil conservation at home or in the school garden.

- Invite a few students to share their reflections with the class.

**Conclusion (5 minutes)**

- Summarize the key points discussed in the lesson: materials for compost, their digital observations, and the importance of compost manure.

- Conduct a brief interactive activity: Have students turn to a partner and share one new thing they learned today about compost.

- Give a preview of what will be covered in the next lesson, such as how to make compost at home.

**Extended Activities:**

- Encourage students to collect organic waste for a week and create a mini compost project at home.

- Suggest that students keep a journal documenting their observations and experiences while composting.

- Organize a class field trip to a local farm or garden where composting practices are implemented.

**Teacher Self-Evaluation:**

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**WEEK 1: LESSON 2**

**Strand:** Conservation of Resources

**Sub Strand**: Soil Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify suitable materials for making compost manure.

- Use digital devices to observe pictures of materials used to make compost manure.

- Appreciate the importance of compost manure in farming.

**Key Inquiry Question(s):**

- Name some of the crops we can add compost manure to.

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Digital devices (tablets, computers, or smartphones)

**Organisation of Learning:**

**Introduction (5 minutes)**

- Review the previous lesson focused on the importance of soil and its role in agriculture.

- Ask students to share what they remember about soil and its nutrients.

- Guide learners to read a short excerpt from the learning resources about compost manure and its benefits.

**Lesson Development (25 minutes)**

**Step 1**: Identify Materials for Compost

- Divide the class into small groups.

- Ask each group to brainstorm a list of organic materials that can be used to make compost manure (e.g., vegetable scraps, leaves, grass clippings).

- Each group will write their list on a piece of paper.

**Step 2:** Use Digital Devices for Research

- Instruct students to use the digital devices to search for pictures of compost materials.

- Encourage them to find and present at least three different pictures to their group that showcase what can be added to compost.

**Step 3**: Group Discussion

- Bring the class back together and have each group share one or two materials they found and their images.

- Discuss the variety of materials and why each is beneficial for composting.

**Step 4:** Importance of Compost Manure

- Lead a discussion on why compost manure is important in farming.

- Ask students questions such as: "How do you think plants benefit from compost?" and "Why should farmers use compost instead of chemical fertilizers?"

**Conclusion (5 minutes)**

- Summarize key points covered in the lesson, including the materials suitable for compost and its benefits.

- Conduct an interactive activity where students name their favorite crops and discuss if those crops can benefit from compost manure.

- Preview the next lesson which will focus on how compost can improve soil health.

**Extended Activities:**

1. Compost Creation Project:

- Have students collect kitchen scraps (with parental guidance) and create their own small compost bin at home. They can document the process with drawings or photos.

2. Field Trip or Virtual Tour:

- Plan a visit to a local farm or a virtual tour of a farm that practices composting. Have students note the different types of compost materials they observe.

3. Compost Journal:

- Students can keep a compost journal where they write down materials they have found at home that can be composted, along with their uses in agriculture.

**Teacher Self-Evaluation:**

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**WEEK 1: LESSON 3**

**Strand:** Conservation of Resources

**Sub Strand**: Soil Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- State suitable materials for making compost manure.

- Collect materials for making compost manure from the local environment.

- Appreciate the importance of compost manure in farming.

**Key Inquiry Question(s):**

- What is the importance of compost manure to farmers?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design.

**Organisation of Learning:**

**Introduction (5 minutes):**

- Begin the lesson by reviewing last week's topic on soil and its importance in agriculture.

- Ask students what they remember about soil health and its impact on farming practices.

- Guide learners to read and discuss relevant parts from the Agriculture and Nutrition curriculum, focusing on compost and its benefits.

**Lesson Development (25 minutes):**

**Step 1**: Understanding Compost Manure

- Introduce the concept of compost manure. Explain that compost is made from organic materials that decompose and enrich the soil.

- Discuss suitable materials for making compost manure, such as kitchen scraps (vegetable peels), grass clippings, leaves, and animal waste.

- Activity: Ask students to share any organic waste they might have at home that could be used for compost.

**Step 2**: Collecting Materials

- Take a brief walk around the school garden or playground (if possible) to collect materials.

- Assign students to small groups to gather leaves, twigs, or other biodegradable materials they find.

- Encourage them to think critically about what can and cannot go in compost.

**Step 3:** Importance of Compost Manure

- Discuss how compost manure is beneficial to farmers. Explain how it improves soil structure, provides nutrients, and helps retain water.

- Illustrate with examples of farmers who use compost manure to grow healthy crops.

**Step 4:** Creating Compost

- Show students how to layer compost materials properly (browns and greens) and explain the decomposition process.

- Give a brief overview of the time it takes for compost to break down and how it can be used in gardens.

**Conclusion (5 minutes):**

- Summarize the key points: what compost manure is, suitable materials for making it, and its benefits to farming.

- Conduct an interactive activity: Have students create a simple poster or drawing that shows what can be included in compost and why it is important.

- Preview the next session: Mention that they will learn about how to use compost manure in gardening.

**Extended Activities:**

- Invite students to start a small compost bin at home or in the school garden and monitor its progress over time.

- Create a journal where they can record what materials they used and how their compost changes over weeks.

- Research a farmer in the local area who uses compost and prepare a short presentation on their practices for the class.

**Teacher Self-Evaluation:**

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**WEEK 1: LESSON 4**

**Strand:** Conservation of Resources

**Sub Strand**: Soil Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

1. Outline the steps for making compost manure.

2. Prepare compost manure for farming using the heap method.

3. Appreciate the importance of compost manure in farming.

**Key Inquiry Question(s):**

- Which steps do you follow when making compost manure?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Materials for composting (e.g., leaves, kitchen scraps, soil, water)

**Organisation of Learning:**

**Introduction (5 minutes)**

- Begin by asking students what they remember from the previous lesson about resources and conservation.

- Introduce the topic of compost manure and explain its significance in enriching soil and promoting healthy plants.

- Guide learners to read aloud relevant sections from the learning resource, encouraging them to ask questions and make connections to previous knowledge.

**Lesson Development (25 minutes)**

Group Activity: Outline and Prepare Compost Manure

**Step 1**: Gather Materials

- Discuss what items can be composted (e.g., fruit and vegetable scraps, dry leaves, grass clippings).

- Each group will list the materials they will need to collect for making compost.

**Step 2**: Build a Compost Heap

- Explain the heap method of composting.

- In groups, have learners build a small model of a compost heap using classroom materials (paper for dry leaves, other scraps to represent food waste).

- Encourage them to think about the layers (green materials vs. brown materials).

**Step 3**: Maintenance of the Compost

- Teach students about the importance of turning the compost and keeping it moist.

- Discuss how often they need to check the compost and what conditions are ideal for composting to happen.

**Step 4**: Discuss the Benefits of Composting

- Each group will share why composting is important for farming.

- Engage students in a discussion about how compost helps plants grow and reduces waste.

**Conclusion (5 minutes)**

- Summarize the steps discussed in making compost manure and the benefits it offers to farmers.

- Conduct a quick interactive quiz with questions about the key concepts learned, such as "What materials can we compost?"

- Preview upcoming lessons on other soil conservation methods and ask students to think about ways they can use what they've learned at home.

**Extended Activities:**

1. Composting at Home: Encourage students to start a small compost bin at home with their families. They can track what materials they use and how the compost changes over time.

2. Field Trip: Organize a visit to a local farm that uses composting as part of its soil management.

3. Creative Presentation: Have students create a poster or flyer that promotes the benefits of composting, which they can display around the school.

**Teacher Self-Evaluation:**

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**WEEK 2: LESSON 1**

**Strand:** Conservation of Resources

**Sub Strand:** Soil Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Outline the steps for making compost manure.

- Prepare compost manure for farming using the heap method.

- Appreciate the importance of compost manure in farming.

**Key Inquiry Question:**

- Why is it necessary to follow the steps of making compost manure?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Visual aids depicting composting processes (posters, images)

- Compost materials (e.g., kitchen scraps, leaves, soil)

- Markers and large paper for group work

**Organisation of Learning:**

**Introduction (5 minutes)**

- Review the previous lesson on soil and its types.

- Ask students what they remember about how soil is nourished and how they think compost manure could help.

**Lesson Development (25 minutes)**

**1. Step 1:** Gather Materials

- Discuss what materials can be used to make compost (e.g., vegetable peels, grass clippings, leaves, and small branches).

- Hands-on activity: In groups, students will compile a list of compostable materials using pictures from the resource.

**2. Step 2:** Create the Compost Heap

- Explain how to layer materials: start with coarse items (like twigs) at the bottom, add greens (like vegetable scraps), and then browns (like dry leaves).

- Each group can build a small model of a compost heap out of available materials to visualize this step.

**3. Step 3**: Maintain the Compost

- Teach the importance of turning the compost heap to aerate it and speed up decomposition.

- Discuss the role of moisture and temperature. Ask students how they would check if their compost is too dry or too wet.

**4. Step 4:** Harvest the Compost

- Explain how long it takes for compost to be ready and how to know it’s finished (dark and crumbly).

- Discuss how to use compost in the garden, emphasizing its benefits, such as improved soil quality and plant health.

**Conclusion (5 minutes)**

- Recap the steps for making compost manure and its importance in agriculture.

- Conduct a short interactive quiz (e.g., "What goes into a compost heap?") to reinforce learning.

- Give a preview of the next topic: "Different uses of compost in farming."

**Extended Activities:**

- Home Composting Project: Encourage students to start a small compost at home and share their progress in class.

- Field Trip: Organize a visit to a local farm or composting site where students can see compost in action.

- Create an Infographic: Have students create a visual poster about the benefits of composting to hang in the classroom or school entrance.

**Teacher Self-Evaluation:**

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**WEEK 2: LESSON 2**

**Strand:** Conservation of Resources

**Sub Strand:** Soil Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Outline the importance of compost manure in farming.

- Use compost manure in the school or home farm.

- Desire to use compost manure in farming.

**Key Inquiry Question:**

- How can composting conserve the environment?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes):**

- Begin with a quick review of the previous lesson to refresh students' memories.

- Engage students by asking what they remember about soil and its importance.

- Introduce the concept of compost manure by having students read a short passage from the learning resources and discuss its importance with a partner.

- Encourage students to share their thoughts in a class discussion.

**Lesson Development (25 minutes):**

**Step 1:** Understanding Compost Manure

- Explain what compost manure is and how it is made from kitchen scraps, yard waste, and other organic materials.

- Discuss why compost manure is important for plants and soil health. Use visuals or samples if available.

- Ask students, "How do you think compost helps the soil?"

**Step 2:** Benefits of Compost Manure in Farming

- List and discuss the various benefits of using compost manure in farming, such as improving soil structure, increasing nutrient availability, and reducing waste.

- Provide examples of farmers who have successfully used compost manure in their fields.

- Have students think about local farmers or even their gardens/home gardens, asking, “What might happen if they used compost manure?”

**Step 3**: Composting at School and Home

- Discuss how students can create compost in their own homes or at school.

- Present simple steps to start a compost pile: collecting scraps, layering materials, watering, and turning the pile.

- Invite students to brainstorm materials that can be composted from their own homes or school lunches.

**Step 4:** Making a Composting Plan

- In small groups, have students create a simple plan for starting a compost pile either in the school garden or at home.

- Encourage them to think about where they would collect compost materials, who would help, and how they would maintain the pile.

- Each group can present their plan briefly to the class.

**Conclusion (5 minutes):**

- Summarize the key points discussed during the lesson, emphasizing the importance of compost manure for soil conservation and farming.

- Conduct a brief interactive quiz or game (e.g., Kahoot or a simple hand-raising quiz) to reinforce the main concepts.

- Preview the next session by asking students to think about what other ways we can conserve natural resources in our daily lives.

**Extended Activities:**

- Composting Project: Challenge students to start a small composting project at home or in their community. They could keep a journal of what materials they used and the changes they notice over time.

- Research Assignment: Assign students to research and present on different types of organic materials that can be composted and their benefits to the environment.

- Art Project: Encourage students to create a poster about composting benefits for display in the classroom or school hall.

**Teacher Self-Evaluation:**

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**WEEK 2: LESSON 3**

**Strand:** Conservation of Resources

**Sub Strand:** Water Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- State ways of conserving water in farming

- Explain drip irrigation as a way of conserving water

- Appreciate the use of drip irrigation in conserving water in farming

**Key Inquiry Question(s):**

- List ways of conserving water?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Visual aids (charts/images of drip irrigation)

- Examples of farming areas using drip irrigation

**Organisation of Learning**:

**Introduction (5 minutes):**

- Begin the lesson by reviewing the previous session on the importance of farming.

- Ask the learners to share what they remember about water usage in farming.

- Introduce the focus on water conservation, highlighting its critical role in successful farming.

**Lesson Development (25 minutes):**

**Step 1:** Discuss Ways of Conserving Water in Farming

- Engage students in a brainstorm session at the board, asking them to list ways to conserve water in agriculture (e.g., using rainwater, mulching, crop rotation).

- Facilitate a short discussion on why it’s important to save water on farms and how too much water can be harmful.

**Step 2:** Introduction to Drip Irrigation

- Explain what drip irrigation is: a system that delivers small amounts of water directly to the roots of plants.

- Use visual aids to show how the system works and compare it to traditional irrigation methods (like sprinklers) highlighting the efficiency of water usage.

- Discuss the components of a drip irrigation system (hoses, emitters, etc.).

**Step 3:** Benefits of Drip Irrigation

- Talk about the advantages of using drip irrigation, such as saving water, reducing weeds, and providing nutrients directly to plants.

- Give examples of places that utilize this method successfully and discuss how it has helped those farmers.

**Step 4:** Class Activity - Role Play

- Organize a short role-play session where a few students act as farmers and others as customers.

- Farmers will explain how they conserve water using drip irrigation. This helps reinforce understanding in a fun way.

**Conclusion (5 minutes):**

- Summarize the main points taught during the lesson, highlighting the importance of conserving water and how drip irrigation can aid in this effort.

- Conduct a quick quiz where students shout out different ways they learned to conserve water.

- Preview the next session on soil conservation and ask students to think about how soil and water are related.

**Extended Activities:**

1. Water Conservation Poster: Have students create posters that illustrate ways to conserve water in farming. This can be displayed around the classroom.

2. Field Trip Idea: Organize a visit to a local farm that uses drip irrigation. Students can observe water conservation techniques in action.

3. Drip Irrigation Model: In groups, students could design a simple model of a drip irrigation system using materials from the classroom (e.g., plastic bottles, straws).

**Teacher Self-Evaluation:**

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**WEEK 2: LESSON 4**

**Strand:** Conservation of Resources

**Sub Strand**: Water Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- State ways of conserving water in farming.

- Explain drip irrigation as a way of conserving water.

- Appreciate the use of drip irrigation in conserving water in farming.

**Key Inquiry Question(s):**

- What is drip irrigation?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning**

**Introduction (5 minutes)**

- Start by asking students what they remember from the last lesson about agriculture and resources.

- Facilitate a quick discussion on the importance of water in farming, guiding students to recall previous conversations about water usage.

- Introduce the key inquiry question: “What is drip irrigation?” and briefly explain it to set the stage for the lesson.

**Lesson Development (25 minutes)**

**Step 1:** Discuss the Importance of Water in Farming

- Begin by explaining why water is vital for plants and crops—mention topics like growth, nourishment, and sustainability.

- Ask students to share any experiences they have with watering plants or gardens. Discuss how farmers currently use water and the challenges they face with water scarcity.

**Step 2**: Identify Ways to Conserve Water in Farming

- Brainstorm with the class various methods farmers use to save water, such as rainwater harvesting and mulching. Write their responses on the board.

- Discuss how each method helps conserve water, promoting mindful usage among the students.

**Step 3:** Explain Drip Irrigation

- Introduce drip irrigation: a system that delivers water directly to the base of the plant through a network of tubing and emitters.

- Show a simple diagram of a drip irrigation system, highlighting its parts and how it works.

- Explain how drip irrigation reduces water waste because it only delivers water when and where it’s needed.

**Step 4:** Appreciate the Use of Drip Irrigation

- Discuss the benefits of drip irrigation: conserves water, reduces weed growth, and improves crop yield.

- Encourage students to think about where this type of irrigation can be used in their community or homes.

- Ask them for examples of places they might see drip irrigation (e.g., in gardens, farms, or parks).

**Conclusion (5 minutes)**

- Summarize the discussion about why conserving water is essential and how drip irrigation is an effective farm method.

- Conduct a brief interactive quiz. For example, hold up two pictures: one showing a drip irrigation system and one showing a traditional watering system. Ask students to raise their hands if they can name which one conserves water better.

- Preview the next session, which will cover other forms of farming technology. Pose a question for them to think about: “What other technologies might help farmers use resources wisely?”

**Extended Activities**

- Activity 1: Have students create a poster illustrating the benefits of drip irrigation vs. traditional watering methods.

- Activity 2: Organize a small project where students design their own drip irrigation system using simple materials like plastic bottles, straws, and soil to see how it works.

- Activity 3: Encourage students to interview local farmers or community members about how they conserve water in farming and report back to the class.

**Teacher Self-Evaluation:**

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**WEEK 3: LESSON 1**

**Strand**: Conservation of Resources

**Sub Strand:** Water Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- List the steps of innovating a drip irrigation system.

- Improvise a drip irrigation system using water pipes and containers.

- Appreciate the use of drip irrigation in conserving water in farming.

**Key Inquiry Question:**

- Which materials should you collect to improvise a drip irrigation equipment?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes):**

1. Begin with a brief review of the previous lesson on conservation.

2. Ask students about their understanding of water and its importance in farming.

3. Introduce the topic of drip irrigation as a method of conserving water.

**Lesson Development (25 minutes):**

**Step 1:** Discussion of Materials

- Explain that to create a drip irrigation system, we need to gather certain materials.

- Lead a discussion on possible materials: water pipes, containers, scissors, small stones for drainage, etc.

- Write down their contributions on the board.

**Step 2:** Listing Steps

- Guide students through the process of innovating a drip irrigation system.

- Together, list the steps on the board:

1. Collect materials.

2. Decide the layout: where to place the containers and pipes.

3. Connect the water pipes to the containers.

4. Test the system to make sure it drips slowly and efficiently.

**Step 3:** Improvise the Equipment

- Divide students into small groups.

- Provide each group with materials (water pipes, containers).

- Instruct students to improvise and set up their own drip irrigation system based on the steps learned.

- Encourage experimentation with different designs.

**Conclusion (5 minutes):**

1. Summarize key points: importance of water conservation, steps to make a drip irrigation system.

2. Conduct a quick interactive activity: Ask each group to describe their design and how it conserves water.

3. Preview the next lesson on different ways to conserve other resources in farming.

**Extended Activities:**

- Create a Poster: Students can design a poster that explains drip irrigation and why it's beneficial for conserving water.

- Water Usage Chart: Have students keep a record of water use at home for a week, discussing ways to conserve water further.

- Field Visit: Plan a visit to a local farm where they utilize drip irrigation to see it in action.

**Teacher Self-Evaluation:**

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**WEEK 3: LESSON 2**

**Strand:** conservation of resources

**Sub Strand**: Water Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- State ways of conserving water in farming.

- Use digital devices to watch video clips of drip irrigation.

- Appreciate the use of drip irrigation in conserving water in farming.

**Key Inquiry Question:**

- What are the advantages of using drip irrigation in farming?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Digital devices (tablets/computers) for video viewing

**Organisation of Learning:**

**Introduction (5 minutes)**

- Begin by briefly reviewing key concepts from the previous lesson on agriculture.

- Ask students to share any previous knowledge they have about water conservation practices in farming. Highlight their contributions.

**Lesson Development (25 minutes)**

**Step 1:** Discuss Water Conservation Techniques

- Initiate a discussion with the class about various ways farmers can conserve water.

- Present examples such as rainwater harvesting, crop rotation, and the use of mulch.

- Encourage students to think of other strategies they might know or have seen.

**Step 2:** Introduce Drip Irrigation

- Explain what drip irrigation is and how it works, emphasizing how it delivers water directly to the plant roots.

- Pose guiding questions to engage students, such as: "Have you ever seen a system like this in a garden or farm?"

**Step 3:** Watch Video Clips

- Using digital devices, allow students to watch video clips demonstrating drip irrigation in action.

- Ensure that the videos highlight the advantages of this watering method, such as efficiency and reduced water waste.

**Step 4:** Group Discussion

- Following the video, organize students into small groups to discuss what they learned.

- Ask groups to come up with a list of advantages of drip irrigation based on the video.

- Invite a few groups to share their lists with the class.

**Conclusion (5 minutes)**

- Summarize the key points discussed about water conservation methods and the benefits of drip irrigation.

- Conduct a quick interactive activity, such as a "thumbs up/thumbs down" quiz where students respond to statements related to drip irrigation to reinforce understanding.

- Provide a preview of the next lesson—possibly touching on practical applications of irrigation methods in local farming practices.

**Extended Activities:**

- Home Project: Have students observe their home gardens (if applicable) and report back on how their families conserve water. They can create a poster presenting findings.

- Field Trip Idea: Plan a visit to a local farm that uses drip irrigation to see it in action.

- Research Assignment: Ask students to research different irrigation systems used around the world and compare them with drip irrigation's benefits.

**Teacher Self-Evaluation:**

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**WEEK 3: LESSON 3**

**Strand:** Conservation of Resources

**Sub Strand**: Water Conservation - Drip Irrigation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Outline ways of observing safety while working with drip irrigation equipment.

- Carry out drip irrigation to conserve water.

- Appreciate the use of drip irrigation in conserving water in farming.

**Key Inquiry Question:**

- What are the disadvantages of drip irrigation in farming?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes):**

- Begin by reviewing the previous lesson on water conservation and its importance.

- Guide learners in reading a section from the learning resources that discusses drip irrigation. Ask questions to encourage discussion, such as why conserving water is important and how drip irrigation works.

**Lesson Development (25 minutes):**

**Step 1:** Understanding Drip Irrigation

- Explain what drip irrigation is and how it helps conserve water. Show a simple diagram or video demonstrating how the system works.

- Ask students to identify the components of drip irrigation (hoses, drippers, etc.) and discuss their functions.

**Step 2:** Safety Precautions

- Discuss safety measures that should be taken when working with drip irrigation equipment, such as:

- Wear protective gear (gloves, goggles).

- Handle tools carefully to prevent accidents.

- Avoid using damaged equipment.

- Have students create a simple safety checklist they can follow when working with the equipment.

**Step 3:** Hands-On Activity

- Conduct a simple hands-on activity where students can practice setting up a drip irrigation model using materials like straws and containers to simulate how water drips to plants.

- Facilitate this process ensuring everyone understands how to set it up safely.

**Step 4:** Discussing Disadvantages

- Ask the students to brainstorm and discuss potential disadvantages of drip irrigation (e.g., high initial costs, maintenance challenges).

- Record their responses on the board, and steer any misconceptions towards clearer understanding.

**Conclusion (5 minutes):**

- Summarize the key points about drip irrigation, safety precautions, and disadvantages discussed during the lesson.

- Conduct a quick interactive activity, like a thumbs up/thumbs down poll on various statements about drip irrigation to reinforce learning.

- Preview the next session by asking them to think of one benefit of using drip irrigation to conserve water.

**Extended Activities:**

- Create a water conservation poster: Students can work individually or in pairs to develop a poster that outlines ways to conserve water in farming, highlighting drip irrigation.

- Experiment at home: Encourage students to set up a mini-drip irrigation system with household items and observe its effects on watering small plants over a week.

- Class discussion on local farming practices: Research local farms using drip irrigation and prepare a brief presentation on their water-saving methods.

**Teacher Self-Evaluation:**

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**WEEK 4: LESSON 1**

**Strand:** conservation of resources

**Sub Strand:** Water Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

1. Outline ways of observing safety while working with drip irrigation equipment.

2. Carry out drip irrigation to conserve water.

3. Appreciate the use of drip irrigation in conserving water in farming.

**Key Inquiry Question(s):**

- Name three ways of observing safety when working with drip irrigation equipment?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design.

**Organisation of Learning**

**Introduction (5 minutes)**

- Begin by reviewing the previous lesson on water resources and their importance in agriculture.

- Encourage students to share examples of how water is used in farming.

- Introduce the topic of drip irrigation and how it helps conserve water. Ask questions to stimulate interest, such as: "Why do you think conserving water is important?"

**Lesson Development (25 minutes)**

**Step 1:** Understanding Safety

- Discuss the importance of safety when using drip irrigation equipment.

- Guide students to brainstorm and list at least three ways to ensure safety (e.g., wearing gloves, checking for leaks, ensuring all equipment is turned off before inspection).

- Write their ideas on the board.

**Step 2:** Demonstration of Drip Irrigation

- Show a simple diagram or model of a drip irrigation system.

- Explain how it works: water drips slowly to the roots of plants, conserving water and providing it directly where it is needed.

- Highlight the role of each component of the drip system (e.g., the water source, tubing, and emitters).

**Step 3:** Hands-on Activity

- Give students an opportunity to practice setting up a basic drip irrigation system using simple materials (could be a model with tubing and cups or outdoor setup if available).

- Ensure each group discusses how their system conserves water and how they ensured safety during setup.

**Step 4:** Reflection and Discussion

- Have students reflect on what they learned about safety and water conservation.

- Ask guiding questions, such as: "How does drip irrigation compare with traditional watering methods?"

- Invite students to share their thoughts in pairs or small groups before sharing with the class.

**Conclusion (5 minutes)**

- Summarize the key points discussed about safety and the benefits of drip irrigation in conserving water.

- Reinforce the learning objectives: safety practices, functions of drip irrigation, and its importance in farming.

- Engage students in a quick interactive quiz or game based on the day’s lesson to reinforce the main topics.

- Preview the next topic on types of irrigation techniques and their environmental impact to keep students curious.

**Extended Activities:**

1. Water Conservation Poster: Have students create a poster illustrating drip irrigation and the importance of water conservation in agriculture.

2. Field Trip: Organize a visit to a local farm or garden that utilizes drip irrigation to see the system in action.

3. Journal Entry: Ask students to write a journal entry about personal water conservation habits they could adopt at home and how it relates to farming.

**Teacher Self-Evaluation:**

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**WEEK 4: LESSON 2**

**Strand**: Conservation of Resources

**Sub Strand:** Fuel Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify types of fuels used at home.

- Use digital devices to observe pictures of fuels used at home.

- Appreciate the importance of conserving fuels.

**Key Inquiry Question:**

- What fuels do we use at home?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design.

- Digital devices for researching and viewing images.

**Organisation of Learning**

**Introduction (5 minutes):**

- Begin the lesson by reviewing the previous topic on resource conservation.

- Engage students in a discussion on why resources are important, steering them towards the topic of fuel.

- Introduce the key inquiry question: "What fuels do we use at home?" and encourage students to share their thoughts.

**Lesson Development (25 minutes)**

**Step 1:** Identifying Fuel Types

- Discuss the various types of fuels commonly used at home, such as charcoal, firewood, gas, and kerosene.

- Ask students to think of examples of when they see or use these fuels. Write their responses on the board to create a visual list.

**Step 2:** Exploring Pictures

- Divide students into small groups and provide each group with a digital device.

- Instruct them to find images of the types of fuels discussed: charcoal, firewood, gas, and kerosene.

- Allow each group 5-7 minutes to gather images and be prepared to share with the class.

**Step 3**: Sharing and Discussion

- Bring the class back together and invite each group to present one type of fuel they researched.

- Encourage discussion by asking questions such as, "Where is this fuel used?" and "Why do you think people might choose this fuel?"

**Step 4**: Discussing Conservation

- Lead a discussion on the importance of conserving fuels.

- Ask students why conserving fuels is essential for the environment and their families.

- Highlight examples of how they can help save fuel at home and in their communities.

**Conclusion (5 minutes):**

- Summarize the key points covered: types of fuels, their uses, and the importance of fuel conservation.

- Conduct a brief interactive activity, such as a “Fuel Conservation Pledge” where students list one action they will take to conserve fuel at home.

- Introduce the next session's topics, prompting students with questions like, "What are alternative energy sources?"

**Extended Activities:**

- Home Fuel Journal: Ask students to keep a journal for one week noting all the fuels they and their families use at home and reflecting on opportunities to conserve these fuels, such as turning off lights when not in use.

- Research Project: Encourage students to research alternative fuels (like solar or wind energy) and present their findings in a fun format (poster, presentation, or skit) in the next class.

**Teacher Self-Evaluation**:

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**WEEK 4: LESSON 3**

**Strand:** Conservation of Resources

**Sub Strand**: Fuel Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify types of fuels used at home

- Use digital devices to observe pictures of fuels used at home

- Appreciate the importance of conserving fuels

**Key Inquiry Question(s):**

- What are the different types of fuels used at home?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Digital devices (tablets or computers) for image observation

- Pictures of different fuels (charcoal, firewood, gas, kerosene)

**Organisation of Learning**

**Introduction (5 minutes)**

- Begin by reviewing the previous lesson on resources.

- Engage learners in a brief discussion about what resources are and how they are used, leading into the topic of fuels.

**Lesson Development (25 minutes)**

**Step 1:** Discussion on Fuels

- Ask students to name the types of fuels they see and use at home (e.g., charcoal, firewood, gas, kerosene).

- Write down their responses on the board and classify them into renewable and non-renewable fuels.

**Step 2:** Digital Observation

- In pairs, have students use digital devices to look at pictures of the fuels discussed.

- Encourage them to take notes on the characteristics of each type of fuel (e.g., appearance, usage).

**Step 3:** Importance of Fuel Conservation

- Discuss why conserving fuel is important. Ask students how it can benefit the environment and their daily lives.

- Present a few facts or statistics about fuel conservation.

**Step 4**: Group Activity

- Divide the class into small groups and assign each group a type of fuel.

- Have them come up with one creative way to conserve their assigned fuel at home, which they will share with the class.

**Conclusion (5 minutes)**

- Summarize key points discussed about the types of fuels and their conservation.

- Conduct a quick interactive quiz (using thumbs up or down) to reinforce the main topics.

- Preview the next lesson: “What are alternative energy sources, and how can they help us?”

**Extended Activities:**

- Home Fuel Diary: Encourage students to track the types of fuels they and their family use at home for one week and reflect on their usage.

- Fuel Conservation Poster: Have students create a poster showcasing one method of conserving fuel that they’ve learned about. They can present these to the class.

- Class Fuel Audit: Organize a simple class project where students can identify and document the types of fuels used by their families and report back on findings.

**Teacher Self-Evaluation:**

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**WEEK 4: LESSON 4**

**Strand:** Conservation of Resources

**Sub Strand:** Fuel Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- List ways of conserving fuels.

- Understand how to use and conserve fuels in cooking.

- Appreciate the importance of conserving fuels.

**Key Inquiry Question(s):**

- How can we conserve fuels?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organization of Learning:**

**Introduction (5 minutes)**

- Briefly review what was learned in the previous lesson about resources in agriculture.

- Guide learners to read selected passages from the learning resources related to fuel conservation and encourage them to discuss what they understand from the text.

**Lesson Development (25 minutes)**

**Step 1:** Discussion of Fuels

- Initiate a discussion on what fuels are and their role in agriculture (e.g., cooking, machinery).

- Use visual aids or examples (like pictures of cooking stoves or farm equipment) to help students relate.

**Step 2:** Listing Ways to Conserve Fuels

- Students work in pairs to brainstorm ways to conserve fuels in everyday life and in agriculture.

- Each pair presents their ideas to the class. Examples could include using energy-efficient appliances, cooking with lids on pots, and using public transport for transporting goods.

**Step 3:** Cooking Demonstration

- Conduct a simple cooking demonstration that showcases how to conserve fuel while cooking (like using a pressure cooker or cooking on a low flame).

- Discuss how these methods save fuel and resources while preparing food.

**Step 4:** Importance of Conservation

- Lead a discussion on why conserving fuel is essential for both the environment and for farmers.

- Encourage students to think about the long-term benefits of using less fuel, such as saving money and protecting the planet.

**Conclusion (5 minutes)**

- Summarize the key points discussed—ways to conserve fuel, techniques in cooking, and the significance of conserving fuels.

- Conduct a brief interactive quiz or game to reinforce the main topics.

- Preview the next lesson, introducing the concept of renewable energy sources in agriculture for students to consider.

**Extended Activities:**

- Home Fuel Conservation Project: Students can track their family's fuel use over a week and brainstorm at least three changes their family could make to conserve fuel.

- Create a Fuel Conservation Poster: Students can create a poster that illustrates various methods of fuel conservation, combining art with the knowledge they've learned.

- Class Discussion Journal: Encourage students to keep a journal where they can write about what they've done to conserve fuels at home and in school, allowing reflections on how they can improve and share ideas.

**Teacher Self-Evaluation:**

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**WEEK 5: LESSON 1**

**Strand:** Conservation of Resources

**Sub Strand:** Fuel Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- List ways of conserving fuels.

- Use and conserve fuels in cooking.

- Appreciate the importance of conserving fuels.

**Key Inquiry Question:**

- What are the uses of fuel?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning**

**Introduction (5 minutes)**

- Begin by reviewing the previous lesson on natural resources.

- Ask students to share what they remember about the importance of resources and how they are used.

- Present the key inquiry question: “What are the uses of fuel?” Encourage students to share their thoughts, creating a discussion that leads into fuel conservation.

**Lesson Development (25 minutes)**

**Step 1:** Identify Uses of Fuel

- Activity: In groups, have students list different uses of fuel they can think of, particularly in their homes (e.g., cooking, heating, transportation).

- Discussion: Each group will share their list with the class, and the teacher will write the uses on the board for everyone to see.

**Step 2:** Learn About Fuel Conservation

- Instruction: Introduce the concept of fuel conservation. Explain the importance of conserving fuels and the impact it has on the environment.

- Graphic Organizer: Students will create a “Fuel Conservation” chart where they categorize the uses they’ve listed into those that can be conserved and those that can’t.

**Step 3:** Discuss Cooking Practices

- Demonstration: Discuss simple ways to conserve fuel while cooking, such as cooking with a lid on pots, using energy-efficient appliances, or batch cooking.

- Engagement: Have students share what cooking methods they use at home and how they can apply fuel-saving techniques.

**Step 4:** Wrap-Up Activity

- Interactive Activity: Organize a brief class debate: “Is it important to conserve energy?” Divide the class into two sides and give them a few minutes to prepare their thoughts. This encourages critical thinking and summarizing key points learned during the lesson.

**Conclusion (5 minutes)**

- Summarize the key points discussed: uses of fuel, ways to conserve fuel, and the importance of these practices.

- Reinforce the learning objectives achieved during the lesson.

- Preview the next session’s topic on renewable energy sources and why they are essential. Encourage students to think about ways they can use renewable sources at home.

**Extended Activities**

- Project: Assign students to create a "Conservation Poster" at home that illustrates at least three ways to conserve fuel. They can use drawings, pictures cut from magazines, or written explanations.

- Research Assignment: Have students choose one fuel-saving method and research how it impacts our environment. They can share their findings in the next class.

**Teacher Self-Evaluation:**

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**WEEK 5: LESSON 2**

**Strand:** Conservation of Resources

**Sub Strand:** Fuel Conservation

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify the importance of conserving fuels.

- Observe safety while using fuels.

- Appreciate the importance of conserving fuels.

**Key Inquiry Question(s):**

- How does reducing fuel wastage conserve our resources?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes):**

- Review the previous lesson on natural resources.

- Guide learners to read and discuss relevant content from the learning resources, focusing on the importance of fuel conservation.

**Lesson Development (25 minutes):**

**Step 1:** Understanding Fuel Conservation

- Introduce what fuel conservation is and explain why it is important for our environment and daily life.

- Engage students in a discussion to brainstorm examples of fuels we use (e.g., gasoline, electricity) and how they impact our resources.

**Step 2:** Safety Practices When Using Fuels

- Discuss safety measures when using fuels, such as storing them properly and being careful when handling them.

- Show students a short video or presentation on safety practices to reinforce the concepts.

- Ask students to share ideas about how they keep safe when around fuels.

**Step 3**: Activities in Fuel Conservation

- In small groups, have students brainstorm ways they can conserve fuel at home or school (e.g., turning off lights, walking instead of driving).

- Each group shares one idea with the class.

**Step 4:** Real-World Applications

- Discuss how conserving fuel can help our community and environment, such as reducing air pollution.

- Highlight what individuals can do daily to lessen fuel usage.

**Conclusion (5 minutes):**

- Summarize the key points: the importance of conserving fuels, safety while using fuels, and actions to conserve fuels.

- Conduct a "think-pair-share" activity where students share one new thing they learned about fuel conservation with a partner.

- Preview the next session about renewable energy and how it relates to fuel conservation.

**Extended Activities:**

- Home Fuel Audit: Ask students to conduct a simple fuel audit at home by tracking how they use fuel (electricity, gas, etc.) for one week and discuss their findings in the next class.

- Create a Fuel Conservation Poster: Have students create a poster that illustrates ways to conserve fuel, which can be displayed around the school.

- Classroom Debate: Organize a debate on "Is it better to conserve fuel or to use alternative energy sources?" to deepen understanding of energy resources.

**Teacher Self-Evaluation:**

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**WEEK 5: LESSON 3**

**Strand:** Conservation of Resources

**Sub Strand:** Conserving Wild Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify small wild animals that destroy crops.

- Cut and paste pictures of small wild animals that destroy crops in their books.

- Appreciate the importance of living better with small wild animals.

**Key Inquiry Question:**

- What small wild animals destroy crops?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Pictures of small wild animals (e.g., rabbits, mice, birds)

- Glue, scissors, and construction paper

**Organisation of Learning:**

**Introduction (5 minutes)**

- Begin the class by reviewing what was learned in the previous lesson about agriculture and the impact of animals on crops.

- Ask students if they remember any small wild animals that might affect the crops. Guide them to discuss these concepts, connecting to the new lesson.

**Lesson Development (25 minutes)**

**Step 1**: Identifying Small Wild Animals

- Show students a variety of pictures of small wild animals that can damage crops (e.g., rabbits, squirrels, and certain birds).

- Discuss their characteristics, behavior, and how they can affect farming practices.

**Step 2:** Understanding the Impact

- Explore why these animals may be attracted to crops (e.g., food source, habitat).

- Ask students how farmers might feel about these animals and if these feelings are justified.

**Step 3**: Cutting and Pasting Activity

- Provide students with cut-out pictures of small wild animals.

- Instruct them to cut out images of these animals and paste them into their agriculture books.

**Step 4**: Appreciating Coexistence

- Discuss ways in which farmers and wild animals can coexist.

- Brainstorm ideas about protecting crops while respecting wildlife (e.g., using fences, planting specific crops).

**Conclusion (5 minutes)**

- Summarize the key points discussed, emphasizing the importance of understanding wild animals in the context of agriculture.

- Conduct a brief interactive activity: Ask students to share one thing they learned about a small wild animal today and how it relates to farming.

- Preview the next lesson, which will explore solutions for protecting crops without harming wildlife.

**Extended Activities:**

- Field Journal: Encourage students to keep a field journal where they can draw or write about any wildlife they observe in their neighborhoods and how these animals interact with plants.

- Research Project: Assign students to choose one small wild animal that typically destroys crops and prepare a short presentation on its behavior, habitat, and ways to manage its impact on agriculture.

**Teacher Self-Evaluation:**

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**WEEK 5: LESSON 4**

**Strand**: Conservation of Resources

**Sub Strand:** Conserving Wild Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify small wild animals that destroy crops.

- Cut and paste pictures of small wild animals that destroy crops into their books.

- Appreciate the importance of living better with small wild animals.

**Key Inquiry Question(s):**

- What are the crops that are mostly destroyed by small wild animals?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 Curriculum Design

- Pictures of small wild animals (e.g., rabbits, squirrels, birds)

- Scissors, glue sticks, and paper for cutting and pasting

**Organisation of Learning:**

**Introduction (5 minutes)**

- Begin with a quick review of the previous lesson on agriculture and the importance of crops.

- Ask students to share any small wild animals they remember discussing in class.

- Encourage a brief discussion about how these animals can sometimes be a challenge for farmers, leading to the day’s focus on conservation.

**Lesson Development (25 minutes)**

**Step 1:** Observation

- Show the class various pictures of small wild animals that are known to destroy crops.

- Discuss each animal briefly, asking questions like, “What crops do you think this animal may eat?”

**Step 2:** Identification

- Provide students with handouts that include images of small wild animals alongside a few common crops.

- Have students work in pairs to match animals to the crops they might destroy.

**Step 3**: Cutting and Pasting

- Distribute scissors and glue sticks, and ask students to choose images of small wild animals from the previous discussion.

- Have them cut out and paste these images into their books under a heading titled "Animals That Affect Our Crops."

**Step 4**: Appreciation

- Lead a discussion on why it’s important to understand and live with these animals.

- Encourage students to think of ways to protect their crops without harming wildlife (e.g., using fences, planting certain crops, etc.).

**Conclusion (5 minutes)**

- Summarize the key points learned about small wild animals and their impact on crops.

- Ask students for examples of what they can do to coexist with wildlife.

- Briefly introduce the topic for the next lesson, which will be about methods of protecting crops from these animals.

**Extended Activities:**

1. Nature Walk: Organize a short walk around the schoolyard or a local park to observe any small wild animals. Have students take notes or sketches of what they see.

2. Creative Writing: Ask students to write a short story from the perspective of a small wild animal trying to find food in a farm field.

3. Research Project: Assign students to research a specific small wild animal and present its effects on crops and its role in the ecosystem.

**Teacher Self-Evaluation:**

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**WEEK 6: LESSON 1**

**Strand**: conservation of resources

**Sub Strand:** Conserving Wild Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Name small wild animals which destroy crops.

- Use digital devices to search for animals which destroy crops.

- Appreciate the importance of living better with small wild animals.

**Key Inquiry Question(s):**

- How can we keep off small wild animals from destroying crops?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Access to digital devices (tablets/laptops/smartphones)

**Organisation of Learning:**

**Introduction (5 minutes):**

- Quickly review the previous lesson about types of crops and their importance.

- Engage students in a discussion about what they already know regarding wild animals and crops, prompting them to think about their effects (both positive and negative).

**Lesson Development (25 minutes):**

**Step 1**: Identify and List

- Present a chart or a poster of small wild animals (e.g., rabbits, deer, squirrels).

- Ask students to brainstorm and list any small wild animals they think may destroy crops.

- Write their responses on the board for all to see.

**Step 2:** Digital Exploration

- Divide students into small groups and provide them with tablets or access to computers.

- Instruct each group to search for information about specific small wild animals they listed, focusing on how these animals affect crops.

- Encourage them to find images and any interesting facts about these animals.

**Step 3:** Group Sharing

- Each group will present one or two wild animals they researched, discussing the following:

- Name of the animal

- How it affects crops

- Any interesting fact they discovered.

**Step 4:** Discussion on Coexistence

- Lead a class discussion about why it is important to live in harmony with these animals.

- Discuss the consequences of destroying wild animals versus finding ways to protect crops and the animals.

**Conclusion (5 minutes):**

- Summarize the key points discussed today; emphasize the importance of identifying these animals and understanding the need for coexistence.

- Conduct a fun quiz or game (like a match-up) where students match animals to their effects on crops.

- Prepare learners for the next session by offering a hint about learning how to protect crops without harming animals.

**Extended Activities:**

- Create a Poster: Have students create a colorful poster showing one wild animal and describe how it can be kept away from crops while respecting it.

- Nature Walk: Plan a classroom activity where students can go outside (if possible) and observe if they can find signs of small wild animals and discuss how they can protect their school garden/crop area from these animals.

- Class Journal: Encourage students to keep a journal where they note sightings of animals in their neighborhoods that could relate to their learning in class.

**Teacher Self-Evaluation:**

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**WEEK 6: LESSON 2**

**Strand:** Conservation of Resources

**Sub Strand**: Conserving Wild Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- List materials used to construct a scarecrow.

- Collect locally available materials to make a scarecrow.

- Appreciate the use of scarecrows to keep off wild animals.

**Key Inquiry Question(s):**

- What is a scarecrow?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes**)

- Review the previous lesson about local wildlife and why we need to protect our crops.

- Briefly explain what a scarecrow is and ask students if they have ever seen one. Guide them to think about its purpose.

**Lesson Development (25 minutes)**

**Step 1:** Introduce the Concept of a Scarecrow

- Present a picture or a drawing of a scarecrow to the class.

- Ask students to share what they see and how they think it helps farmers. Discuss the main idea that scarecrows are used to scare away wild birds and other animals that might eat crops.

**Step 2:** Materials Brainstorming

- In small groups, students brainstorm and list materials they think could be used to build a scarecrow.

- Provide prompts if necessary (e.g., "What can we use for the body?" "What can we use for arms and legs?").

- Share their lists with the class and combine their ideas to create one master list on the board.

**Step 3:** Collecting Materials

- Guide students to identify locally available materials they can use at home or in their neighborhood.

- Discuss safety and permission: students should ask a parent or guardian before collecting materials.

**Step 4:** Discussing the Importance of Scarecrows

- Ask students why they think scarecrows are helpful in farming and conservation.

- Discuss the importance of conserving resources and protecting crops to support local wildlife.

**Conclusion (5 minutes)**

- Summarize the main points discussed: the purpose of a scarecrow, materials used, and how it helps farmers.

- Engage students in a quick quiz game where they can answer simple questions about scarecrows.

- Preview the next session: “Next time we will learn how we can create our own scarecrows!”

**Extended Activities**:

- Scarecrow Craft: Have students create a mini scarecrow using recycled materials at home. They can bring their creations to the next class for a “Scarecrow Show and Tell.”

- Nature Walk: Organize a short walk outside to observe the local wildlife and discuss how they interact with farms and gardens.

**Teacher Self-Evaluation:**

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**WEEK 6: LESSON 3**

**Strand:** Conservation of Resources

**Sub Strand:** Conserving Wild Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- List materials used to construct a scarecrow.

- Collect locally available materials to make a scarecrow.

- Appreciate the use of scarecrows to keep off wild animals.

**Key Inquiry Question(s):**

- What materials can be used to construct a scarecrow?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design.

**Organisation of Learning:**

**Introduction (5 minutes)**

- Start by reviewing what students learned in the previous lesson about conserving resources.

- Identify and discuss how humans can impact wildlife.

- Guide learners to read a short passage from the Agriculture and Nutrition curriculum that connects wildlife conservation with farming practices, focusing on scarecrows.

**Lesson Development (25 minutes)**

**Step 1:** Group Discussion

- Divide students into small groups.

- Ask each group to brainstorm and list materials they think could be used to make a scarecrow. Use guiding questions such as: "What can we find at home or in the schoolyard?"

- Each group should write down at least 5 different materials.

**Step 2:** Sharing Ideas

- Have each group share their list with the whole class.

- As they share, write down all the materials on the board to create a master list.

- Discuss the importance of using locally available materials.

**Step 3:** Scarecrow Construction

- Instruct students to gather some of the materials listed (if possible) from the classroom or schoolyard (e.g., old clothes, plastic bottles, sticks).

- Guide them in sketching a simple design of a scarecrow based on the materials they found.

- Discuss why scarecrows are effective for keeping away wild animals and how they contribute to conservation efforts.

**Step 4**: Reflection

- Conduct a brief reflection on what they learned about scarecrows and their purpose in farming.

- Ask questions such as: "Why do we need to keep wild animals away from crops?" and "How does a scarecrow help with this?"

**Conclusion (5 minutes)**

- Summarize the key points learned during the lesson: the materials needed for scarecrows, their purpose, and how they help conserve crops.

- Conduct a quick interactive activity, such as a "Guess the Material" game, where students have to name materials used for scarecrows based on clues.

- Preview the next session’s topic about other wildlife conservation methods and encourage students to consider how they can help in their own surroundings.

**Extended Activities:**

- Create a Scarecrow at Home: Assign students to build a small scarecrow at home using local materials and bring in a photo for the next class.

- Research Project: Have students research one of the wild animals that might be deterred by scarecrows and present their findings in the next lesson.

- Art and Craft: Organize a craft session where students can decorate a scarecrow figure using art supplies, focusing on creativity while discussing its role in agriculture.

**Teacher Self-Evaluation:**

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**WEEK 6: LESSON 4**

**Strand:** Conservation of Resources

**Sub Strand:** Conserving Wild Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Outline the steps for constructing a scarecrow.

- Construct and use a scarecrow to deter small wild animals.

- Appreciate the use of scarecrows in protecting crops.

**Key Inquiry Question(s):**

- What steps do we follow to construct a scarecrow?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes)**

- Start the lesson by reviewing the previous topic about wildlife and their habitats.

- Introduce the importance of protecting crops from wild animals and how scarecrows can help.

- Read a passage together from the learning resources that explains the purpose and benefits of scarecrows.

**Lesson Development (25 minutes)**

**Step 1**: Gather Materials

- Discuss with the class what materials are needed to build a scarecrow, such as sticks, old clothes, straw, a hat, and string.

- Create a list on the board and encourage students to think about where they could find these materials.

**Step 2:** Build the Scarecrow Frame

- Explain that the scarecrow's body is usually made from sticks.

- Demonstrate how to tie sticks together to form a frame (cross the sticks and tie securely).

- Allow students to work in small groups to start constructing their scarecrow frames using available materials.

**Step 3:** Dress the Scarecrow

- Once the frames are ready, demonstrate how to dress the scarecrow using old clothes.

- Encourage students to use creativity when dressing up their scarecrow, discussing colors and patterns that might scare away animals.

**Step 4:** Positioning and Testing the Scarecrow

- Discuss how to position the scarecrow in a garden or field effectively to keep wild animals away.

- Suggest areas where they can test their scarecrow, either in an outdoor space if possible or through imagining a garden layout.

**Conclusion (5 minutes)**

- Summarize the main points about constructing scarecrows and their importance in conserving crops from wild animals.

- Conduct a brief interactive quiz, where students can share what they learned or answer questions on scarecrows.

- Preview the next session's topic, which will explore different methods of protecting plants in gardens.

**Extended Activities**:

- Create a "Scarecrow Contest" where students can design scarecrows at home using recyclable materials and bring them to class for voting.

- Start a garden project where each group can build their scarecrow and monitor its effectiveness over a few weeks, observing any changes in the area around it.

**Teacher Self-Evaluation:**

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**WEEK 7: LESSON 1**

**Strand**: Food Production Processes

**Sub Strand:** Direct Sowing of Tiny Seeds

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify crops established through direct sowing of tiny seeds.

- Use digital devices to observe pictures of crops grown through direct sowing.

- Adopt direct sowing in the establishment of food crops.

**Key Inquiry Question:**

- Which food crops are grown through direct sowing?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Digital devices (tablets/computers) for research

**Organisation of Learning:**

**Introduction (5 minutes)**

- Begin with a brief review of the previous lesson on general planting methods.

- Engage learners in a discussion about what they know about tiny seeds and direct sowing. Ask questions to elicit prior knowledge and interest.

**Lesson Development (25 minutes)**

**Step 1:** Group Brainstorming

- Divide students into small groups of 3-4 members.

- Each group will brainstorm and list crops they know that can be grown by direct sowing tiny seeds (e.g., carrots, radishes, lettuce). Encourage them to think of vegetables and herbs.

**Step 2:** Digital Exploration

- Provide each group with digital devices.

- Instruct them to search for pictures and information about the crops they listed. Encourage them to find images showing these crops at various stages of growth.

**Step 3:** Sharing Findings

- Have each group share one or two crops they found, along with pictures (if possible) from their digital exploration.

- Encourage other groups to ask questions or add to the discussion.

**Step 4:** Direct Sowing Activity

- Discuss the process of direct sowing as a means of planting tiny seeds.

- Present some practical tips for direct sowing (e.g., preparing the soil, spacing seeds appropriately) and ask students if anyone has tried direct sowing at home or in a garden.

**Conclusion (5 minutes)**

- Summarize the key points learned during the lesson:

- What crops can be grown through direct sowing.

- The tools and resources used for learning.

- Conduct a quick interactive question session where students shout out what they learned or found interesting.

- Preview the next session by posing questions about how to care for crops after they are sown.

**Extended Activities**

- Garden Project: Have students create a mini garden at home or in school where they can practice direct sowing tiny seeds. They can keep a journal of their observations as the seeds grow.

- Research Assignment: Ask students to choose one crop grown from tiny seeds and create a poster or digital presentation about it, including how to plant, care for it, and harvest.

**Teacher Self-Evaluation:**

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**WEEK 7: LESSON 2**

**Strand:** Food Production Processes

**Sub Strand**: Direct Sowing of Tiny Seeds

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

1. Identify crops established through direct sowing of tiny seeds.

2. Use digital devices to observe pictures of crops grown through direct sowing.

3. Adopt direct sowing in the establishment of food crops.

**Key Inquiry Question:**

- How does direct sowing of tiny seeds enhance the food production process?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Digital devices (tablets, computers)

**Organisation of Learning**

**Introduction (5 minutes):**

- Begin with a quick review of the previous lesson on food production.

- Ask students to share what they learned and how it relates to growing crops.

- Guide learners to read and discuss relevant content on direct sowing of tiny seeds from the learning resources, highlighting the importance of the topic.

**Lesson Development (25 minutes):**

**Step 1**: Group Discussion

- Divide students into small groups.

- In their groups, have them list at least three crops that can be grown through direct sowing of tiny seeds (e.g., carrots, lettuce, radishes).

- Encourage them to think about where these crops might be grown and their nutritional benefits.

**Step 2**: Digital Observation

- Assign each group a digital device to look up pictures of the crops they listed.

- They will search for images showing the seeds, seedlings, and mature plants.

- Each group will select one crop to focus on and be prepared to share their findings, including what they learned about how direct sowing works.

**Step 3:** Presenting Findings

- Have each group present their chosen crop to the class.

- They should explain how the seed is sown and mention any observations from the pictures they found.

**Step 4**: Direct Sowing Demonstration

- If possible, demonstrate how to directly sow tiny seeds using a small planter box or pot with soil (or show an instructional video).

- Discuss the importance of spacing and depth when planting seeds and the role of soil in supporting plant growth.

**Conclusion (5 minutes):**

- Summarize the key points discussed during the lesson: the meaning of direct sowing and the crops learned about.

- Conduct a brief interactive activity, such as a quiz, to reinforce the main topics.

- Preview the next lesson’s topic, which will explore the growth stages of plants and factors affecting their growth.

**Extended Activities:**

1. Seed Journal: Have students create a 'Seed Journal' where they can draw or paste pictures of tiny seeds and write about their observations as they grow a plant from direct sowing at home or in a school garden.

2. Culinary Exploration: Plan a simple cooking activity where students use one of the crops they learned about (e.g., a salad with lettuce and carrots) to reinforce the connection between growing food and nutrition.

3. Community Garden Project: Encourage students to participate in or start a small community garden, applying direct sowing methods.

**Teacher Self-Evaluation:**

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**WEEK 7: LESSON 3**

**Strand:** Food Production Processes

**Sub Strand:** Direct sowing of tiny seeds

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Students will be able to list the steps of preparing a seedbed.

- Students will sow tiny seeds in a finely prepared seedbed.

- Students will adopt direct sowing techniques in the establishment of food crops.

**Key Inquiry Question(s):**

- Which steps are followed to prepare a seedbed?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes)**

1. Begin with a brief review of the previous lesson, discussing what was learned about different types of seeds and their growth.

2. Guide learners to read and discuss key sections from their learning resources related to seedbeds and direct sowing. Focus on the importance of seedbeds in growing healthy plants.

**Lesson Development (25 minutes)**

**- Step 1:** Preparing the Soil

Explain the first step: clearing the area of weeds and debris. Discuss why clean soil is important for plant growth.

- **Step 2:** Loosening the Soil

Guide students on how to use a hoe or rake to loosen the soil. Highlight how loose soil helps seeds to grow roots more easily.

**- Step 3:** Adding Nutrients

Discuss the importance of adding compost or fertilizer to the soil. Ask students why they think nutrients are essential for seeds to sprout.

**- Step 4**: Sowing the Seeds

Demonstrate how to sow tiny seeds evenly in the prepared seedbed, showing the right depth and spacing. Allow students to practice with simulated activities or using small containers of soil.

**Conclusion (5 minutes)**

1. Summarize the key points discussed: the steps to prepare a seedbed, the importance of each step, and the process of sowing tiny seeds.

2. Conduct a brief interactive quiz, asking questions about the steps in seedbed preparation. Encourage students to share what they learned in pairs.

3. Preview the next lesson, which will cover plant growth and care after seeds have been sown. Pose questions for students to think about, such as "What do plants need to grow after they sprout?"

**Extended Activities**:

- Seedling Observation Journal: Students can keep a journal for any seeds they plant at home or in class. They can draw pictures and write observations about their growth over time.

- Group Project: In small groups, have students design a small garden plan, selecting various plants and outlining how they would prepare the seedbed for each type.

- Field Trip: If possible, arrange a visit to a local farm or community garden to see real-life applications of seedbed preparation and food crops.

**Teacher Self-Evaluation:**

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**WEEK 7: LESSON 4**

**Strand:** Food Production Processes

**Sub Strand:** Direct sowing of tiny seeds

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- List the steps of preparing a seedbed.

- Sow tiny seeds in a finely prepared seedbed.

- Adopt direct sowing in the establishment of food crops.

**Key Inquiry Question**:

- What is the importance of preparing a seedbed?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning**

**Introduction (5 minutes)**

- Begin by reviewing key points from the previous lesson on agricultural practices.

- Introduce the topic of seedbeds. Ask students what they know about preparing a seedbed and its purpose in farming.

- Read together from the learning resources, focusing on the importance of seedbeds in the growth of food crops.

**Lesson Development (25 minutes)**

**Step 1**: Understanding Seedbed Preparation

- Discuss what a seedbed is and why it is important.

- Explain how a well-prepared seedbed helps seeds grow better (e.g., it provides the right environment for germination).

**Step 2**: Preparing the Seedbed

- List the steps for preparing a seedbed:

1. Choose a sunny spot in the garden.

2. Remove weeds and stones from the area.

3. Loosen the soil with a garden fork or spade.

4. Level the soil and make it smooth.

**Step 3:** Sowing Tiny Seeds

- Explain how to sow tiny seeds in a finely prepared seedbed:

1. Make small holes or rows in the soil.

2. Place the tiny seeds in the holes or scatter them in rows.

3. Cover the seeds lightly with soil.

4. Water gently to avoid washing away the seeds.

**Step 4:** Caring for the Seedbed

- Discuss what to do after sowing the seeds:

1. Water the seedbed regularly but avoid overwatering.

2. Keep an eye out for weeds and remove them gently.

3. Protect the seedbed from pests.

**Conclusion (5 minutes)**

- Summarize the key points of the lesson: what a seedbed is, the steps to prepare it, and how to sow tiny seeds.

- Conduct a brief interactive activity where students match the steps of seedbed preparation with pictures or definitions.

- Preview the next topics: different types of seeds and the importance of watering crops.

**Extended Activities**

1. Gardening Project: Have students create their own small seedbeds (in pots or garden spaces) and keep a journal tracking the progress of their seeds.

2. Seed Exploration: Have students research and present on different types of seeds, including their ideal growing conditions and growth times.

3. Art Activity: Create a poster showing the steps of seedbed preparation with drawings or cut-outs from magazines.

**Teacher Self-Evaluation:**

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**WEEK 9: LESSON 1**

**Strand:** Food Production Processes

**Sub Strand:** Growing Fruits

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify fruits that grow in the locality

- Draw and color different fruits that grow in the locality

- Appreciate the importance of consuming fruits for nutrition

**Key Inquiry Question(s):**

- What fruits grow in your locality?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning**

**Introduction (5 minutes):**

1. Begin the lesson by reviewing the previous topic on the importance of fruits in our diet.

2. Ask students to share any fruits they discussed or learned about in their last lesson.

3. Guide the class to read and discuss relevant sections of the learning resources, focusing on local fruit types and their benefits.

**Lesson Development (25 minutes):**

**Step 1:** Group Discussion

- Organize the class into small groups of 4-5 students.

- Provide each group with chart paper.

- Ask them to brainstorm and list down the fruits that grow in their locality. Encourage them to think about fruits they see in local markets, gardens, or parks.

**Step 2:** Research and Sharing

- Have each group choose 2-3 fruits from their list to research briefly.

- Allow groups to share interesting facts about their selected fruits, such as where they grow, what they taste like, and their nutritional benefits.

- Encourage classmates to ask questions.

**Step 3:** Drawing Activity

- Distribute drawing materials (colored pencils, markers, etc.) to each student.

- Ask students to draw and color one of the fruits discussed in their group.

- Remind them to think about the colors they see in real life and represent them on paper.

**Step 4:** Presentation

- Invite a few students to share their drawings with the class, explaining why they chose that fruit and what they learned about it.

**Conclusion (5 minutes):**

1. Summarize the key points discussed during the lesson, reinforcing the local fruits identified and their nutritional importance.

2. Conduct a brief interactive quiz where you ask questions like "What is your favorite fruit?" or "How does fruit help our bodies?"

3. Preview the next session by hinting at learning about how to grow fruits in a garden and asking students to think about what fruits they might like to cultivate.

**Extended Activities:**

- Fruit Tasting Day: Organize a class fruit-tasting event where students can bring in or share fruits discussed in the lesson. They can rate their favorites and share why they like them.

- Home Fruit Exploration: Encourage students to explore their homes or neighborhoods for fruit trees or plants. They can take pictures or make a small scrapbook to present in class.

- Nutrition Poster: Let students create a nutrition poster about their favorite fruit, detailing its health benefits and fun facts.

**Teacher Self-Evaluation:**

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**WEEK 9: LESSON 2**

**Strand:** Food Production Processes

**Sub Strand:** Growing Fruits

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

1. Identify fruits that grow in the locality.

2. Draw and color different fruits that grow in the locality.

3. Appreciate the importance of consuming fruits for nutrition.

**Key Inquiry Question:**

- What is the importance of taking fruits?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes):**

- Review the previous lesson on basic plant growth and the role of fruits.

- Ask students questions to stimulate discussion, such as: “What fruits did we learn about before?” and “Can anyone name a fruit you ate recently?”

**Lesson Development (25 minutes):**

**Step 1**: Identify Local Fruits

- Divide students into small groups.

- Each group will brainstorm and list fruits that grow in their locality. Encourage them to think about fruits they may have seen in their gardens, markets, or parks.

- Share the lists with the class, writing them on the board.

**Step 2:** Research and Discussion

- In their groups, students will choose one fruit from their list to research briefly (using the curriculum as a reference).

- Each group discusses why that fruit is important to our diet and how it can help us stay healthy.

**Step 3:** Drawing and Coloring

- Each student will draw and color their chosen fruit. Remind them to make the fruit look vibrant and realistic.

- Encourage them to add details, like leaves or a branch, to their drawings.

**Step 4:** Sharing Artwork

- Groups will present their drawings to the class. As they share, they will also explain why the fruit they chose is important for nutrition.

- This allows for collaborative learning and reinforces their understanding of key concepts.

**Conclusion (5 minutes):**

- Summarize the key points discussed: the different fruits that grow locally, their nutritional importance, and the students’ artwork.

- Conduct a quick interactive activity, like a quiz or a call-and-response session, to reinforce the importance of eating fruits.

- Preview the next lesson, hinting that they will learn about how fruits are harvested and processed.

**Extended Activities:**

- Create a Fruit Diary: Students can keep a diary for a week, noting which fruits they eat and how they feel after eating them.

- Fruit Tasting Day: Organize a structured tasting session where students can sample a variety of local fruits and vote on their favorites, discussing taste and texture.

- Community Fruit Map: Students can work together to create a map showing where various fruits can be found locally, which can be displayed in the classroom.

**Teacher Self-Evaluation:**

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**WEEK 9: LESSON 3**

**Strand**: Food Production Processes

**Sub Strand:** Growing Fruits

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- State fruits that grow in the locality.

- Use digital devices to observe pictures of different fruits.

- Appreciate the importance of consuming fruits for nutrition.

**Key Inquiry Question:**

- Which fruits are mostly grown in your locality?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Digital devices (tablets or computers) with internet access

**Organisation of Learning:**

**Introduction (5 minutes)**

- Begin by revisiting the previous lesson on agriculture basics.

- Ask students to share what they remember about fruits.

- Introduce the day’s topic: “Today, we will explore the fruits that grow in our area and learn why they are important for our health.”

**Lesson Development (25 minutes)**

**Step 1:** Identifying Local Fruits

- Interactive discussion: Have students share any fruits they already know that grow in the locality. Create a list on the board as students contribute.

- Discuss characteristics of each fruit mentioned (color, taste, and season).

**Step 2:** Digital Exploration

- Split students into small groups. Each group will use digital devices to find pictures of local fruits not mentioned in the previous step.

- Guide students to use safe search engines to look up information about these fruits, including where they grow and any nutritional benefits.

**Step 3:** Class Presentation

- Each group displays their findings to the class. Encourage students to share any interesting facts about the fruits they discovered.

- Highlight nutritional information and how these fruits benefit our health.

**Step 4:** Nutritional Value Discussion

- Lead a discussion on why eating fruits is important for our bodies. Ask students:

- What do you think happens if we eat fruits every day?

- Can anyone tell me a fruit they enjoy and why?

- List benefits on the board, reinforcing the importance of fruits for nutrition.

**Conclusion (5 minutes)**

- Summarize key points discussed during the lesson.

- Reinforce the idea that recognizing local fruits and understanding their benefits helps to improve our diets.

- Conduct a brief interactive activity: Have students draw their favorite fruit and share one fact they learned about it.

- Preview the next session: “Next time, we will learn how fruits are picked and prepared for eating.”

**Extended Activities:**

- Fruit Journal: Ask students to keep a journal for a week where they note the fruits they eat each day and any new types they may try.

- Fruit Tasting Day: Organize a day where students bring in a fruit from their home or local fruit market. Discuss its origin and taste test together.

- Gardening Project: If possible, start a small class garden where students can participate in planting and caring for fruit plants.

**Teacher Self-Evaluation:**

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**WEEK 9: LESSON 4**

**Strand:** Food Production Processes

**Sub Strand:** Growing Fruits

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Match the fruits with their names

- Use digital devices to observe pictures of different fruits

- Appreciate the importance of consuming fruits for nutrition

**Key Inquiry Question:**

- Which vitamin is provided by fruits?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Digital devices (tablets/computers) with internet access

**Organisation of Learning:**

**Introduction (5 minutes)**

- Review the previous lesson about the types of plants and their importance in our diet.

- Guide learners to read and discuss relevant content in the curriculum. Focus on the importance of fruits and the nutrients they provide, specifically vitamins.

**Lesson Development (25 minutes)**

**Step 1:** Naming Fruits

- Begin by introducing different fruits found in the local area (e.g., apples, bananas, oranges).

- Use flashcards or images to show various fruits and have students say their names aloud.

**Step 2:** Matching Activity

- Provide students with a matching worksheet where they match pictures of fruits with their names.

- Walk around the classroom to assist students as needed. Encourage discussion about the fruits they enjoy or have tried.

**Step 3:** Digital Exploration

- Allow students to use digital devices to search for pictures of fruits they may not know.

- In pairs, they can explore fruits not commonly found in the locality and present one new fruit to the class.

**Step 4:** Nutritional Discussion

- Discuss the vitamins found in fruits, asking students to share which vitamins they think fruits provide. Guide them toward understanding Vitamin C and others.

- Emphasize the importance of eating a variety of fruits for good health.

**Conclusion (5 minutes)**

- Summarize the key points: the names of fruits, matching names to pictures, exploring different types of fruits, and their nutritional benefits.

- Conduct a brief interactive activity where students can shout out their favorite fruit and one health benefit of it.

- Preview the next lesson by asking, "What other foods do you think are important for our health?"

**Extended Activities:**

- Fruit Chart Project: Have students create a chart or poster of local fruits, including their names, colors, and one vitamin or health benefit for each fruit.

- Fruit Taste Testing: Organize a fruit tasting day where students can bring in different fruits. Have them fill out a simple survey about their favorites and why.

- Gardening Activity: Plan a small class garden where students can plant and observe the growth of different fruit plants (if feasible based on resources).

**Teacher Self-Evaluation:**

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**WEEK 10: LESSON 1**

**Strand:** Food Production Processes

**Sub Strand**: Growing Fruits

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- State fruits that grow in the locality.

- Collect different fruits and bring them to class.

- Appreciate the importance of consuming fruits for nutrition.

**Key Inquiry Question**:

- Which fruits are likely to grow in your locality?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Local fruit guide (charts, images, etc.)

- Fresh fruits for comparison and discussion

**Organisation of Learning:**

**Introduction (5 minutes):**

- Begin with a brief review of the previous lesson, asking students what they remember about food production.

- Introduce today’s focus on fruits, asking students if they can name fruits that they enjoy or see in their community.

- Encourage learners to share their thoughts and experiences related to local fruits.

**Lesson Development (25 minutes):**

**Step 1:** Identifying Local Fruits

- Engage the class in a brainstorming session to list local fruits. Use a whiteboard to write down their responses.

- Discuss some characteristics of these fruits (color, taste, seasonality) and where they can typically be found.

**Step 2**: Group Work - Fruit Collection

- Divide the class into small groups.

- Assign each group to collect different fruits to bring to class for discussion (if possible, coordinate a “Fruit Day” where students can bring in fresh fruits).

- Guide each group to think about where they might find these fruits (markets, gardens, stores).

**Step 3:** Nutritional Discussion

- After collection, each group should present the fruits they brought and share one interesting fact about each fruit (such as taste, origin, or nutritional benefits).

- Discuss as a class why eating fruits is important for health and nutrition (vitamins, fiber, etc.).

**Step 4**: Hands-On Example

- If available, give a hands-on comparison of different fruits. Let students explore and taste a few of the fruits brought in.

- Ask questions about their preferences and what they learned from the visual and tasting experience.

**Conclusion (5 minutes):**

- Summarize key points: types of local fruits, their nutritional benefits, and the importance of including fruits in our diets.

- Conduct a brief interactive quiz (e.g., “Raise your hand if you like [fruit]!” or a true/false game about fruits) to reinforce the main topics learned.

- Prepare students for the next lesson that might involve cooking or preparing a simple fruit dish, asking them to think about what fruits they would like to use.

**Extended Activities:**

- Fruit Journals: Encourage students to keep a week-long journal where they track the fruits they eat daily and note how they feel after eating them.

- Fruit Art: Have students create art using pictures of fruits or actual fruits (like fruit prints).

- Community Exploration: Organize a visit to a local orchard or farmer's market where students can see fruit production firsthand.

**Teacher Self-Evaluation:**

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**WEEK 10: LESSON 2**

**Strand:** Food Production Processes

**Sub Strand**: Growing Fruits

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Outline the steps followed when growing a fruit tree.

- Grow a fruit tree suited in the locality.

- Appreciate the importance of consuming fruits for nutrition.

**Key Inquiry Question(s):**

- Which steps are followed when growing a fruit tree?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning**

**Introduction (5 minutes)**

- Review the previous lesson on the importance of fruits.

- Guide learners to read and discuss relevant content from the learning resources, focusing on the steps to grow a fruit tree.

**Lesson Development (25 minutes)**

**Step 1:** Choosing the Right Fruit Tree

- Discuss how to select a fruit tree that grows well in the local climate and soil.

- Examples: Apple trees in cooler climates, mango trees in warmer regions.

**Step 2:** Preparing the Soil

- Explain the importance of soil health and preparation.

- Demonstrate how to dig the hole, clear weeds, and add nutrients (like compost) to the soil.

**Step 3:** Planting the Seedling

- Show the proper way to plant a fruit tree seedling.

- Discuss the correct depth and spacing to allow the tree to grow.

**Step 4:** Caring for the Tree

- Cover the essentials of watering, mulching, and protecting the tree from pests.

- Explain how to recognize when the tree ishealthy or needs care.

**Conclusion (5 minutes)**

- Summarize the key steps discussed in the lesson for growing a fruit tree.

- Conduct a fun quiz where students can use small cards to identify the steps learned.

- Prepare learners for the next session by asking them to think about their favorite fruits and where they come from.

**Extended Activities:**

- Fruit Tree Journal: Have students start a journal to track the growth of a tree (real or hypothetical). They can draw pictures of each step and write a few sentences about what they learned.

- Fruit Food Day: Organize a 'Fruit Food Day' where students bring a fruit dish, encouraging them to explore the different ways fruits can be consumed.

**Teacher Self-Evaluation:**

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**WEEK 10: LESSON 3**

**Strand:** Food Production Processes

**Sub Strand**: Growing Fruits

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- List the importance of consuming fruits for our health.

- Develop self-efficacy when producing their own fruits for consumption.

- Appreciate the importance of consuming fruits for nutrition.

**Key Inquiry Question:**

- Why are fruits good for our health?

**Organisation of Learning**

**Introduction (5 minutes)**

- Begin by reviewing the previous lesson on plants and their roles in our environment.

- Guide learners in reading parts of the Agriculture and Nutrition Grade 4 curriculum. Ask students to share what they already know about fruits and their significance to health.

**Lesson Development (25 minutes)**

**Step 1:** Discuss the Health Benefits of Fruits

- In small groups, have students brainstorm and list different fruits they know.

- Ask groups to research and share at least three health benefits of consuming fruits. Encourage them to think about nutrition and how fruits help our bodies (e.g., vitamins, minerals, fiber).

**Step 2:** Growing Fruits: Practical Idea

- Discuss with groups how they can start growing their own fruits, even in small spaces (e.g., pots, community gardens).

- Have each group make a plan for a small fruit garden. What fruits would they choose to grow? How would they take care of them?

**Step 3:** Self-Efficacy through Production

- Guide learners to reflect on how growing their own fruits can help them feel proud and capable.

- Have them write down one reason they would want to produce their own fruits and how they would feel once they see the fruits grow.

**Step 4:** Sharing and Celebrating Fruits

- Each group shares their garden plan and best fruit health benefits. Celebrate their creativity!

- Highlight how sharing fruits from their garden can be a fun way to enjoy healthy eating with family and friends.

**Conclusion (5 minutes)**

- Summarize the key points discussed: the health benefits of fruits, the joy of growing them, and how they contribute to good nutrition.

- Conduct a brief interactive activity: Have students create a “Fruit Health Benefits” poster to display in class.

- Preview the next session: Questions for consideration might include, “What fruits could we grow in our community?” or “How do fruits help our bodies when we feel sick?”

**Extended Activities:**

- Fruit Tasting Day: Organize a day where students bring in different fruits to share, providing opportunities to taste and discuss their flavors and benefits.

- Create a Fruit Recipe Book: Have students develop simple recipes that include fruits, encouraging creativity in the kitchen.

**Teacher Self-Evaluation:**

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**WEEK 10: LESSON 4**

**Strand**: Food Production Processes

**Sub Strand:** Growing Fruits

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify ways of taking care of growing fruit trees

- Cut and paste pictures of different fruit trees in their books

- Develop a desire to grow fruit trees suited to their locality

**Key Inquiry Question:**

- Why should we take care of growing fruit trees?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes)**

- Review the previous lesson on plants and their needs.

- Discuss briefly what students remember about fruits and fruit trees.

- Guide learners to read and discuss relevant content from the learning resources, emphasizing the importance of fruit trees.

**Lesson Development (25 minutes)**

**Step 1:** Discuss the Importance of Fruit Trees

- Ask students why they think fruit trees are important. Record responses on the board.

- Explain benefits such as providing food, improving the environment, and enhancing local beauty.

- Engage students by sharing fun facts about common fruit trees in their locality.

**Step 2:** Identifying Care Needed for Fruit Trees

- Introduce ways of taking care of growing fruit trees (e.g., watering, pruning, protecting from pests).

- Use visuals to show good practices versus poor practices in fruit tree care.

- Question students about what they can do in their own backyards to help fruit trees grow healthy.

**Step 3:** Cut and Paste Activity

- Provide students with printed pictures of various fruit trees (e.g., apple, mango, orange).

- Instruct students to cut out pictures and glue them into their books.

- Encourage them to label each tree and write one way they can help that tree grow strong.

**Step 4:** Group Discussion

- Organize students into small groups to share their pasted pictures and discuss which fruit tree they would like to grow and why.

- Prompt them with questions about the care each chosen tree would need.

**Conclusion (5 minutes)**

- Summarize key points:

- Importance of fruit trees

- Ways to take care of them

- Personal interest in growing fruit trees

- Conduct a brief interactive activity: Each student shares one thing they learned and one fruit tree they would like to grow.

- Briefly preview the next session, which will cover the different types of fruits and their growth cycles.

**Extended Activities:**

- Fruit Tree Diary: Encourage students to start a diary for a fruit tree (real or imaginary). They can draw pictures, write about its care, and document its growth.

- Home Project: Ask students to identify a fruit tree in their neighborhood or at home, observe it for a week, and note how people take care of it—what’s working and what isn’t?

- Plant a Seed: If possible, organize a simple project where students can plant seeds of a fruit tree (like a pit from an avocado), take care of it, and observe its growth over time.

**Teacher Self-Evaluation:**

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**WEEK 11: LESSON 1**

**Strand**: Food Production Processes

**Sub Strand:** Uses of Domestic Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify domestic animals in the community.

- Use digital devices to observe pictures of domestic animals.

- Appreciate the importance of domestic animals for food production.

**Key Inquiry Question(s):**

- What are domestic animals?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

- Digital devices (tablets or computers)

- Pictures of domestic animals

**Organisation of Learning:**

**Introduction (5 minutes)**

- Begin by reviewing the previous lesson on food production. Ask students to share what they remember.

- Introduce today's topic by asking, "What do you think of when you hear the words 'domestic animals'?" Encourage students to share their thoughts and make a connection with food.

**Lesson Development (25 minutes)**

**- Step 1:** Identify Domestic Animals

- Ask students to think about animals they see around their homes or in farms.

- Prompt them to list these domestic animals on the board, such as cows, chickens, and pigs.

- Discuss why these animals are considered "domestic."

**- Step 2:** Digital Exploration

- Split students into small groups and provide access to digital devices.

- Instruct them to search for pictures of the domestic animals listed on the board.

- Encourage each group to find at least one picture for each animal and share it with the class.

**- Step 3:** Discuss the Importance

- Bring the class back together and ask each group to share their findings.

- Facilitate a discussion on why these animals are important for food production. Highlight roles such as providing milk, eggs, meat, and wool.

**- Step 4**: Reflection and Connection

- Ask students to think individually about how their lives would be different without domestic animals.

- Have students write one or two sentences about their thoughts and share with a partner.

**Conclusion (5 minutes)**

- Summarize the key points: What domestic animals are, their importance in our community, and their role in food production.

- Conduct a brief interactive activity, such as a quick quiz with questions about domestic animals.

- Preview the next session by asking students to think about how we take care of these animals or where the food produced comes from.

**Extended Activities:**

- Animal Profile Project: Have students select a domestic animal to research. They can create a poster with pictures and fun facts about the animal’s role in food production.

- Farm Visit (Virtual or Actual): Arrange for students to either visit a local farm or take a virtual tour of a farm to observe domestic animals in their environment.

**Teacher Self-Evaluation:**

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**WEEK 11: LESSON 2**

**Strand:** Food Production Processes

**Sub Strand:** Uses of Domestic Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Identify domestic animals in the community.

- Use digital devices to observe pictures of domestic animals.

- Appreciate the importance of domestic animals for food production.

**Key Inquiry Question(s):**

- Name five domestic animals.

- **Learning Resources:**

Agriculture and Nutrition Grade 4 curriculum design.

**Organisation of Learning**

**Introduction (5 minutes)**

- Review the previous lesson on food sources.

- Guide students to read the relevant sections of the learning resources, particularly focusing on domestic animals and their contributions to food production.

**Lesson Development (25 minutes)**

**Step 1:** Identify Domestic Animals

- Have the students think about farms, homes, and their communities.

- Ask them to name domestic animals they know (e.g., cows, chickens, sheep, pigs, goats).

- Create a list on the board of the animals mentioned.

**Step 2:** Observing Pictures

- Divide students into small groups.

- Use tablets or computers to show pictures of the domestic animals identified.

- Each group takes turns sharing their findings and discussing key features of each animal (e.g., what they eat, where they live).

**Step 3:** Importance of Domestic Animals

- Discuss with students how domestic animals help in food production (milk from cows, eggs from chickens, etc.).

- Ask students why they think these animals are important to families and communities.

**Step 4**: Reflection Activity

- Ask students to individually draw their favorite domestic animal and write a sentence about its importance to food production.

- Collect drawings and sentences for a classroom display.

**Conclusion (5 minutes)**

- Summarize key points: Name five domestic animals, recognize them through pictures, and understand their importance.

- Conduct a brief interactive activity: Ask students to share one new thing they learned about domestic animals.

- Preview the next session: “Next time, we will learn about the roles of these animals on farms and how they contribute to our daily meals.”

**Extended Activities**

- Animal Farm Visit: Organize a field trip to a local farm where students can see domestic animals in real life.

- Create an Animal Book: Have students create a mini-book featuring different domestic animals, including their names, pictures, and facts about their contributions to food production.

- Class Research Project: Assign students to research one domestic animal and present their findings to the class using posters or digital presentations.

**Teacher Self-Evaluation:**

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**WEEK 11: LESSON 3**

**Strand:** Food Production Processes

**Sub Strand**: Uses of Domestic Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- Outline the uses of domestic animals.

- Draw and color domestic animals.

- Appreciate the importance of domestic animals for food production.

**Key Inquiry Question(s):**

- How are domestic animals important to us?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes)**

- Begin the lesson by quickly reviewing the previous lesson on food sources.

- Ask students to share what they remember about domestic animals and their roles in food production.

- Guide learners to read a short passage about domestic animals from the learning resources, highlighting the importance of each animal in agriculture.

**Lesson Development (25 minutes)**

**Step 1:** Discussion of Domestic Animals

- Introduce domestic animals such as cows, chickens, sheep, and pigs.

- Ask students to brainstorm different uses of these animals (e.g., milk from cows, eggs from chickens).

- Write their responses on the board to visually illustrate the discussion.

**Step 2**: Group Brainstorming

- Divide students into small groups and assign each group a specific domestic animal.

- Each group should list all the ways their assigned animal can be used (e.g., products, labor, companionship).

- After 5 minutes, have each group share their findings with the class.

**Step 3:** Drawing Activity

- Give students paper and crayons or colored pencils.

- Instruct them to choose one domestic animal and draw it in a farm setting, emphasizing the role it plays.

- Encourage creativity, ensuring they include something that represents its use (e.g., a cow with a milk bucket).

**Step 4**: Coloring and Presentation

- Allow students to color their drawings.

- After coloring, ask a few students to present their drawings to the class, explaining how their animal is important in food production.

**Conclusion (5 minutes)**

- Summarize key points discussed during the lesson, reinforcing the uses of domestic animals and their importance in agriculture.

- Ask students to participate in a quick quiz game where they can answer questions based on the day's learning.

- Preview the next session, which will focus on sustainable farming practices and how they relate to domestic animals.

**Extended Activities:**

- Create a "Domestic Animal Diary" where students record information about a domestic animal they observe at home or in the community, noting its uses.

- Organize a visit to a local farm where students can see domestic animals up close and learn more about their roles in food production.

- Have students research another domestic animal not covered in class and present their findings in a short paragraph or poster.

**Teacher Self-Evaluation:**

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**WEEK 11: LESSON 4**

**Strand:** Food Production Processes

**Sub Strand**: Uses of Domestic Animals

**Specific Learning Outcomes:**

By the end of the lesson, learners should be able to:

- State the products we get from domestic animals.

- Cut and paste pictures of domestic animals in their books.

- Appreciate the importance of domestic animals for food production.

**Key Inquiry Question(s):**

- What products do we get from domestic animals?

**Learning Resources:**

- Agriculture and Nutrition Grade 4 curriculum design

**Organisation of Learning:**

**Introduction (5 minutes)**

- Review the previous lesson on plants and their uses in food production.

- Guide learners to read and discuss the section in their learning resources related to domestic animals and their contributions to food production. Focus on understanding why domestic animals are important.

**Lesson Development (25 minutes)**

**Step 1:** List the Products

- Begin by asking students to name some domestic animals (e.g., cows, chickens, goats).

- Write their answers on the board.

- Discuss the different products we get from these animals (e.g., milk from cows, eggs from chickens, meat from goats).

**Step 2**: Group Activity

- Divide the class into small groups.

- Each group selects two domestic animals and discusses the products they provide.

- Groups will present their findings to the class.

**Step 3:** Cut and Paste Activity

- Provide printed pictures of various domestic animals.

- In their notebooks, students will cut out the pictures and paste them next to the names of the products these animals provide.

- Encourage creativity in decorating their pages.

**Step 4:** Discussion on Importance

- Lead a discussion on the importance of these animals in food production.

- Ask students questions like, "Why do we need cows for milk?" or "How do chickens help us?"

- Highlight the significance of responsible animal care.

**Conclusion (5 minutes)**

- Summarize the key points: the products obtained from domestic animals and their importance to human food supply.

- Conduct a brief interactive activity, such as a quick quiz where students shout out answers to questions about the lesson.

- Preview the next session by introducing the topic of sustainable agriculture practices involving domestic animals. Encourage students to think about how to care for and efficiently use these animals.

**Extended Activities:**

- Create a "Domestic Animal Diary" where students can draw and write about a domestic animal they find interesting.

- Visit a local farm or invite a farmer to talk about animal care and products in real life.

- Have students research and present on a specific animal, focusing on its products and care.

**Teacher Self-Evaluation:**