



Pathfinder Honour:

Workbook

Agriculture



Name:

Club:

Date Started:

Date Completed:

Instructor Name:

Signature:

Club Director's Name:

Signature:

Please Award Patch:

Date:

To be signed by Authorised Person (ie District Director for Pathfinders) after satisfactory completion. Leaders, please see the Assessment Sheet for a checklist of practical requirements and a short test to check knowledge of honour.

Date Patch Presented

Agriculture Honour

Requirement 1: List the components of soil. Why is soil important to plants?

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Requirement 2: Explain the difference between clay, sand, and loam soils and collect samples as available in your area. List 3 crops that grow well in each.

	<u>Description</u>	<u>Crops</u>
Clay Soils	1.	
	2.	
	3.	
Sandy Soils	1.	
	2.	
	3.	
Loam Soils	1.	
	2.	
	3.	

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Requirement Test the germination of three varieties of seeds - 100 seeds of each variety.
3: Record germination percentage on consecutive days once germination begins.

Seed Name:	<u>Variety A</u>		<u>Variety B</u>		<u>Variety C</u>	
	<u>Number germinated today</u>	<u>Total No germinated so far</u>	<u>Number germinated today</u>	<u>Total No germinated so far</u>	<u>Number germinated today</u>	<u>Total No germinated so far</u>

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Requirement 4: Explain how plants obtain nutrients and convert them to food. List the 16 elements that plants at least need to live, grow and reproduce.

How plants obtain nutrients & convert them to food:

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Please complete the following table. Hint: Please see Trainer's Notes

Element	%		Element	%
O	45		M	0.3
C	44		M	0.05
H	6		I	0.02
N	2		Z	0.01
P	1.1		C	0.01
C	0.6		B	0.005
S	0.5		C	0.001
P	0.4		M	0.0001

Requirement 5: Name & identify ten common weeds or grasses which affect your farming community, and tell how best to control them using natural or chemical methods.

	<u>Name of weed or grass</u>	<u>How best to control it using natural or chemical methods.</u>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Agriculture Honour

Requirement 6: Identify six common insect pests or diseases which affect agriculture in your area. Tell what plants they usually affect, and how to control or prevent their occurrence.

	<u>Name of insect pest or disease</u>	<u>Plants usually affected</u>	<u>How to control or prevent occurrence.</u>
1			
2			
3			
4			
5			
6			

Requirement 7: Understand a weather map and, using a series of maps, determine a four-day forecast for your area. Record the results. How is this knowledge helpful to the farmer?

Source of weather information:			
<u>Date</u>	<u>What was forecast</u> (Temperature range, wind, rain etc)	<u>Results: What actually happened</u> (Temperature range, wind, rain etc)	
1			
2			
3			
4			
How was this knowledge helpful to the farmer?			

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Requirement 8: What is erosion? How can it be prevented?

What is erosion?	
How can it be prevented?	

Requirement 9: Visit a farm, interview the farmer about his farm and photograph or obtain brochures of machinery used for the following purposes. Describe their use and function.

Interview with farmer.

Please complete the following. There's room for your own questions below 'Crops grown'

Farmer's name:		Date of Visit:	
Location of farm:		Size of farm:	
Crops grown:			

Use and function of the following machinery:

a.	Cultivating:	
b.	Zero Tillage:	
c.	Planting:	
d.	Harvesting:	
e.	Irrigation, if applicable:	

Agriculture Honour

Requirement 10: List the advantages and disadvantages of zero tillage agriculture.

Advantages:

Disadvantages:

Requirement 11: Maintain a log and take photos for one of the following:
a. Make the plans and do the principle work from preparation and planting to harvest of a farm crop of at least a quarter of a hectare.
Or,
b. Assist in planting, cultivating and harvesting at least four different crops.

Details of Project

Location:

Area planted:

Crop/s planted

Any other details:

Project Log

<u>Date</u>	<u>What was done. Results. Comments etc</u>