

ANSWERS ENCYCLOPEDIA GRADE 4

Assessment Exercise 1

1. Compost manure is made of organic matter that has rotten (decomposed).
2. a) The heap method involves piling plant and animal waste. They are then left to break down (decompose).
b) Under a tree.
3. a) Vegetable leaves, dry leaves, maize cobs, saw dust
b) Old clothes, plastic bags
4. a) Collect materials and tools needed to make compost manure.
b) Choose a suitable place to make the compost heap.
c) Mark the size of the heap.
d) Start by placing the plant material at the bottom.
e) Add another layer of a different plant material.
f) Add manure and some ash.
g) Add kitchen waste.
h) Add a layer of plant material. Repeat steps (d) to (g).
i) Sprinkle the heap with water.
j) Add some soil to cover the pile.
5. Every 2 to 3 weeks.
6. A place that is protected from excess sunlight, rainfall and strong wind.
7. Improves soil fertility, reduces plant diseases, reduces soil erosion, provide nutrients for crops.

Assessment Exercise 2

1. Drip irrigation
2. a) Drip irrigation
b) A-pipes, B-bottles
3. It releases water slowly through bottles or pipes to the roots of the crops.
4. a) i) Puncture holes at the bottom of the plastic bottles.
ii) Place the bottle near the base of the crop. You can bury the bottle slightly in the soil.
iii) Fill the bottle with water.
b) i) Wear personal protective equipment such as gloves.
ii) Be careful when using sharp tools to avoid cuts.
5. Reduces water wastage.

Assessment Exercise 3

1. Firewood, charcoal, gas, kerosene
2. a) A-sawdust, B-maize cobs
b) Use only the required amount.
3. Helps conserve the resources, saves money, saves time, reduces pollution
4. B
5. Use energy saving jikos, cover the remaining burning fuel, turn off kerosene stoves, adjust the gas to the required heat, do not use a lot of firewood.
6. a) Cover the remaining burning charcoal, do not use a lot of charcoal
b) Cover pots or pots to cook food fast

Assessment Exercise 4

1. a) A-bird, B-hare
b) Use of a scarecrow
2. a) Use of a scarecrow
b) Scare off small wild animals.
3. C
4. They are part of the environment.
5. a) Old clothes, sticks, wires, used plastic bottles, dry grass
b) i) Draw a sketch of the scarecrow that you want to make.
ii) Decorate it with a face using paint or markers.
iii) Dress the frame with old clothes, stuffing them with used plastic bottles or other materials like grass to give the scarecrow body.
iv) Add a head, either by using an old cloth or grass.
v) Build a frame using the sticks, shaping it into a human-like figure.

End of strand 1 assessment

1. a) Kitchen waste, wood ash, dry leaves
b) Improves soil fertility, reduces plant diseases, reduces soil erosion, provides nutrients for crops
2. C
3. D
4. C
5. C
6. D
7. B
8. a) B and C
b) A and D
9. a) Turns dark
b) To increase the rate of decomposition.
10. a) To make the bottle remain stable.

- b) Adjust the flow by making the holes smaller or by partially covering them with a tape.
11. D
12. B
13. a) Scarecrow
- b) Sticks, old clothes, wires, dry grass, used plastic bottles
- c) i) Draw a sketch of the scarecrow that you want to make.
- ii) Decorate it with a face using paint or markers.
- iii) Dress the frame with old clothes, stuffing them with used plastic bottles or other materials like grass to give the scarecrow body.
- iv) Add a head, either by using an old cloth or grass.
- v) Build a frame using the sticks, shaping it into a human-like figure.
14. A
15. a) True
- b) True
- c) False
- d) False
16. during dry seasons
17. B
18. Use a scarecrow
19. C
20. Moles

Assessment Exercise 5

1. Millet, carrots, spinach
2. a) Fine seedbed
- b) i) To have fine particles, rid the soil of any stones, sticks or roots.
- ii) Choose a good spot with lots of sunlight.
- iii) Use the jembe to dig up the soil. Ensure there are no big lumps.
- iv) Use the rake to level the seedbed so it is nice and flat.
- v) Mix in some compost manure to make the soil nice and rich.
3. a) i) Create shallow drills using a pipe.
- ii) Mix soil with tiny seeds.
- iii) Scatter the soil containing tiny seeds.
- iv) Cover with a thin layer of soil.
- v) Gently press the soil.
- vi) Water the seedbed.
- b) To ensure they are spread out evenly.

4. B
5. a) False
b) True

Assessment Exercise 6

1. a) Ground nursery bed
b) i) Choose a suitable site and clear it.
ii) Measure the desired nursery bed size.
iii) Plough the area using a jembe.
iv) Use a hand rake to break soil into small particles.
v) Mix the soil with manure and raise the nursery bed.
vi) Make the nursery bed even.
c) Container nursery bed
2. a) A-weeding, B-adding manure
b) Watering, protecting
3. Training
4. They provide our bodies with vitamins.
5. a) i) Put the well mixed soil into the containers.
ii) Collect fine soil and mix it with compost manure.
iii) Choose a suitable place to place your container nursery bed.
iv) Make tiny holes at the base of the container or planting bag.
b) For drainage
6. a) Suppresses the growth of weeds, provides soil with manure
b) Prevents weeds from competing for nutrients with crops.
c) To prevent them from damage.

Assessment Exercise 7

1. Domestic animals are animals kept at home.
2. a) A-goat, B-cow, C-chicken
b) A-provides milk and meat, B-provides milk and meat, C-provides eggs and meat
3. a) Joram
b) Cow-provides milk and meat, sheep-provides wool and meat, chicken-provides eggs and meat
4. a) A-cow, B-chicken, C-chicken, D-sheep
b) Provide transport
5. They are a source of food

Assessment Exercise 8

1. Balanced meal
2. a) Rice, ugali
b) Fish, egg, chicken, meat
c) Spinach, mangoes, bananas, cabbage
3. a)

Protective food	Body building food	Energy giving food
Spinach, mangoes, bananas, cabbage	Fish, egg, chicken, meat	Rice, ugali

b) A balanced meal should contain food from all the food groups in the right proportions.

4. They enable our bodies get all the required nutrients.

5. To enable the body get all the required nutrients.

6. The body gets enough nutrients.

Assessment Exercise 9

1. a) A-boiling, B-shallow frying
b) Eggs, potatoes, cassava
c) Eggs, meat, vegetables, pancakes
2. a) i) Eggs-boiling and shallow frying
ii) Maize-boiling
iii) Meat-shallow frying
iv) Potatoes-boiling
b) Group A-sufuria or pan
Group B-sufuria
Group C-pan
Group D-sufuria
3. Do not touch hot oil or pan, do not add too much oil
4. a) Frying pan
b) Sufuria

End of strand 2 assessment

1. B
2. a) A balanced meal should contain food from all the food groups in the right proportions.
b) Protective food, body building food, energy giving food
c) Provides the body with all the required nutrients.
3. a) A
b) i) To have fine particles, rid the soil of any stones, sticks or roots.
ii) Choose a good spot with lots of sunlight.
iii) Use the jembe to dig up the soil. Ensure there are no big lumps.
iv) Use the rake to level the seedbed so it is nice and flat.
v) Mix in some compost manure to make the soil nice and rich.
4. A
5. D
6. a) Training

- b) To manage the weak stems.
- 7. a) i) Boiling-sufuria or pot
ii) Shallow frying-frying pat
b) i) Eggs, cassava, potatoes
ii) Eggs, chapati
- 8. A
- 9. A
- 10. C
- 11. D
- 12. a) To ensure the seeds are evenly distributed.
b) To ensure the tiny seeds germinate well.
- 13. B
- 14. A
- 15. D
- 16. a) Woody fruit crops-tree tomatoes, guavas,
b) Passion fruit, rasp berries, passion fruits, kiwi, grapes, black berries
- 17. A
- 18. a) i) Sheep
ii) Chicken
iii) Cow
b) Provide wool, provide transport
- 19. C
- 20. a) Shallow frying
b) Eggs, meat

Assessment Exercise 10

1. Personal hygiene refers to the way we take care of our bodies to keep it clean and healthy.
2. a) A-gloves, B-canvas shoes, C-gumboots
b) Mask, apron
3. After coughing, sneezing or blowing your nose, after using the toilet, after touching animals or their cages, when your hands are dirty.
4. a) Hand washing: Wet your hands, use soap, rub your hands, rinse your hands, dry your hands.
b) Use of protective equipment: The steps vary for each personal protective equipment.
c) Use of clean water: Bathing, drinking, brushing teeth, washing clothes
5. Reduces the spread of diseases, enhances the well-being

Assessment Exercise 11

1. a) A-dusting, B-mopping
b) i) Dusting is done using a piece of cloth to remove dust on surfaces.
ii) Mopping is done by cleaning surfaces such as floors using a wet cloth or mop.
2. a) Mopping, dusting, sweeping

- b) i) Mopping-old towel, water, detergent
- ii) Sweeping-broom, water, mop, dustpan
- iii) Dusting-old cloth, soap, water
- 3. Helps us stay healthy, helps us breathe fresh air, prevents diseases
- 4. a) i) Steps for sweeping
 - Gather the items needed.
 - Push any furniture out of the way.
 - Hold the broom properly.
 - Start sweeping from the far corner from the door.
 - Sweep smoothly. Sweep underneath any furniture present.
 - Collect the dirt at one point.
 - Scoop the dirt using a dustpan.
 - Dispose the dirt in the dustbin.
- ii) Steps for mopping
 - Gather the items.
 - Add detergent to one bucket. Have a second bucket with clean water for rinsing.
 - Clean the floors with water containing detergent.
 - Rinse the floor with clean water.
 - Repeat until the whole floor is clean.
 - Clean your item, dry and store.
- b) Mop, broom

Assessment Exercise 12

1. a) Mask, gloves, gumboots
b) Follow the correct steps when cleaning each personal protective equipment.
2. Water, soap, soft brush, scrubbing cloth, a bucket or basin
3. a) Gumboots, apron, gloves
b) Mask, gloves
c) Gloves, mask
4. Keep us safe and healthy, prevents the spread of diseases

End of strand 3 assessment

1. C
2. a) Apron
b) Masks, headgear, gloves, canvas shoes
3. Clean water and soap.
4. a) Mopping, sweeping, dusting, disposal of refuse
b) Improvised mop, broom
5. a) iii, I, iv, v, ii

b)After coughing, sneezing or blowing your nose, after using the toilet, after touching animals or their cages, when your hands are dirty.

6. a) i) Farm work, dusting surfaces
ii) Farm work
iii) Cleaning surfaces
b) Keep us safe and healthy, prevents the spread of diseases
7. Bathing, drinking, brushing teeth, washing clothes
8. a) A-sweeping, B-disposing refuse
b) Mop, old cloth, brush
9. a) Mopping involves using a wet cloth or mop to clean floors.
b) Sweeping involves using a broom to remove dirt from floors.
c) Dusting the house entails using an old cloth to remove dust from surfaces.
d) Disposal of refuse involves properly managing waste in the home environment.
10. a) To prevent damaging them.
b) i) Remove mud with a blunt stick.
ii) Soak the gumboots in water for a few minutes.
iii) Wash the gumboots with water, soap and a cloth or soft brush.
iv) Clean the inside then outside
v) Rinse the gumboots with water.
vi) Dry them in a shade upside down.
11. Remove shoe laces, clean the shoe laces in soapy water, rinse and hang to dry, use a blunt sick to remove any mud from the shoes, remove the insoles, scrub the shoes ans insoles, rinse, dry in a shade, replace the laces back.
12. Keep us safe and healthy, prevents the spread of diseases
13. A
14. a) A-mopping, B-dusting
b) A-floors, B-surfaces
15. Sprinkle it with water
16. a) True
b) True
c) False
17. a) Hand washing: Wet your hand, apply soap, scrub, rinse, dry.
b) Use of clean water: Drinking, bathing, washing clothes, brushing teeth.
18. a) Mask
b) Gumboots, gloves
19. To maintain cleanliness.
20. Using only the required amount.

Assessment Exercise 13

1. Tacking stitches are stitches used to hold clothes temporarily before machine sewing.
2. a) A-Even tacking stitches, B-long and short tacking stitches
b) For even tacking stitches, the stitches and the spaces between are of the same length. A long stitch is followed by a short stitch to create long and short tacking stitches.
3. a) Sack cloth for a scarecrow, handkerchief

b) Be careful when using sharp objects to prevent cuts.

4. Tacking stitches are useful in the following:

- i) Putting tags and labels on clothing.
- ii) Keeping slippery material before machine sewing.
- iii) Fastening zippers and other accessories to clothing.
- iv) Securing several layers of cloth for machine stitching.

End of strand 4 assessment

1. C
2. Fabric, a pair of scissors, a needle, a ruler and thread, pins, tailor's chalk or pencil
3. a) For even tacking stitches, the stitches and the spaces between are of the same length. A long stitch is followed by a short stitch to create long and short tacking stitches.
b) Sack dress for a scarecrow, handkerchief
4. a) i) Hold the needle between your thumb and index finger.
ii) Take the end of the thread and pinch it between the thumb and index finger of your other hand.
iii) Bring the end of the thread close to the eye of the needle.
iv) Push the end of the thread through the eye of the needle.
v) Pull the thread through the eye of the needle until you have an equal length on both sides of the needle,

MODEL TEST PAPERS

MODEL PAPER 1

1. Improves soil fertility, reduces plant diseases, reduces soil erosion, provide nutrients for crops.
2. a) Drip irrigation
b) It conserves water, reduces water wastage
3. iv, ii, i, iii
4. a) They are part of the environment, they earn us an income
b) Squirrels, moles
5. a) Spinach, millet, wheat
b) Seedbed
6. Source of vitamins and minerals, they contain fibre that helps in digestion, they protect our bodies against diseases.
7. Nursery beds, agro vets
8. Watering
9. Cows, goats, sheep, chicken, donkey
10. Sheep
11. a) Fuels are materials that we use to produce heat and light at home or in school.
b) Saves money, saves time, reduces pollution, conserves natural resources

12. John
13. Body building food, protective food, energy giving food
14. a) Eggs, chapatti
b) Eggs, cassava
15. Use of clean water, hand washing, use of personal protective equipment.
16. Filtering, boiling
17. iv, iii, ii, i
18. Cover the working area, dry plastic shoes under a shade to prevent damaging them,

MODEL PAPER 2

1. a) Cow
b) i) Female
ii) It has an udder.
c) Milk and meat
2. a) Pipes, bottles
b) Observe care when using sharp tools to prevent cuts.
c) It releases water slowly to the roots of the crops.
3. Ccc
4. Weeding, watering, mulching
5. a) Cabbage
b) Tomato
6. a) Proteins help in building and repairing tissues.
b) Vitamins protects our bodies against diseases.
7. Mask, headgear, gumboots
8. a) Guavas, tree tomatoes, kiwi, rasp berries
b) Nursery bed, agro vets
c) Watering, mulching, weeding
9. a) Mopping involves cleaning the floor with a damp or wet cloth.
b) Disposing of refuse entails managing and eliminating waste found in a homestead.
10. Dusting
11. Water, soap, a soft brush or scrubbing cloth, a blunt stick, a bucket or basin.
12. Dust pan, dustbin
13. a) Kerosene
b) Cooking
c) Turning off kerosene stoves and lamps when not in use.
14. a) Migango
b) Chicken, beans
15. Long and short tacking stitches

MODEL PAPER 3

1. a) Pawpaw
b) i) Birds
ii) Using a scarecrow

c) Turns yellow in colour

d) Protects our bodies against diseases

2. a) Guava plantation, forest

b) i) Cut the fruit in two halves.

ii) Scoop out the seeds from the fruit

iii) Use clean water to wash the seeds

iv) Dry the seeds under direct sunlight

v) Separate the good and spoilt seeds.

c) They have the best chance of germinating and producing strong healthy crops.

3. a) Hand washing, use of clean water, use of personal protective equipment

b) Wet your hand, apply soap, scrub, rinse, dry.

c) Prevents us from diseases.

4. a) H-tilling land, J-to provide milk

b) i) J

ii) It has an udder

c) H

5. a) Rake

b) Levelling the seedbed, breaking large lumps of soil

c) Washing with water

6. a) Q-carrots, R-kales

b) R

c) Uprooting

d) Using drip irrigation

7. a) Adding manure

b) i) In container garden.

ii) Manure, seeds

8. Do not use a lot of firewood, cover the remaining firewood for future use

9. a) Body building food

b) Eggs, chicken, beans

10. Cassava-boiling, eggs-shallow frying

11. Even tacking stitches, long and short tacking stitches

MODEL PAPER 4

1. a) Scarecrow

b) Sticks, old clothes, wires

c) They are part of the environment, they earn us an income

2. iv, ii, iii, i

3. a) Thinning

b) Weeding, mulching, watering

4. a) Vegetable remains, fruit peels, dry leaves
b) Improves soil fertility, reduces plant diseases
5. a) Dan
b) Heating, cooking
6. a) Charcoal
b) Do not use a lot of charcoal, cover the remaining charcoal for future use
7. a) Guavas, tree tomatoes
b) Weeding, watering, mulching
8. a) Watering
b) Training
9. Millet, spinach, wheat
10. a) Eggs, potatoes
b) Observe care as boiling water can cause burns, open lids carefully
11. Rice, ugali
12. A balanced meal contains food from all the food groups in the right proportions.
13. a) Protects us from diseases
b) Prevents us from germs that cause diseases
14. a) Mop
b) Old t shirt, old towel
15. a) Even tacking stitch
b) Long and short tacking stitch

MODEL PAPER 5

1. They are materials that can decompose.
2. Pipes and bottles
3. a) A fine seedbed
b) Spinach, millet
4. Protection
5. a) Gas
b) Reducing it to the required heat, turning off when not in use
6. Fruits and vegetables
7. Shallow frying
8. Sheep
9. a) Shallow frying
b) Eggs, vegetables
c) Frying pan
10. a) After visiting the toilet, after blowing the nose
b) Wet your hand, apply soap, scrub, rinse, dry.
11. a) A-gloves, B-canvas shoes, C-gumboots
b) Masks, apron, headgear
12. a) Needle, a pair of scissors
b) Observe care when using sharp tools to prevent cuts, cut away from your body
13. a) A-sweet potatoes, B-egg
b) A-boiling, B-shallow frying

14. Washing clothes, bathing, brushing teeth, drinking

15. a) Food from all the food groups

b) i) Ugali, beef, sukuma wiki

ii) Ugali, egg, spinach