



Education Bureau



Agriculture, Fisheries and
Conservation Department

Countryside Adventure

Learning Activity Resource Package
Education Bureau

Teacher's Guide



VII Activity Plans

Activity Area: A. Field Crops

Activity 1 : I am a Little Farmer

Activity 2 : Protect the Little Plants



A. Field Crops

Activities “I am a Little Farmer” and “Protect the Little Plants” can be conducted in this area.

Area Introduction

- Field Crops is located in the valley of the AFCD Lions Nature Education Centre. Seasonal crops such as legumes, aquatic crops, melons, Chinese radish, garlic, chives and leeks, roots and tubers, eggplant & fruit and short-term leafy vegetables (with growing period for 30-40 days). Crop rotation practice will be adopted for each growing season. Children can observe, compare and contrast different

plants such as yam (Tuber type), lettuce (leafy type) and tomato (eggplant & fruit type), and experience the work of a farmer through operating the tools, to understand the growing conditions of crops and the procedures in farming.

Safety Precautions

- Teachers should pay attention to children's use of tools and remind them to give due regard to safety.



- | | |
|---------------------------------|-------------------------|
| A Geopark Visitor Centre | E Insectarium |
| B Fisheries Hall | F Rock Classroom |
| C Agriculture Hall | G Rock Academy |
| D Shell House | |

- When children are using the tools, teachers should remind them to place the tools carefully to prevent children from stepping on the tools which may cause tripping hazards.
- When children are using the long and short bamboo rods to build the nets, teachers should remind them not to use the rods to point at themselves or others.
- Beware of uneven ground.

Design Rationale

- Children in Hong Kong do not have much opportunity to get close to the fields and countryside, they may not know the farming methods and the source of food. At Field Crops, children can learn about the crops' (or plants') growing conditions; experience the farming procedures; and understand the close relationship between the nature and human life, so as to bring forth the message of loving the nature and cultivate the attitude towards treasuring the food.
- In the first activity "I'm a Little Farmer", children gain a preliminary understanding of the growing conditions of crops (or plants) through plowing and watering the soil. Science activities for children allow them to freely explore, discover problems and try to find out the answers on their own through predictions, hypothesis and experiments. Therefore, this activity not

only allows children to have first-hand experience, but also proactive explorations, predictions and experiments.

- In the second activity "Protect the Little Plants", children can further experience the work of farmers and understand that besides sowing, planting and watering, farmers also have to protect crops from damage caused by pests and other animals. Children love role-play and constructive play activities. In this activity, children will cooperate to build a protection net, which enables them to demonstrate their creativity and team spirit. The purpose of building a protection net is not only for repelling pests, it is also a physical precaution to prevent animals like boars or birds from eating the crops.

Teaching Skills

- Teachers should be open-minded and encourage children to freely explore, self-discover, and solve problems during the activity. Teachers should let children guess or share how to use the tools. They should avoid too much demonstration which will stifle children's thinking.
- During free exploration/construction, teachers should observe children's performance to provide appropriate assistance and guidance; yet avoid dominating children's exploration.

- Prior to the activity, teachers are encouraged to discuss with children about what kind of tools to bring to the field for plowing the soil, which will foster children's interest and commitment. As for K3 children, teachers may discuss and construct concept maps with them to grasp their prior knowledge. Teachers may invite them to prepare and bring a tool for plowing the soil.
- Under safe conditions, teachers should let children freely choose the tools and methods to water and plow the soil. Children should not be asked to use the tools provided only, for example, they may use their own bottles or hands for watering or their own tools for plowing. However, teachers should avoid using the disposable plastic bottles and cups in order to instill the concept of reducing waste source and recycling for environmental protection.
- While inviting children to observe and share the characteristics of various farming tools, they may have other interesting discoveries, such as an inverted reflection in water. Teachers may explore the topic with children in a flexible manner, they may also jot down the questions for further sharing at school.
- To avoid domination, teachers should let children freely suggest and test different methods in building nets.
- The "Agriculture Hall" in the AFCD Lions Nature Education Centre displays animal and crop specimens, and organic produces. Teachers may use other facilities in the Centre flexibly as a reference for teaching.
- According to actual situations and children's interests, teachers may conduct extended activities at school.

Activity 1: I am a Little Farmer



Proposed Class Level	K1
Name of Area	Field Crops
Proposed Number of Participants	6 people in a group
Duration	Around 30 minutes
Teaching Aids/ Materials	<p>Free loan from AFCD Lions Nature Education Centre through advance registration:</p> <ul style="list-style-type: none"> • Farming tools, including plows and shovels in various sizes • Watering tools, including various kinds of containers, and bottles, cups, scoops and buckets made of various materials
Children's Developmental Characteristics 3-4 years old	<ul style="list-style-type: none"> • Enjoy role-play activities • Enjoy exploration through body and movement
Proposed Learning Objectives	<p>[Knowledge] Children are able to identify various farming tools, such as plows and shovels</p> <p>[Skill] Children are able to use different tools for watering</p> <p>[Attitude] Children are able to enjoy and appreciate the nature</p>
Focus of Activity	Enable children to have a basic understanding of different farming and watering tools, and provide children with the opportunities to use the tools for plowing and watering.



Proposed Activity Plan
(Procedures)

Introduction

Teacher leads children to Field Crops and asks questions: What is this place? What do you see? Have you seen the fields before? Do you know the use of the fields? What are the colours of vegetables and fruits? Which is your favourite vegetable or fruit? Let children express freely and share what they have heard/seen so as to understand children's prior knowledge and experience regarding the fields.

Process

- Teacher invites children to experience the work of a farmer.
- Teacher shows them different farming tools (such as plow and shovel) and let them try to use the tools.
- If children cannot use the tools, teacher can give a demonstration.
- After plowing the soil, teacher asks children if they know what else a farmer needs to do (children may respond freely).
- Teacher summarises children's sharing and simulates sowing. Teacher tells them that farmer needs to water the soil for the plants to grow periodically, just like we need to drink water every day. Teacher shows them different watering tools and containers, (such as glass bottles, water bottles, cups, scoops and buckets), then invites them to explore the use of tools and take turns to water the soil.
- During the watering process, teacher observes and pays attention to children's use of the tools, and provides assistance if needed.

Conclusion (Sharing)

- Teacher revises with children about what they have discovered; for example, the tools used to plow and water the soil, and plants need water to grow.
- Finally, teacher may invite them to share their feelings in the fields, for example, is the work of a farmer difficult? Teacher guides them to consider if food comes easily, so as to bring forth the message of care for the nature and treasuring food.

Possible Adjustments

- Children in Hong Kong do not have much opportunity to get close to the fields, and may not understand the work of a farmer. As individual children have different prior knowledge and experience, teachers can understand children's prior knowledge before the field visit, or provide a brief introduction to children about the activity to facilitate children's experience as a farmer.
- Children may not fully master eye-hand coordination, and teachers may need to assist them in plowing and watering.



Reference Questions for Teachers

(Select questions according to circumstances and in line with the proposed learning objectives)

According to children's prior knowledge and skills on the activity, teacher guides them in thinking and questioning gradually and progressively.

Before the Activity

- Have you tried watering the plant? If yes, how do you water the plant?

During the Activity

- How do you feel about touching the soil?
- How do we plow the soil?
- How do we water the fields?
- What tools can we use to plow / water?
- How are these tools used?

After the Activity

- Can you share your feelings about being a farmer?
- Do you think water is useful? What are the uses of water?

Extended Activities

Based on the rationale of this activity, teachers may develop other extended activities to fit into the themes of the school-based curriculum, for example:

Activity 1

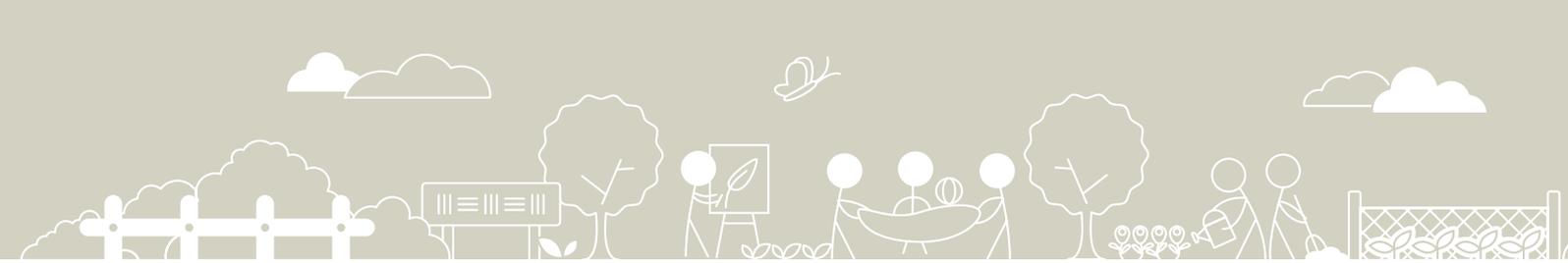
As it takes time for seeds to germinate, teachers can carry out planting activities at school to let children observe the growing process of seeds.

Activity 2

After the field visit, teachers can encourage children to treasure food, such as by responding to the Food Wise Hong Kong Campaign to teach children not to waste food.



Proposed Class Level	K2
Name of Area	Field Crops
Proposed Number of Participants	6-8 people in a group
Duration	Around 30-45 minutes
Teaching Aids/ Materials	Free loan from AFCD Lions Nature Education Centre through advance registration: <ul style="list-style-type: none"> • Farming tools, including plows and shovels in various sizes • Watering tools, including various kinds of containers, and bottles, cups, scoops and buckets made of various materials
Children's Developmental Characteristics 4-5 years old	<ul style="list-style-type: none"> • Enjoy role-play activities • Enjoy questioning and show curiosity about the surroundings
Proposed Learning Objectives	<p>[Knowledge] Children are able to identify various watering and plowing tools</p> <p>[Skill] Children are able to compare and contrast the use of different tools</p> <p>[Attitude] Children are able to enjoy the fun of farming</p>
Focus of Activity	Enable children to compare and contrast different farming and watering tools, enjoy the farming experience and understand that the nature can provide us with food.
Proposed Activity Plan (Procedures)	<p>Introduction Teacher leads children to Field Crops to observe different crops and asks questions: How do farmers grow the vegetables and fruits? What kinds of vegetables do you like or dislike? What would you do if you are given some vegetables you do not like to eat?</p> <p>Process</p> <ul style="list-style-type: none"> • Teacher guides children to think and share about the procedures in farming and the tools required.



- Children should be able to briefly describe the farming process. After teacher invites them to share, children can take turns to try plowing and watering the soil so as to experience the process of farming.
- During the activity, teacher first shows them different farming tools (for example, plow, shovel), then guides them to think, question and share the ways of using the tools and farming methods, and let them have hands-on experience for comparison of tools.
- After plowing the soil, teacher may simulate sowing with children, then show them different watering tools and containers (such as glass bottles, water bottles, cups, scoops and buckets).
- Teacher invites them to select watering tools, then compare and contrast those watering tools. For example, what is the difference in using a scoop and a bottle for watering? Which one is more convenient, a watering can with a handle or a bottle without a handle?

Conclusion (Discussion and Sharing)

- Teacher invites children to share about their farming experience. For example, is it hard to plow the soil? What's the difference in using different watering tools?
- Finally, teacher brings out the message that farmers' work is hard, we need to care for the nature and treasure food.

Possible Adjustments

Children may not know how to use different tools, and may not be able to select appropriate tools; yet there is no urgent need for teachers to hint the correct answers; instead teachers may guide children to observe the characteristics of different tools.

Reference Questions for Teachers

(Select questions according to circumstances and in line with the proposed learning objectives)

According to children's prior knowledge and skills on the activity, teacher guides them in thinking and questioning gradually and progressively.

Before the Activity

- Why do we need to water the plants?

During the Activity

- What should be done before sowing?
- What kind of tools can we use for plowing / watering?
- How do we water the fields?
- Under what conditions do we need to water the fields? Why?
- How do we use the plowing and watering tools?
- Compare and contrast the plowing and watering tools, what are the differences?



- Can you guess why farmers need to plow and water the soil?
- Can you guess what happens to seeds after sowing?

After the Activity

- Can you share your feelings about being a farmer?
- As food is precious, what should we do when ordering food?

Extended Activities Based on the rationale of this activity, teachers may develop other extended activities to fit into the themes of the school-based curriculum, for example:

Activity 1

As it takes time for seeds to germinate, teachers can carry out planting activities at school to let children observe the growing process of seeds.

Activity 2

Teachers can revise with children about the watering tools used in the field, and invite children to collect disposable plastic bottles and upcycle them into watering jugs with pierced holes.

Activity 3

After the field visit, teachers can encourage children to treasure food, such as by responding to the Food Wise Hong Kong Campaign to teach children not to waste food.



Proposed Class Level	K3
Name of Area	Field Crops
Proposed Number of Participants	8 people in a group
Duration	Around 30-45 minutes
Teaching Aids/ Materials	Free loan from AFCD Lions Nature Education Centre through advance registration: <ul style="list-style-type: none"> • Farming tools, including plows and shovels in various sizes • Watering tools, including various kinds of containers, and bottles, cups, scoops and buckets made of various materials
Children's Developmental Characteristics 5-6 years old	<ul style="list-style-type: none"> • Enjoy role-play activities • Able to explore and discuss with peers, with the mastery of language development
Proposed Learning Objectives	<p>[Knowledge] Children are able to understand the farming process and food doesn't come easily</p> <p>[Skill] Children are able to select appropriate tools for farming based on their prediction</p> <p>[Attitude] Children are able to appreciate farmers' contribution and treasure food</p>
Focus of Activity	Enable children to predict the effects of using different farming and watering tools, understand that farming takes time through farmer's contribution, so as to learn to treasure food.
Proposed Activity Plan (Procedures)	<p>Introduction Teacher leads children to Field Crops, let them freely share their prior experience about fields and farming, so as to revise the farming methods with them. In addition, teacher may ask questions: Should we buy a lot of vegetables and fruits at one time or according to our actual needs and why?</p> <p>Process</p> <ul style="list-style-type: none"> • Teacher shows different farming tools, leads children to discuss in small groups and share the ways of using the tools.



- Teacher can guide them to observe the characteristics of different tools and predict the effects of using them. For example, what is the difference in watering efficiency by using a water bottle and a watering can with wide spout or rose attachment (like a shower head)? Besides the volume of water and the area to be covered, they can also predict the difference in the amount of soil to be washed away.
- During the experiential farming process, children can understand that different tools have different functions and characteristics. For example, teacher can invite children to observe that a watering can with wide spout or rose attachment (like a shower head) provides fine water streams or droplets which could cover a wider plantation area comparatively.
- Teacher can further guide them to deduce the reasons.
- Teacher can also demonstrate plowing to show the effects, they can also guide the children to understand that soil, air, and water of the nature are the crucial factors for growth of crops.
- Teacher can also guide them to share the major elements involved in plant growth hence to elaborate the purpose of irrigation in farming practice, as well as to make prediction about the growing process of plants.

Conclusion (Discussion and Sharing)

- Teacher can invite children to share the pros and cons by using different farming tools, such as a bigger shovel could scoop up more soil, but it weighs heavier and difficult to manoeuvre.
- After sharing, teacher can reiterate that farmer's job is not an easy one, therefore we should care for the nature and treasure food.
- Teacher can also invite children to share and discuss about ways of avoiding food wastage.

Possible Adjustments

Children may not be able to predict the results based on the characteristics of different tools. Teachers may guide children to use different tools and compare and contrast the effects.

Reference Questions for Teachers

(Select questions according to circumstances and in line with the proposed learning objectives)

According to children's prior knowledge and skills on the activity, teacher guides them in thinking and questioning gradually and progressively.

Before the Activity

- Why do we need to water the plants?
- What kind of tools can we use to water the fields?
- Why do we need to plow the soil?
- What kind of tools can we use to plow the soil?



During the Activity

- Please take a look at these plowing / watering tools, how will you use these tools?
- Compare and contrast plowing / watering tools, what are the differences?
- Which tool is better and why? Which tool do you like to use?
- Which types of watering containers can cover a larger irrigation area? Why?
- Can you guess why farmers need to water and plow the soil?
- What would happen if there was no watering and plowing?
- What would happen if there was too much watering?
- Why don't plants in the forest need watering?
- Can we use sewage and clean water to water the crops? Why?
- What do plants need for healthy growth?

After the Activity

- Can you share your feelings about being a farmer?
- What should we do to avoid food wastage?

Extended Activities Based on the rationale of this activity, teachers may develop other extended activities to fit into the themes of the school-based curriculum, for example:

Activity 1

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Activity 2

Teachers can revise with children about the watering tools used in the field, and invite children to collect disposable plastic bottles and upcycle them into watering jugs with pierced holes.

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Appendix 1

Plant Information at Field Crops of AFCD Lions Nature Education Centre

Common Perilla

Features : Leaves stained with purple,
pubescent, with scent of
Common Perilla
Flowering & : Flowering: Oct-Dec;
fruiting : fruiting: Nov-Feb
Uses : Additive (flavouring),
medicinal (folklore)



Mint

Features : Leaves opposite, with scent
of Mint
Flowering & : Flowering: Aug-Sep;
fruiting : fruiting: Oct
Uses : Material (essential oils),
spice, medicinal (folklore)



Long Pepper, Bell Pepper

Features : Mature fruit usually red
Flowering & : Summer to autumn
fruiting
Uses : Food (vegetable),
additive (flavouring)



Lemon-grass, Citronella Grass

Features : Perennial herb, with scent of
Citronella Grass
Flowering & : Nov-Apr of the following
fruiting year
Uses : Material (essential oil),
additive (flavouring)



Some information and pictures are provided by AFCD.