

LEARNING OUTCOME

BASED

VOCATIONAL

CURRICULUM

JOB ROLE: Solanaceous Crop Cultivator

(QUALIFICATION PACK: Ref. Id. AGR/Q0402)

SECTOR: Agriculture

Classes 9 and 10

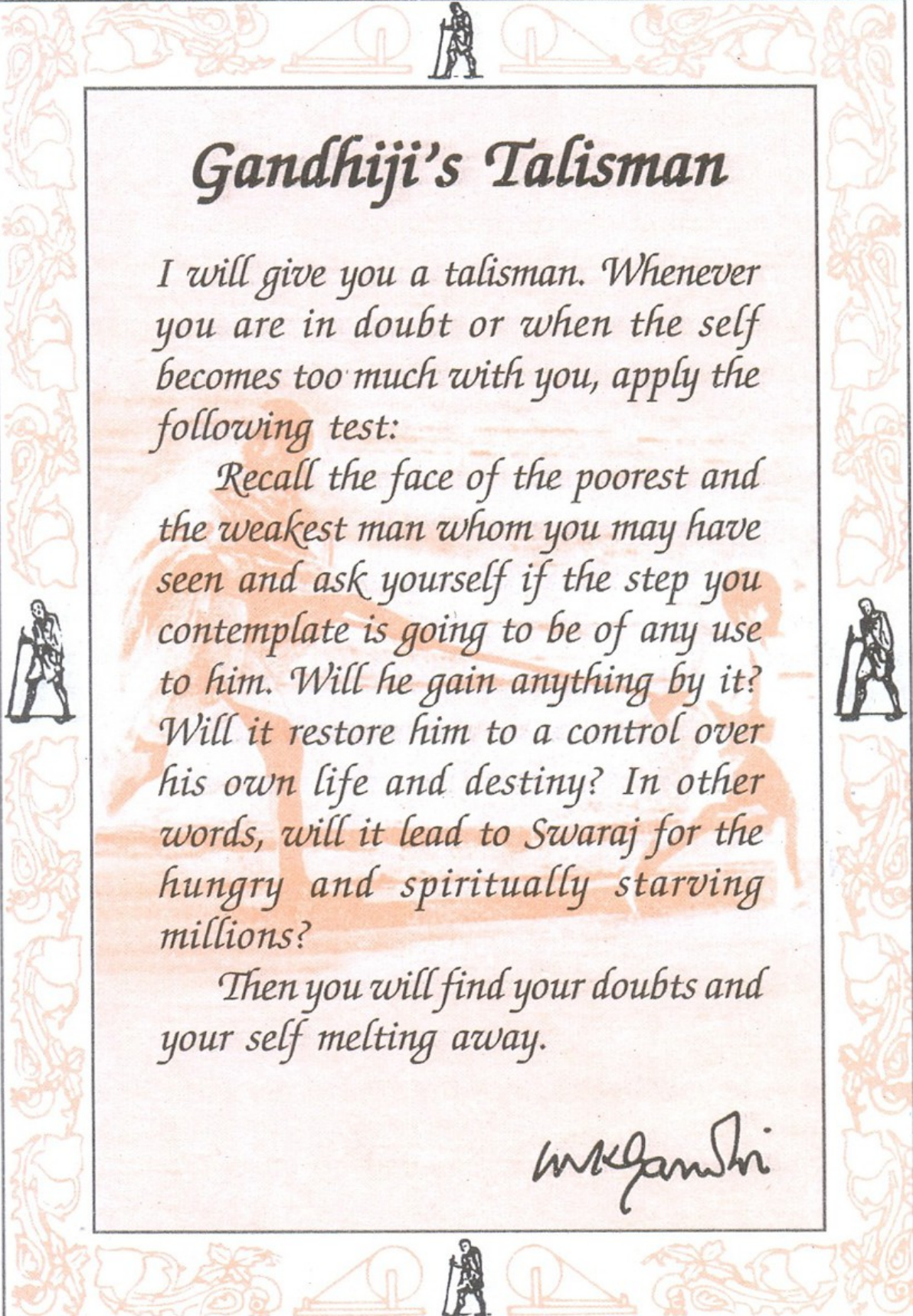
PSS CENTRAL INSTITUTE OF

VOCATIONAL EDUCATION

(a constituent unit of NCERT, under MHRD, Government of
India)

Shyamla Hills, Bhopal- 462 002, M.P., India

<http://www.psscive.ac.in>



Gandhiji's Talisman

I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test:

Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it? Will it restore him to a control over his own life and destiny? In other words, will it lead to Swaraj for the hungry and spiritually starving millions?

Then you will find your doubts and your self melting away.

M.K. Gandhi

**LEARNING OUTCOME
BASED
VOCATIONAL
CURRICULUM
JOB ROLE: Solanaceous Crop Cultivator**

(QUALIFICATION PACK: Ref. Id. AGR/Q0402)

**SECTOR: Agriculture
Classes 9 and 10**

**PSS CENTRAL INSTITUTE OF VOCATIONAL
EDUCATION**

Shyamla Hills, Bhopal- 462 002, M.P., India

PATRONS

Prof. Hrushikesh Senapaty, Ph.D.,
Director, National Council of Educational
Research and Training (NCERT),
New Delhi

Prof. Rajesh Khambayat, Ph.D.,

Joint Director

PSS Central Institute of Vocational Education,

Bhopal

COURSE COORDINATOR

Dr. Uadal Singh

Assistant Professor,

Dept. of Agriculture & Animal Husbandry

PSS Central Institute of Vocational Education,

Bhopal

LEARNING OUTCOME BASED VOCATIONAL CURRICULUM

Agriculture- Solanaceous Crop Cultivator

June, 2017

© PSSCIVE, 2017

Published by:

Joint Director

PSS Central Institute of Vocational Education,

NCERT, Shyamla Hills, Bhopal

FOREWORD

The Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE) a constituent of the National Council of Educational Research and Training (NCERT) is spearheading the

efforts of developing learning outcome based curricula and courseware aimed at integrating both vocational and general qualifications to open pathways of career progression for students. It is a part of Central y Sponsored Scheme of Vocationalisation of Secondary and Higher Secondary Education (CSSVSHSE) launched by the Ministry of Human Resource Development, Government of India in 2012. The PSS Central Institute of Vocational Education (PSSCIVE) is developing curricula under the project approved by the Project Approval Board (PAB) of *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA). The main purpose of the learning outcome based curricula is to bring about the improvement in teaching-learning process and working competences through learning outcomes embedded in the vocational subject.

It is a matter of great pleasure to introduce this learning outcome based curriculum as part of the vocational training packages for the job role of Solanaceous Crop Cultivator. The curriculum has been developed for the secondary students of vocational education and is aligned to the National Occupation Standards (NOSs) of a job role identified and approved under the National Skill Qualification Framework (NSQF).

The curriculum aims to provide children with employability and vocational skills to support occupational mobility and lifelong learning. It will help them to acquire specific occupational skills that meet employers' immediate needs. The teaching process is to be performed through the interactive sessions in classrooms, practical activities in laboratories and workshops, projects, field visits, and professional experiences.

The curriculum has been developed and reviewed by a group of experts and their contributions are greatly acknowledged. The utility of the curriculum will be adjudged by the qualitative improvement that it brings about in teaching-learning. The feedback and suggestions on the content by the teachers and other stakeholders will be of immense value to us in bringing about further improvement in this document.

Hrushikesh Senapaty

Director

National Council of Education Research and Training

(i)

PREFACE

India today stands poised at a very exciting juncture in its saga. The potential for achieving inclusive growth are immense and the possibilities are equally exciting. The world is looking at us to deliver sustainable growth and progress. To meet the growing expectations, India will largely depend upon its young workforce. The much-discussed demographic dividend will bring sustaining benefits only if this young workforce is skilled and its potential is channelized in the right direction.

In order to fulfil the growing aspirations of our youth and the demand of skilled human resource, the Ministry of Human Resource Development (MHRD), Government of India introduced the revised Centrally Sponsored Scheme of Vocationalisation of Secondary and Higher Secondary Education that aims to provide for the diversification of educational opportunities so as to enhance

individual employability, reduce the mismatch between demand and supply of skilled manpower and provide an alternative for those pursuing higher education. For spearheading the scheme, the PSS Central Institute of Vocational Education (PSSCIVE) was entrusted the responsibility to develop learning outcome based curricula, student workbooks, teacher handbooks and e-learning materials for the job roles in various sectors, with growth potential for employment.

The PSSCIVE firmly believes that the vocationalisation of education in the nation need to be established on a strong footing of philosophical, cultural and sociological traditions and it should aptly address the needs and aspirations of the students besides meeting the skill demands of the industry.

The curriculum, therefore, aims at developing the desired professional, managerial and communication skills to fulfil the needs of the society and the world of work. In order to honour its commitment to the nation, the PSSCIVE has initiated the work on developing learning outcome based curricula with the involvement of faculty members and leading experts in respective fields. It is being done through the concerted efforts of leading academicians, professionals, policy makers, partner institutions, Vocational Education and Training experts, industry representatives, and teachers. The expert group through a series of consultations, working group meetings and use of reference materials develops a National Curriculum. Currently, the Institute is working on developing curricula and courseware for over 100 job roles in various sectors.

We extend our gratitude to all the contributors for selflessly sharing their precious knowledge, acclaimed expertise, and valuable time and positively responding to our request for development of curriculum. We are grateful to MHRD and NCERT for the financial support and cooperation in realising the objective of providing learning outcome based modular curricula and courseware to the States and other stakeholders under the PAB (Project Approval Board) approved project of *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA) of MHRD.

(ii)

Finally, for transforming the proposed curriculum design into a vibrant reality of implementation, all the institutions involved in the delivery system shall have to come together with a firm commitment and they should secure optimal community support. The success of this curriculum depends upon its effective implementation and it is expected that the managers of vocational education and training system, including subject teachers will make efforts to create better facilities, develop linkages with the world of work and foster a conducive environment as per the content of the curriculum document.

The PSSCIVE, Bhopal remains committed in bringing about reforms in the vocational education and training system through the learner-centric curricula and courseware. We hope that this document will prove useful in turning out more competent Indian workforce for the 21st Century.

RAJESH P. KHAMBAYAT

Joint Director

PSS Central Institute of Vocational Education

(iii)

ACKNOWLEDGEMENTS

On behalf of the team at the PSS Central Institute of Vocational Education (PSSCIVE) we are grateful to the members of the Project Approval Board (PAB) of *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA) and the officials of the Ministry of Human Resource Development (MHRD), Government of India for the financial support to the project for development of curricula.

We are grateful to the Director, NCERT for his support and guidance. We also acknowledge the contributions of our colleagues at the Technical Support Group of RMSA, MHRD, RMSA Cell at the National Council of Educational Research and Training (NCERT), National Skill Development Agency (NSDA) and National Skill Development Corporation (NSDC) and Agriculture Skill Council of India (ASCI) for their academic support and cooperation.

We are grateful to the contributors for their earnest efforts and contributions in the development of this learning outcome based curriculum. Their names are acknowledged in the list of contributors. The contributions of the course coordinator Uadal Singh and the reviewer R. Elanchezhian, Principal Scientist ICAR-Indian Institute of Soil Science, Nabi Bagh, Bairasia Road, Bhopal are thankfully acknowledged.

The contributions made by Vinay Swarup Mehrotra, Professor and Head, Curriculum Development and Evaluation Centre (CDEC), Vipin Kumar Jain, Associate Professor and Head, Programme

Planning and Monitoring Cell (PPMC) and Dipak Shudhalwar, Associate Professor, Department of Engineering & Technology, PSSCIVE in development of the curriculum for the employability skills are duly acknowledged.

Special thanks are due to Sunil Prajapati, Consultant, Horticulture, Department of Agriculture & Animal Husbandry, PSSCIVE, Bhopal, for contribution in drafting and editing the document and bringing it in its present form.

PSSCIVE Team

(iv)

CONTENTS

S.No	Title	Page No.
.	Foreword	(i)
	Preface	(ii)
	Acknowledgement	(iv)
1.	Course Overview	1
2.	Scheme of Units	2
3.	Teaching/Training Activities	3
4.	Assessment and Certification	4
5.	Unit Content	
	CLASS 9	
	Part A Employability Skills	
	Unit 1: Communication Skills – I	7
	Unit 2: Self-management Skills – I	8
	Unit 3: Information and Communication Technology Skills – I	8
	Unit 4: Entrepreneurial Skills – I	9
	Unit 5: Green Skills – I	10
	Part B Vocational Skills	
	Unit 1: Introduction to Horticulture	11
	Unit 2: Seed selection and seedling production	12
	Unit 3: Soil preparation and transplanting	13
	Unit 4: Nutrient management in vegetable crops	13
	CLASS 10	
	Part A Employability Skills	
	Unit 1: Communication Skills – II	14
	Unit 2: Self-management Skills – II	15
	Unit 3: Information and Communication Technology Skills – II	16
	Unit 4: Entrepreneurial Skills – II	17
	Unit 5: Green Skills – II	17

1. COURSE OVERVIEW

COURSE TITLE: Agriculture – Solanaceous Crop Cultivator

The Solanaceous crop Cultivator is responsible for cultivating Solanaceous crop on a given piece of land. The responsibilities include from procurement of seed to marketing of farm produce in the market.

The job of the Solanaceous Crop Cultivator involves cultivation of Solanaceous crop as per the package of practices recommended for a particular agronomic climate zone, type of soil, rainfall pattern and climatic condition to achieve the yield as per the genetic potential of given variety and sell the produce as per the competitive market prices without distress sale. The job requires the individual to have: Ability to work independently, bearing risks and must have ability to work hard and take decisions pertaining to his area of work. The individual should be result oriented and should be responsible for his / her own learning and working. Individual should be able to comprehend basic arithmetic and algebraic principle. Should be able to access and analyze various opportunities & threats pertaining to climatic and market conditions

COURSE OUTCOMES: On completion of the course, students should be able to:

- Apply effective oral and written communication skills to interact with people and customers;
- Identify the principal components of a computer system;
- Demonstrate the basic skills of using computer;

- Demonstrate self-management skills;
 - Demonstrate the ability to provide a self-analysis of entrepreneurial skills and abilities;
 - Demonstrate the knowledge of the importance of green skills in meeting the challenges of sustainable development and environment protection
 - Identify and control hazards in the workplace that pose a danger or threat
 - Understand Seed selection & seedling production
 - Demonstrate Soil preparation and transplanting in Solanaceous crops
 - Understand Soil nutrient management in vegetable crops
 - Demonstrate Weed control and management in vegetable crops
 - Demonstrate pest and disease management in vegetable crops
 - management in vegetable crops
- Understand Harvest and post harvest management in Solanaceous crop

COURSE REQUIREMENTS: The learner should have the basic knowledge of science.

COURSE LEVEL: This is a beginner level course. On completion of this course, a student can take up an Intermediate level course for a job role in Agriculture, such as Tuber Crop Cultivator in Class XI and Class XII.

COURSE DURATION: 400 hrs

Class 9 : 200 hrs

Class 10 : 200 hrs

Total : 400 hrs

2. SCHEME OF UNITS

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9 and 10 opting for vocational subject along with general education subjects. The unit-wise distribution of hours and marks for Class 9 is as follows:

CLASS 9			
Units		No. of Hours for Theory and Practical 200	Max. Marks for Theory and Practical 100
Part A	Employability Skills		
	Unit 1: Communication Skills-I	20	10
	Unit 2: Self-management Skills-I	10	
	Unit 3: Information and Communication Technology Skills-I	20	
	Unit 4: Entrepreneurial Skills-I	15	
	Unit 5: Green Skills-I	10	
	Total	75	10
Part B	Vocational Skills		
	Unit 1: Introduction to Horticulture	20	30
	Unit 2: Seed selection and seedling production	30	
	Unit 3: Soil preparation and transplanting	25	
	Unit 4: Nutrient management in vegetable crops	20	
	Total	95	30
Part C	Practical Work		
	Practical Examination	06	15
	Written Test	01	10
	Viva Voce	03	10
	Total	10	35
Part D	Project Work/Field Visit		
	Practical File/Student Portfolio	10	10
	Viva Voce	05	05
	Total	15	15
Part E	Continuous and Comprehensive Evaluation (CCE)		
	Total	05	10
	Grand Total	200	100

3. TEACHING/TRAINING ACTIVITIES

The teaching and training activities have to be conducted in classroom, laboratory/ workshops and field visits. Students should be taken to field visits for interaction with experts and to expose them to the various tools, equipment, materials, procedures and operations in the workplace. Special emphasis should be laid on the occupational safety, health and hygiene during the training and field visits.

CLASSROOM ACTIVITIES

Classroom activities are an integral part of this course and interactive lecture sessions, followed by discussions should be

conducted by trained vocational teachers. Vocational teachers should make effective use of a variety of instructional aids, such as audio-video materials, colour slides, charts, diagrams, models, exhibits, hand-outs, online teaching materials, etc. to transmit knowledge and impart training to the students.

PRACTICAL WORK IN LABORATORY/WORKSHOP

Practical work may include but not limited to hands-on-training, simulated training, role play, case based studies, exercises, etc. Equipment and supplies should be provided to enhance hands-on learning experience of students. Only trained personnel should teach specialized techniques. A training plan that reflects tools, equipment, materials, skills and activities to be performed by the students should be submitted by the vocational teacher to the Head of the Institution.

FIELD VISITS/ EDUCATIONAL TOUR

In field visits, children will go outside the classroom to obtain specific information from experts or to make observations of the activities. A checklist of observations to be made by the students during the field visits should be developed by the Vocational Teachers for systematic collection of information by the students on the various aspects. Principals and Teachers should identify the different opportunities for field visits within a short distance from the school and make necessary arrangements for the visits. At least three field visits should be conducted in a year.

4. ASSESSMENT AND CERTIFICATION

Upon successful completion of the course by the candidate, the Central/ State Examination Board for Secondary Education and the

respective Sector Skill Council will certify the competencies.

The National Skills Qualifications Framework (NSQF) is based on outcomes referenced to the National Occupation Standards (NOSs), rather than inputs. The NSQF level descriptors, which are the learning outcomes for each level, include the process, professional knowledge, professional skills, core skills and responsibility. The assessment is to be undertaken to verify that individuals have the knowledge and skills needed to perform a particular job and that the learning programme undertaken has delivered education at a given standard. It should be closely linked to certification so that the individual and the employer could come to know the competencies acquired through the vocational subject or course. The assessment should be reliable, valid, flexible, convenient, cost effective and above all it should be fair and transparent. Standardized assessment tools should be used for assessment of knowledge of students. Necessary arrangements should be made for using technology in assessment of students.

KNOWLEDGE ASSESSMENT (THEORY)

Knowledge Assessment should include two components: one comprising of internal assessment and second an external examination, including theory examination to be conducted by the Board. The assessment tools shall contain components for testing the knowledge and application of knowledge.

The knowledge test can be objective paper based test or short structured questions based on the content of the curriculum.

WRITTEN TEST

It allows candidates to demonstrate that they have the knowledge and understanding of a given topic. Theory question paper for the vocational subject should be prepared by the subject experts comprising group of experts of academicians, experts from existing vocational subject experts/teachers, subject experts from university/colleges or industry. The respective Sector Skill Council should be consulted by the Central/State Board for preparing the panel of experts for question paper setting and conducting the examinations.

The blue print for the question paper may be as follows:

SKILL ASSESSMENT (PRACTICAL)

Assessment of skills by the students should be done by the assessors/examiners on the basis of practical demonstration of skills by the candidate, using a competency checklist. The competency checklist should be developed as per the National Occupation Standards (NOSs) given in the Qualification Pack for the Job Role to bring about necessary consistency in the quality of assessment across different sectors and Institutions. The student has to demonstrate competency against the performance criteria defined in the National Occupation Standards and the assessment will indicate that they are 'competent', or are 'not yet competent'. The assessors assessing the skills of the students should possess a current experience in the industry and should have undergone an effective training in assessment principles and practices. The Sector Skill Councils should ensure that the assessors are provided with the training on the assessment of competencies.

Practical examination allows candidates to demonstrate that they have the knowledge and understanding of performing a task. This will include hands-on practical exam and viva voce. For practical, there should be a team of two evaluators – the subject teacher and the expert from the relevant industry certified by the Board or concerned Sector Skill Council. The same team of examiners will conduct the viva voce.

Project Work (individual or group project) is a great way to assess the practical skills on a certain time period or timeline. Project work should be given on the basis of the capability of the individual to perform the tasks or activities involved in the project. Projects should be discussed in the class and the teacher should periodically monitor the progress of the project and provide feedback for improvement and innovation. Field visits should be organised as part of the project work. Field visits can be followed by a small-group work/project work. When the class returns from the field visit, each group might be asked to use the information that they have gathered to prepare presentations or reports of their observations. Project work should be assessed on the basis of practical file or student portfolio.

Student Portfolio is a compilation of documents that supports the candidate's claim of competence.

Documents may include reports, articles, photos of products prepared by students in relation to the unit of competency.

Viva voce allows candidates to demonstrate communication skills and content knowledge. Audio or video recording can be done at the time of viva voce. The number of external examiners would be decided as per the existing norms of the Board and these norms

should be suitably adopted/adapted as per the specific requirements of the vocational subject. Viva voce should also be conducted to obtain feedback on the student's experiences and learning during the project work/field visits.

CONTINUOUS AND COMPREHENSIVE EVALUATION

Continuous and Comprehensive Evaluation (CCE) refers to a system of school-based evaluation of students that covers all aspects of student's development. In this scheme, the term 'continuous' is meant to emphasize that evaluation of identified aspects of students 'growth and development' is a continuous process rather than an event, built into the total teaching-learning process and spread over the entire span of academic session. The second term 'comprehensive' means that the scheme attempts to cover both the scholastic and the co-scholastic aspects of students' growth and development. For details, the CCE manual of Central Board of Secondary Education (CBSE) or the guidelines issued by the State Boards on the procedure for CCE should be followed by the Institutions.

5. UNIT CONTENTS

CLASS 9

Part A: Employability Skills

Sino.

Units

Duration

(Hrs)

1.

Communication Skills - I

20

2.

Self-management Skills - I

10

3.

Information and Communication Technology Skills-I

20

4.

Entrepreneurial Skills - I

15

5.

Green Skills - I

10

Total

75

Unit 1: Communication Skills - I

Learning Outcome

Theory

Practical

Duration

(20 Hrs)

1. Demonstrate

1. Methods of

1. Writing pros and

knowledge of

communication

cons of written,

various methods of

- Verbal

verbal and non-

05

communication

- Non-verbal

verbal

-

communication

Visual

2. Listing do's and

don'ts for avoiding

common body

language mistakes

2. Identify elements of

1. Meaning of

1. Draw a diagram of

communication

communication

communication

cycle

2. Importance of

cycle

communication skills

2. Role plays on

3. Elements of

communication

05

communication

process related to

cycle–

the sector/job role

(I) sender,

(i) ideas,

(i) encoding,

(iv) communication

channel,

(v) receiver,

(vi) decoding, and

(vii) feedback

3. Identify the factors

1. Perspectives in

1. Group discussion

affecting our

communication

on factors affecting

perspectives in

2. Factors affecting

perspectives in

05

communication

perspectives in

communication

communication

2. Sharing of

- Visual

experiences on

perception

factors affecting

- Language

perspectives

- Past

3. Sharing

experience

experiences on

- Prejudices

factors affecting

-

communication at

Feelings

workplace

- Environment

4. Demonstrate the

1. Writing skills

1. Demonstration and

knowledge of basic

related to the
practice of writing
writing skills
following:
sentences and

.

paragraphs on

05

Phrases

topics related to

· Kinds of

the subject

sentences

· Parts of

sentence

· Parts of speech

· Use of articles

· Construction of a

paragraph

Unit 2: Self-management Skills – I

Learning Outcome

Theory

Practical

Duration

(10 Hrs)

1.

1. Meaning of self-management

1.

Identification of

05

Describe the

2. Positive results of self-

self-

meaning and

management

management skill s

importance of

3. Self-management skill s

2.

Strength and

self-

weakness analysis

management

2.

a.i.1.

F 1.Role play exercises

05

Identify the

actors that help in building self-

on building self-

factors that

confidence – social, cultural,

confidence

helps in building

and physical factors

2. Use of positive

self-confidence

a.i.2.

S

metaphors/ words

3. Positive stroking on

elf-confidence building tips –

wakeup and before

getting rid of the negative
going bed
thoughts, thinking positively,
4. Helping others and
staying happy with small things,
working for
staying clean, hygienic and
community
smart, chatting with positive
people, etc.

Unit 3: Information and Communication Technology Skills – I

Learning Outcome

Theory

Practical

Duration

(20 Hrs)

1. Describe the role
1. Introduction to ICT
1. Discussion on the
of Information and
2. Role and importance of ICT

role and

Communication

importance of ICT

Technology (ICT)

in personal life and at

in personal life and

04

in day-to-day life

workplace

at workplace.

and workplace

3. ICT in our daily life

(examples)

2. Preparing posters /

4. ICT tools - Mobile, tab,

col ages for

showing the role of

radio, TV, email, etc.

ICT at workplace

2. Identify

1. Computer system - Central

1. Connecting the components of Processing Unit (CPU), cables and basic computer memory, motherboard, storage peripherals to the system and their devices

Central Processing functions

2. Hardware and software of a Unit

computer system

2. Starting and

3. Role and functions of Random shutting down a

07

Access Memory(RAM) and computer

Read Only Memory(ROM)

3. Group discussion
4. Role and functions of Central
on the various
Processing Unit
aspects of
5. Procedure for starting and
hardware and
software
shutting down a computer
3. Demonstrate use
1. Peripherals devices and their
1. Identification of
of various
uses – mouse, keyboard,
components and
scanner, webcam, etc. of a
various parts and
peripherals of
computer system
peripherals of a
computer system

computer

2. Demonstration and
practice on the use

05

of mouse

3. Demonstration and
practice on the use
of keyboard

4. Demonstration of
the uses of printers,
webcams, scanner
and other peripheral
devices

5. Drawing diagram of
computer system
and label ing it

4. Demonstrate

1. Primary operations on a

1. Identification of the
basic computer

computer system – input,

various input and

04

skills

process, storage, output,

output units and

communication networking, etc.

explanation of their

purposes

Unit 4: Entrepreneurial Skills - I

Theory

Practical

Duration

Learning Outcome

(15 Hrs)

1. Identify various 1. Types of businesses –

1. Prepare posters of

types of business

service, manufacturing,

business activities found

activities

hybrid

in cities/villages, using

2. Types of businesses found

pictures

in our community

2. Discuss the various

3. Business activities around us

types of activities,

generally adopted by

small businesses in a

local community

3. Best out of waste

09

4. Costing of the product

made out of waste

5. Selling of items made

from waste materials

6. Prepare list of

businesses that provides

goods and services in

exchange for money

7.

2. *Demonstrate the*

1. Meaning of

1. Prepare charts showing

06

knowledge of

entrepreneurship

advantages of

distinguishing

development

entrepreneurship over

characteristics of

2. Distinguishing

wages

entrepreneurship

characteristics of

2. Group discussions on

entrepreneurship

role and features of

3. Role and rewards of

entrepreneurship

entrepreneurship

3. Lectures/presentations
by entrepreneurs on
their experiences and

Unit 4: Entrepreneurial Skills - I

Theory

Practical

Duration

Learning Outcome

(15 Hrs)

success stories

4. Identify core skills of
successful entrepreneur

Unit 5: Green Skills - I

Theory

Practical

Duration

Learning Outcome

(10 Hrs)

1. Demonstrated

1. Introduction to environment,

1.

Group

05

the knowledge of

2. Relationship between

discussion on

the factors

society and environment,

hazards of

influencing

ecosystem and factors

deteriorating

natural resource

causing imbalance

environment

conservation

3. Natural resource

2.

Prepare

conservation

posters showing

4. Environment protection and

environment

conservation

conservation

3.

Discussion

on various factors

that influence our

environment

2. Describe the

1. Definition of green economy

1. Discussion on the

importance of

2. Importance of green

benefits of green skill s

green economy

economy

and importance of

05

and green skill s

green economy

2. Prepare a Poster

showing the
importance of green
economy with the help
of
newspaper/magazine
cuttings

Total

34

41

75

Part B: Vocational Skills

Sino.

Units

Duration

(Hrs)

1.

Introduction to Horticulture

20

2.

Seed selection and seedling production

30

3.

Soil preparation and transplanting

25

4.

Nutrient management in vegetable crops

20

Total

95

Unit 1: Introduction to Horticulture

Learning Outcome

Theory

Practical

Duration

(08 hrs)

(12 hrs)

(20 Hrs)

1. Describe the

1. Define Horticulture

1. Enlist the major

present status

2. Importance of horticulture

horticultural crops in India

and prospects of

in daily life

and your locality

5

Horticulture in

3. Prospects of Horticulture

India

in India

2. Classify and

1. Branches of

1. Draw a diagram depicting

categorize

horticulture

the classification of

horticulture crops

2. Different horticultural

horticultural crops

5

crops and their major

growing regions in India

Unit 1: Introduction to Horticulture

Learning Outcome

Theory

Practical

Duration

(08 hrs)

(12 hrs)

(20 Hrs)

3. Carry out

1. Horticultural

1. Visit to a nursery/

important

operations viz. training,

Horticulture farm for

horticultural

pruning and transplanting

Demonstration of pruning,

5

operations

Training and transplanting

of seedlings

2. Practice of pruning

4. Describe

1. Olericulture

1. Demonstrate the

olericulture and

2. Importance of vegetable

availability of nutrients

importance of

in human diet

through vegetables using

5

vegetable in

charts/pictures

human diet

Unit 2: Seed Selection and Seedling Production

Learning Outcome

Theory

Practical

Duration

(12 hrs)

(18 hrs)

(30 Hrs)

1. Select the seed & 1. Various characteristics of 1.

Identify various and

procurement of

seed with their suitability

appropriate variety

seed

to the location

(including hybrid) of

2. Characteristics of healthy

Solanaceous crops

varieties

2.

Identify various

3. Demand of various

vendors / suppliers

varieties in the market

(including government

5

nurseries /department) of

the seed that are certified

3.

Procure seeds in
appropriate quantity

4.

Identify market rates
for Solanaceous crop seeds
(such as tomato, capsicum,)

2. Prepare seed bed 1. Preparing the site for

1. Demonstration of the
seed bed

procedure of preparation

2. Soil sterilization –

of various types of seed
solarisation and chemical
beds – raised, sunken,

5

treatment

level

3. Seed treatment

techniques with
chemicals

3. Plant seeds on a 1. Factors affecting seed

1. Estimating how much

seed bed or

germination – seed

seed is required to grow a

containers

viability, seed pests and

given number of area for

diseases, etc.

each crop

2. Factors to be considered 2. Planting seeds in the poly

while planting seeds on

bags/trays to aid in the

10

seed bed and polybags/

cultivation of Solanaceous

trays – time, depth, etc.

crops

3. Counting the number of

seeds that have

germinated so as to

assess mortality rate

4. Manage nursery 1. Advantages and

1.

Identify soil nursery or

5

for Solanaceous

disadvantages of soil

tray method for growing

crops cultivation

nursery or tray method

seedlings

2. Depth and spacing of

2.

Plant the seed at

planting seedlings in case

correct depth and

of soil nursery & tray for

appropriate spacing

Solanaceous crops

3.

Water the seedling at

appropriate time with

appropriate method

Unit 3: Soil Preparation and Transplanting in Solanaceous Crops

Learning Outcome

Theory

Practical

Duration

(10 hrs)

(15 hrs)

(25 Hrs)

1. Prepare Soil for 1. Importance of Soil

1. Enlist the authorised soil

transplanting

testing

testing centres in your

2. Various authorized

state.

centers of soil testing

2. Prepare the land with

3. Level of soil til age

ridges and furrows

including depth of

3. Application of farm yard

ploughing and

manure and fertilizers

appropriate equipments

10

for plugging

4. Distance between

ridges and furrows

5. Requirement of farm

yard manure and

fertilizer in appropriate

quantity

2. *Apply transplanting* 1. Appropriate time for

1. Demonstration

of the seedlings

planting by taking in to

Transplanting of

account of soil, climatic

seedling at appropriate

conditions

stage and spacing

2. Planting equipments

(shovel or trowel)

3. Spacing between rows

and plants

15

4. Advantages

and

disadvantages

of

intercropping and types

of plant to be

intercropped

5. Advantages of crop

rotation

Unit 4: Soil Nutrient Management in Vegetable Crops

Learning Outcome

Theory

Practical

Duration

(08 hrs)

(12 hrs)

(20 Hrs)

1. Describe the 1. Elements / components 1.

Understand the basic

Macro &

under macro & micro

macro & micro nutrients

micronutrients in

nutrients

with their functions

soil and its testing

2. Function of each macro 2.

Undertake testing of

& micro nutrient

soil to determine its

10

3. Advantages

&

nutrient and fertilizer needs

disadvantages

of

from authorized laboratory

particular macro & micro

3.

Collect soil testing

nutrients

report

Unit 4: Soil Nutrient Management in Vegetable Crops

Learning Outcome

Theory

Practical

Duration

(08 hrs)

(12 hrs)

(20 Hrs)

2. Apply manures, 1. Types of organic

1. Visit to a Vegetable farm

fertilizers and

manures (farm yard

for applying manures and

biofertilizers

manure, compost, green

fertilizers as per the
manure, vermicompost),
recommended dose to
fertilizers and
various vegetables
biofertilizers

2.

10

Methods of application of
manures, fertilizers and
biofertilizers

3. Time of application of
manures, fertilizers and
biofertilizers

Total

38

57

95

CLASS 10

Part A - Employability Skills

S.No.

Units

Duration

(Hrs)

1.

Communication Skills – II

20

2.

Self-management Skills - II

10

3.

Information and Communication Technology Skills – II

20

4.

Entrepreneurial Skills – II

15

5.

Green Skills - II

10

Total

75

Unit 1: Communication Skills - II

Learning Outcome

Theory

Practical

Duration

(20 Hrs)

1.

Demo 1. Methods of

1. Writing pros and cons of

non-verbal

communication

written, verbal and non-

verbal knowledge of

- Verbal

non-verbal communication

05

various

- Non-verbal

2. Listing do's and don'ts

of non-verbal

- Visual

methods for avoiding common

communicatio

body language mistakes

n

2. Provide

1. Communication cycle and 1. Constructing sentences

descriptive and

importance of feedback

for providing descriptive

specific

2. Meaning and importance

and specific feedback

03

feedback

of feedback

3. Descriptive feedback -

written comments or

conversations

4. Specific and non-specific

feedback

3. Apply measures

1. Barriers to effective

1. Enlisting barriers to
to overcome
communication – types and
effective communication
barriers in
factors

2. Applying measures to

04

communication

2. Measures to overcome

overcome barriers in

barriers in effective

communication

communication

4. Apply principles

1. Principles of effective

1. Constructing sentences

of

communication

that convey al facts

communication

2. 7 Cs of effective
required by the receiver

03

communication

2. Expressing in a manner
that shows respect to the
receiver of the message

3. Exercises and games on
applying 7Cs of effective
communication

5. Demonstrate

2. Writing skills to the

1. Demonstration and
basic writing

following:

practice of writing

skills

.

sentences and

Sentence

paragraphs on topics

05

· Phrase

related to the subject

· Kinds of Sentences

· Parts of Sentence

· Parts of Speech

· Articles

· Construction of a

Paragraph

Unit 2: Self-management Skills - II

Learning Outcome

Theory

Practical

Duration

(10 Hrs)

1. Apply stress

1. Meaning and importance 1. Exercises on stress

management

of stress management

management techniques

06

techniques

– yoga, meditation,

2. Stress management

physical exercises

techniques – physical

2. Preparing a write-up on

exercise, yoga,

an essay on experiences

meditation

during a holiday trip

3. Enjoying, going to

vacations and holidays

with family and friends

4. Taking nature walks

3. Demonstrate the 1. Importance of the ability

1. Demonstration on

ability to work

to work independently

working independently

04

independently

2. Describe the types of

2. goals

self-awareness

3.

3. Planning of an activity

Describe the meaning of

self-motivation and self-

4. Executing tasks in a

regulation

specific period, with no

help or directives

5. Demonstration on the

qualities required for

working independently

Unit 3: Information and Communication Technology Skills– II

Learning Outcome

Theory

Practical

Duration

(20 Hrs)

1. Distinguish

1. Classes of operating

1. Identification of task bar,

between different

systems

icons, menu, etc.

operating systems

2. Menu, icons and task

2. Demonstration and

bar on the desktop

practicing of creating,

17

3. File concept, file

renaming and deleting

operations, file

files and folders, saving

organization, directory

files in folders and sub-

structures, and file-

folders, restoring files and

system structures

folders from recycle bin

4. Creating and managing files and folders
2. Apply basic skills
1. Importance and need of
1. Demonstration of the for care and care and maintenance of procedures to be followed maintenance of computer for cleaning, care and computer
- Cleaning computer maintenance of hardware

03

- components and software
- Preparing maintenance schedule
- Protecting computer against viruses

- Scanning and cleaning
viruses and removing
SPAM files, temporary
files and folders

Unit 4: Entrepreneurial Skills - II

Learning

Theory

Practical

Duration

Outcome

(15 Hrs)

1. List the

1. Entrepreneurship and

1. Writing a note on

15

characteristics

society

entrepreneurship as

of successful

2. Qualities and functions of an

career option

entrepreneur

entrepreneur

2. Collecting success

3. Role and importance of an

stories of first generation

entrepreneur

and local entrepreneurs

4. Myth about

3. Listing the

entrepreneurship

entrepreneurial qualities

5. Entrepreneurship

– analysis of strength

and weaknesses

as a career option

4. Group discussion of

self-qualities that

students feel are needed

to become successful

entrepreneur

5. Collect information

and related data for a

business

6. Make a plan in team

for setting up a business

Unit 5: Green Skills - II

Learning

Theory

Practical

Duration

Outcome

(10 hrs)

1. Demonstrate

1. Definition of sustainable

1. Identify the problem

10

the knowledge

development

related to sustainable

of importance,

2. Importance of sustainable

development in the

problems and

development

community

solutions

3. Problems related to

2. Group discussion on the

related to

sustainable development

importance of respecting

sustainable

and conserving

development

indigenous knowledge

and cultural heritage

3. Discussion on the

responsibilities and

benefits of environmental

citizenship, including the

conservation and

protection of

environmental values

4. Preparing models on rain
water harvesting, drip /
sprinkler irrigation,
vermin-compost, solar
energy, solar cooker, etc.

Total

38

37

75

Part B–Vocational Skills

Sino.

Units

Duration

(Hrs)

1.

Irrigation management in vegetable crops

15

2.

Weed control and management in vegetable crops

15

3.

Integrated pest and disease management in vegetable crops

20

4.

Harvest and post harvest management in Solanaceous crop

30

5.

Occupational Health, Hygiene and First Aid Practices

15

Total

95

Unit 1: Irrigation Management in Vegetable Crops

Learning

Theory

Practical

Duration

Outcome

(06 hrs)

(09 hrs)

(15 Hrs)

1. Describe the 1. Irrigation and micro-

1. Enlist the different

importance of

irrigation

qualities of irrigation

irrigation

2. Quality of irrigation water

water

3. Quantity of water required

for the specific crop and its

5

affect on its yield

4. Frequency of irrigation

required at various stage of

plant growth

2. Identify 1. Characteristics of good

1. Visit to an agricultural

5

irrigation

irrigation systems

farm and identify the

system 2. Different types of irrigation

various types of

system available

irrigations systems

3. Quantity of water required

2. Interact with micro

for the specific crop and its

irrigation expert and get

affect on its yield

feedback on the usage of

4. Frequency of irrigation

specific applicable

irrigation methods to be

required at various stage of

adopted at the farm

plant growth

5. Various types of micro

irrigation equipments to be

Unit 1: Irrigation Management in Vegetable Crops

Learning

Theory

Practical

Duration

Outcome

(06 hrs)

(09 hrs)

(15 Hrs)

used (mistifiers, drippers, sprinklers, foggers, etc)

6. Relative advantages and disadvantages of irrigation equipments

3. Irrigate the

1. Suitability of different

1. Ensure appropriate water vegetable crop

methods of irrigation

supply at various life

2. Advantage and

stages of the crop as per

disadvantage of methods

each stage requirement

of irrigation

2. Enlist the different

3. Critical stages of
components of drip

5

irrigation in vegetable

irrigation system

crops

4. Selection of the best
time of the day to irrigate
the crops

Unit 2: Weed Control and Management in Vegetable Crops

Learning Outcome

Theory

Practical

Duration

(06 hrs)

(09 hrs)

(15 Hrs)

1. Describe the

1. Define weeds

1. Enlist the major weeds

importance

2. Major weeds of
found in your school

5

of weeds

Vegetable crops

campus

2. Identify the 1. Various types of Weed

2. Identify the types of weed

Weeds

(broadleaf, grass weed

in the vegetable crops

etc)

5

2. Types of weed and their
efficient control methods

3. Apply weed 1. Advantages and

1. Demonstration

of

Managemen

disadvantages of weeding

procedure for control ing

t at various

methods (herbicide &
weeds through application

stages of

mechanical)

of physical, cultural,

plant cycle

2. Critical stages of weed

biological and chemical

control (first weeding

methods

time)

5

3. Use of different methods

to control weeds such as

plastic mulch

4. Procedures involved in

soil solarization

Unit 3: Integrated Pest and Disease Management in Vegetable Crops

Learning Outcome

Theory

Practical

Duration

(08 hrs)

(12 hrs)

(20 Hrs)

1. Identify pests and

1. Importance of safe

1.

Identify types of pests

5

understand their

production and safe

(cutworm, nematode, leaf

behavior

produce

miner fly, potato tuber moth,

2. Vegetable crop growing

aphid) in vegetable crops

conditions (soil

2.

Identify stages of crop

Unit 3: Integrated Pest and Disease Management in Vegetable Crops

Learning Outcome

Theory

Practical

Duration

(08 hrs)

(12 hrs)

(20 Hrs)

conditions, temperature

and pest incidence

etc)

3.

Diagnose symptoms

3. Advantages of natural

and extent of damage

enemies

4.

Understand natural

enemies of the pest such as

lady bird, ground beetles,

2. *Carry out the* 1. Common diseases of

1.

Visit to a vegetable

Identification of

vegetable crops and

farm/field and Identify early

diseases

control measures

symptoms of various types

2. Describe pesticides and

of diseases

its uses

2.

Understand the

10

different mode of

transmissions of disease

from implements, vectors,

water, rain, wind

3. *Recognize* 1. Use of resistant varieties

1.

Demonstration of

preventive and

pruning of the diseases

curative measures 2. Various mechanical

affected plant part

control- traps, sticky

2.

Enlist the types of

plates etc)

biological, mechanical and

3. Advantages of biological

chemical measures of

control of insects, pest &

disease control

5

diseases

4. Handling tools and

equipment

5. National and international

standards on pesticide

residues

Unit 4: Harvest and Post Harvest Management in Solanaceous Crop

Learning Outcome

Theory

Practical

Duration

(12 hrs)

(18 hrs)

(30 Hrs)

1. Identify the Stage 1. Define harvesting indices 1. Select right time of

of harvesting 2. Differentiate between

Harvesting given crops

maturity and ripening

2. Identified climacteric and

3. Differentiate between

non-climacteric Vegetable

climacteric and non-

3.

climacteric

Picked the vegetable as

05

4. Types of maturity indices

per harvesting standards

(physical and chemical)

4. Demonstrate the use of

5. Harvesting the

harvesting tools

Solanaceous crop at right

Stage

2. Describe 1. Methods of harvesting

1. Identify tools and

harvesting 2. Tools and container used

implement used in

technique

for harvesting

harvesting

3.

05

Time of harvesting

2. Properly harvesting

4. Precaution taken during

vegetable of given crops

harvesting

Unit 4: Harvest and Post Harvest Management in Solanaceous Crop

Learning Outcome

Theory

Practical

Duration

(12 hrs)

(18 hrs)

(30 Hrs)

3. Harvesting the 1. Harvesting based on 1. Harvest the crop at

Solanaceous

demand of type in the

appropriate stage

vegetables

market (in case of 2. Harvest the crop at right

tomatoes)

time

2. Ideal time of harvest 3. Harvest the crop based

(climatic

conditions,

on use and distance from

distance from the market)

the market

3. Proper

harvesting 4. Identify the appropriate

10

methods

harvesting method

5. Undertake grading of the
crops

6. Undertake packing of the
crops

7. Maintain ideal storage
condition

4. Storage & post 1. Grading of crop based on 1. Identify the right
market

harvest

size, color and quality

for sale of produce

management 2. Packaging of crop with 2. Analyze the right time for
appropriate material and

sale considering the

method

periodical demand for the

10

3. Ideal storage condition

produce

(temperature, moisture, 3. Coordinate and negotiate
etc)

with procurement

4. Market rates of the crop

assistant of the buyer for

best price

Unit 5: Occupation Health, Hygiene and First Aid Practices

Learning Outcome

Theory

Practical

Duration

(06 hrs)

(09 hrs)

(15 Hrs)

1. Recognize and 1. Types of hazards

1. Reading of the manuals

adopt strategies 2. Common hazards at

for tools, equipment and

for preventing

Vegetable Farm

materials used at

hazardous 3. Principles of safety and

Vegetable Farm

conditions and

2. Demonstration of the

work practices

health

4. Procedure and steps to

correct and safe use of

tools, equipment and

be taken to report any

materials

accident, incident or

problem without delay to

3. Demonstration of the

5

an appropriate person

correct and safe storage of

5. Applicable hygiene and

tools, equipment and

materials

safety standards,

regulations, and codes

4. Discussion on the

for Vegetable Farm

procedure for reporting

any accident, incident or

problem without delay to

an appropriate person and

taking action to reduce

further danger

2. Administer first 1. Procedure for providing

1. Demonstration of basic

5

aid or undertake

first aid in case of

first aid practices adopted

most important

medical emergency – cut,

for cut, burns, snake bites,

Unit 5: Occupation Health, Hygiene and First Aid Practices

Learning Outcome

Theory

Practical

Duration

(06 hrs)

(09 hrs)

(15 Hrs)

action in a life-

burns, bites, grazes,

grazes, bruises, external

threatening

bruises electric shock,

bleeding, dog bites, bee

emergency

external bleeding, etc.

bites, and other injuries

2. Demonstration of first aid

care for a conscious and

an unconscious victim with

an obstructed airway

3. Undertake 1. Procedure for treating

1. Disposing waste safely

physical and

waste materials using

and correctly in a

biological methods

physical and biological

designated area

5

of treating waste

methods

materials

Total

38

57

95

6. ORGANISATION OF FIELD VISITS

In a year, at least 3 field visits/educational tours should be organised for the students to expose them to the activities in the workplace.

Visit a Vegetable Farm and observe the following: Location, Site, Office building, Store, Pot yard, Packing Yard, Seed bed, Nursery bed, Water tank/Tube well, Gate and fencing. During the visit, students should obtain the following information from the owner or the supervisor of the Vegetable Farm:

1. Area under Cultivation and its layout
2. Types of vegetable raised
3. Name of varieties grown
4. Number of crops raised annual y
5. Total production of particular vegetable grown annual y
6. Sale procedure
7. Manpower engaged
8. Total expenditure of growing vegetables
9. Total annual income
10. Profit/Loss (Annual)
11. Any other information

7. LIST OF EQUIPMENT AND MATERIALS

The list given below is suggestive and an exhaustive list should be prepared by the vocational teacher. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

1. Farmyard Manure
2. Fertilizers
3. Garden Hand Tools
4. Garden Hoes
5. Garden Knife

6. Garden Rake
7. Garden/Digging Fork
8. Garden/Digging Spade
9. Hand Screens/Sieves
10. Hoe
11. Hori Hori Knife
12. Knapsack Sprayer
13. Leaf Rake
14. Long Handle Hoes
15. Loppers or Pruning Saw
16. Plastics Baskets
17. Poly bags (different sizes)
18. Plug trays
19. Pruners
20. Rabbiting Spade
21. Sanitizers
22. Secateurs
23. Seed Cleaner
24. Seed Treating Equipment
25. Shovels and Specialty Spades
26. Soil Scoop

27. Sprinkler Irrigation Unit
28. Drip Irrigation Unit
29. Dutch Hand Hoe
30. Trowels
31. Vermicompost
32. Water Hose
33. Watering Can
34. Wheelbarrow or Garden Cart

8. VOCATIONAL TEACHER'S/ TRAINER'S

QUALIFICATION AND GUIDELINES

Qualification and other requirements for appointment of vocational teachers/trainers on contractual basis should be decided by the State/UT. The suggestive qualifications and minimum competencies for the vocational teacher should be as follows:

S.

Qualification

Minimum

Age Limit

No.

Competencies

1.

Post-graduation in Horticulture

· Effective

18-37 years (as on Jan. 01

from a recognized

communication skills

(year))

Institute/University, with at least

(oral and written)

1 year work/teaching experience

·

Age relaxation to be

Basic computing

provided as per Govt. rules

skills.

Vocational Teachers/Trainers form the backbone of Vocational Education being imparted as an integral part of Rashtriya Madhyamik Shiksha *Abhiyan* (RMSA). They are directly involved in teaching of vocational subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement.

These guidelines have been prepared with an aim to help and guide the States in engaging quality Vocational Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging the Vocational Teachers/Trainers are mode and procedure

of selection of Vocational Teachers/Trainers, Educational Qualifications, Industry Experience, and Certification/Accreditation.

The State may engage Vocational Teachers/Trainers in schools approved under the component of Vocationalisation of Secondary and Higher Secondary Education under RMSA in the following ways:

(i)

directly as per the prescribed qualifications and industry experience suggested by the PSS

Central Institute of Vocational Education(PSSCIVE), NCERT or the respective Sector Skill Council(SSC)

OR

(i)

through accredited Vocational Training Providers accredited under the National Quality Assurance Framework (NQAF*) approved by the National Skill Qualification Committee on 21.07.2016. If the State is engaging Vocational Teachers/Trainers through the Vocational Training Provider (VTP), it should ensure that VTP should have been accredited at NQAF Level 2 or higher.

The educational qualifications required for being a Vocational Teacher/Trainer for a particular job role are clearly mentioned in the curriculum for the particular NSQF compliant job role. The State should ensure that teachers / trainers deployed in the schools have relevant technical competencies for the NSQF qualification being delivered. The Vocational Teachers/Trainers preferably should be certified by the concerned Sector Skill Council for the particular Qualification Pack/Job role which he will be teaching. Copies of

relevant certificates and/or record of experience of the teacher/trainer in the industry should be kept as record.

To ensure the quality of the Vocational Teachers/Trainers, the State should ensure that a standardized procedure for selection of Vocational Teachers/Trainers is followed. The selection procedure should consist of the following:

(i)

Written test for the technical/domain specific knowledge related to the sector;

(i)

Interview for assessing the knowledge, interests and aptitude of trainer through a panel of experts from the field and state representatives; and

(i i) Practical test/mock test in classroom/workshop/laboratory.

In case of appointment through VTPs, the selection may be done based on the above procedure by a committee having representatives of both the State Government and the VTP.

The State should ensure that the Vocational Teachers/Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools.

The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understand the latest trends and policy reforms in vocational education.

The Head Master/Principal of the school where the scheme is being implemented should facilitate and ensure that the Vocational Teachers/Trainers:

(i)

Prepare session plans and deliver sessions which have a clear and relevant purpose and which engage the students;

(i)

Deliver education and training activities to students, based on the curriculum to achieve the learning outcomes;

(i i) Make effective use of learning aids and ICT tools during the classroom sessions;

(iv) Engage students in learning activities, which include a mix of different methodologies, such as project based work, team work, practical and simulation based learning experiences;

(v)

Work with the institution's management to organise skill demonstrations, site visits, on-job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;

(vi) Identify the weaknesses of students and assist them in upgradation of competency;

(vi) Cater to different learning styles and level of ability of students;

(vi i) Assess the learning needs and abilities, when working with students with different abilities (ix) Identify any additional

support the student may need and help to make special arrangements for that support;

(x)

Provide placement assistance

Assessment and evaluation of Vocational Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the Vocational Teachers/Trainers is appraised annually. Performance based appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the Vocational Teachers/Trainers. Following parameters may be considered during the appraisal process:

1.

Participation in guidance and counselling activities conducted at Institutional, District and State level;

2.

Adoption of innovative teaching and training methods;

3.

Improvement in result of vocational students of Class X or Class XII;

4.

Continuous upgradation of knowledge and skills related to the vocational pedagogy, communication skills and vocational subject;

5.

Membership of professional society at District, State, Regional, National and International level; 6.

Development of teaching-learning materials in the subject area;

7.

Efforts made in developing linkages with the Industry/Establishments;

8.

Efforts made towards involving the local community in Vocational Education

9.

Publication of papers in National and International Journals;

10.

Organisation of activities for promotion of vocational subjects;

11.

Involvement in placement of students/student support services.

9. LIST OF CONTRIBUTORS

1. Dr. B. S. Tomar,

Head, Division of Vegetable Science, ICAR - Indian Agricultural Research Institute, PUSA Campus, New Delhi - 110 012.

2. Dr. A. D. Munshi,

Principal Scientist, Division of Vegetable Science, ICAR - Indian Agricultural Research

Institute, PUSA Campus, New Delhi - 110 012

3. Dr. Zakir Hussain,

Principal Scientist, Division of Vegetable Science, ICAR - Indian Agricultural Research

Institute, PUSA Campus, New Delhi - 110 012

4. Dr. R. K. Yadav,

Principal Scientist, Division of Vegetable Science, ICAR - Indian Agricultural Research

Institute, PUSA Campus, New Delhi - 110 012

5. Dr. Shiv Kumar,

Principal Scientist, National Institute of Agricultural Economics and Policy Research, PUSA Campus, New Delhi - 110 012

6. Dr. Partha Saha,

Scientist, Division of Vegetable Science, ICAR - Indian Agricultural Research Institute, PUSA Campus, New Delhi - 110 012

7. Dr. Arpita Srivastava,

Scientist, Division of Vegetable Science, ICAR - Indian Agricultural Research Institute, PUSA Campus, New Delhi - 110 012

8. Dr. Yvonne Angel Lyngdoh,

Scientist, Division of Vegetable Science, ICAR - Indian Agricultural Research Institute, PUSA Campus, New Delhi - 110 012

9. Dr. Gograj Singh Jat,

Scientist, Division of Vegetable Science, ICAR - Indian Agricultural Research Institute, PUSA Campus, New Delhi - 110 012

10. Mr. Jogendra Singh,

Scientist, Division of Vegetable Science, ICAR - Indian Agricultural Research Institute, PUSA Campus, New Delhi - 110 012

11. Dr. Uadal Singh,

Assistant Professor & Programme Coordinator, Department of Agriculture & Animal

Husbandry, PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal- 462002

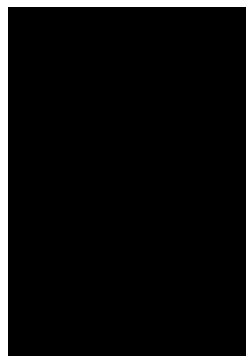
10. LIST OF REVIEWERS

1. Dr. R. Elanchezhian

Principal Scientist

ICAR-Indian Institute of Soil Science

Nabi Bagh, Bairasia Road, Bhopal (M.P.)



© PSS CENTRAL INSTITUTE OF VOCATIONAL EDUCATION,
BHOPAL

**PSS CENTRAL INSTITUTE OF VOCATIONAL
EDUCATION**

Shyamla Hills, Bhopal- 462 002, M.P., India

CURRICULUM: AGRICULTURE - NURSERY WORKER

34 | Page