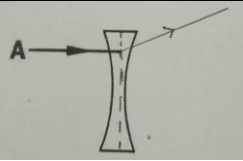


# SAMPLE MARKING GUIDE FOR PLE INTEGRATED SCIENCE 2022

**DEVELOPED BY TEACHERS OF TEACH & LEARN SCIENCE PLATFORM**

**TO ADD A TEACHER OF SCI. INBOX ADMINS ON 0775120363/ 0752041080/ 0787284916/ 0779398208**

NO.	SECTION A (40 MARKS)				OTHER INFORMATION
	CORRECT RESPONSE/ANSWER	WRONG RESPONSE/ WRONG ANSWER	TOPIC/ THEME & CLASS	QL	
1	Lateral bud / Axillary bud	<i>Auxillary bud/ Terminal bud</i>	Plant life/ flowering plants, P.4, Classification of plants, P.6	K	
2	Availability of flowering plants. // Accessibility of the site. // Safe distance away from the homesteads/people and livestock. // Safe distance from noise & disturbances. // Availability of adequate windbreaks. // Nearness to fresh water supply. // Presence of shades. // Safety from predators such as wax moths, safari ants and other parasites. // Presence of security against theft and vandalism. // The site should be fairly dry, away from swampy or flooding valley or any bottom land with stagnant water. // Presence of reasonable distance from the ground.		Bee keeping, P.5	C	
3	They build the body. // They promote body growth // Repair worn-out body tissues. // Replace worn out body cells. // Make enzymes and antibodies.	<i>Prevents kwashiorkor</i>	Food and nutrition, P.4	C	
4	Evaporation is important in formation of rain. // It is important in distillation process to produce clean water. // It is important in distillation process to produce alcohol. / Helps to separate mixtures of substances with different boiling points.	<i>Helps in rain fall /Helps in rainfall formation</i>	Matter and energy P.5	C	
5	To prevent indigestion. // To ease chemical digestion of food. // To ease peristalsis // To prevent choking. // To stimulate saliva production for chemical digestion of food.	<i>To prevent <b>chocking</b></i>	Digestive System, P.5	C	
6	Wearing dry and clean stockings. // Dry feet before wearing socks and shoes. // Avoid sharing shoes or socks.		Personal hygiene, P.6	A	
7	Concave lens/ Diverging lens	<i>Convex lens// Biconcave lens// Converging lens.</i>	Light, P.7	K	<i>Ray should bear arrow head. Use a pencil to</i>

8			Light, P.7	A	draw it. There must be a dotted line passing through the principal axis of the lens <b>from</b> which refraction <b>starts</b> .
9	Organising school health parades. // Educating community members about how malaria spreads. // Sensitising the community about the dangers of malaria. // Sensitizing community members about control of malaria. // Encouraging school children to sleep under mosquito nets. // Putting up campaigns about community hygiene.	Killing mosquitoes	Population and Health concerns, P.7	A	
10	Pulp cavity	Dentine // Sensory nerves	Human teeth, P.4	K	
11	Due to displacement of some water by the volume of the stone. / The space occupied by the stone displaces some water. / The stone displaced water equal to its volume.		Matter, P.5	C	
12	Smoking causes lung cancer // Smoking damages the lungs.		Population and Health concerns, P.7	C	
13	Immunisation // Control of communicable diseases. // Information and Health Education. // Personal Hygiene // Water and Sanitation.		Population and Health concerns, P.7	K	
14	They grow and mature within one year.	They grow and mature within one year <b>and are harvested once</b> .	Growing crops, P.5	C	Not all annual crops are harvested once. E.g., some indeterminate tomato varieties may be harvested continuously throughout the year.
15	Using them sparingly // Using alternative sources of energy such as biogas and solar energy. // Avoid over mining of fossil fuels.	Using <b>other alternative</b> sources of energy	Resources: Renewable & non renewable resources, P.7	A	
16	Jinja fly/simulium fly/ blackfly/Simulid fly			K	
17	Ear tagging	Ear notching // Numbering	Cattle keeping, P.6	C	
18	For easy identification of goats.		Cattle keeping, P.6	C	
19	Sunny weather	Dry weather // Dry season	Our weather, P.1	K	
20	Crossing a busy road at a Zebra crossing. // Using flyovers while crossing a busy road. // Looking right, left and right again before crossing a busy road.		Accidents and first aid, P.6	A	

21	Heart /The heart // Lungs/The lungs.		Body organs, P.4	K	
22	Blown out filament. // When dry cells are exhausted.// When parts of the terminals of the torch are rusty. // Rusty dry cell terminals.	Poor arrangement of dry cells.	Electricity, P.7	C	When dry cells are poorly arranged, the circuit is not considered complete.
23	Bathing well. // Bathing regularly/daily.// Wearing deodorants or perfumes.// Washing underwears regularly.// Putting on clean underwears.// Shaving pubic hairs.		Personal hygiene, P.4/P.6	A	
24	By sorting them before washing. // Washing clothes according to their colours.		Personal hygiene, P.4/P.6	A	
25	Reptiles /Reptalia	Reptilia /Amphibians	Classification, P.6	C	
26	By hiding in its hard shell. / By withdrawing into its hard shell.		Classification, P.6	C	
27	Through <b>immunization</b> of infants (with BCG vaccine) at birth. // Covering the mouth when coughing.// Isolation of infected persons.//Drinking well boiled water. // Drinking well boiled milk. // Wearing face masks in congested places.//Treating infected persons at early stages of the disease.		Immunization, P.5	A	
28	Serving food in dirty containers. // Touching food with dirty hands. // Eating in dirty places.//Leaving food uncovered.// Cockroaches landing on the food. //Dirty objects falling on food.//When houseflies vomit on prepared food.		Sanitation, P.6	C	
29	Molecules/particles in solids are closely packed which makes them to vibrate faster than in other states of matter.		Matter, P.5	C	
30	Switching off electric sockets when not in use. // Installing sockets at higher levels where children can't reach.//Teaching children dangers of electric shock. Teaching Children how to prevent electric shock at home. // Keeping away electric appliances from children's reach.		Accidents and first aid, P.6	A	
31	They make joints more flexible. (Reduce joint pain) // They strengthen body muscles. // Help muscles to generate heat.		Muscular-skeletal system, P.7	C	
32	Both moulds and ferns reproduce by means of spores.	Both organisms feed saprophytically. // Both	Kingdom fungi, P.5, Classification of	C	Ferns have chlorophyll & feed autotrophically.

		<i>are non flowering plants.</i>	plants, P.6.		
33	To keep the pit hole dry. // To reduce bad smell from the pit latrine.// To control the movement of maggots around the latrine pit hole.//To kill germs around the hole of the pit latrine.		Theme: Human health, Topic: Sanitation, P.6	C	
34	Water vapour// Carbon dioxide	<i>Urea//Sweat//Condensed vapour// <u>Carbondioxide</u></i>	Theme: Human body, Topic: Excretory System, P.6	K	
35	Planting trees. // Educating members about deforestation. // Educating members about re-afforestation. // Holding debates and composing songs about ways of conserving the environment.		Population and health concerns, P.7	A	
36	Using thick curtains. // Covering walls of large halls with soft boards. // Putting ceilings in large halls. // Using woolen blankets on walls of large halls.	<i>Use of plywood</i>	<b>Theme:</b> Matter & Energy <b>Topic:</b> Sound Energy, P.6	A	
37	Water softens the testa/seed coat for the radicle to come out. // It dissolves the stored food in a seed for the embryo to absorb.	<i>...radical...</i>	<b>Theme:</b> World of living things <b>Topic:</b> Classification of plants, P.6	C	
38	Tapeworms feed on digested food in humans.	<i>Tapeworms feed on blood. <b>Rej: Tape worms</b></i>	<b>Theme:</b> World of living things <b>Topic:</b> Invertebrates & Worms, P.4 & P.6.	C	
39	Keeping drugs out of reach of children. // Proper storage of drugs. // Checking the expiry dates of a drug before giving it to the children.// Following instructions on drug use as directed by medical personnel. // Labelling poisonous drugs.// Storing drugs in sealed containers.	<i>The child should follow drug prescription.</i>	<b>Theme:</b> Human health <b>Topic:</b> Alcohol, Smoking & drugs in society, P.6	A	<i>Children can't follow drug prescription.</i>
40	Influences temperatures of an area. // Reduces visibility causing traffic accidents on runways. // Protects animal life from direct sunlight.// Causes rain formation.		Our Weather, P.1	C	

SECTION B (60 MARKS)					
NO.	CORRECT RESPONSE(S) / ANSWER(S)	INCORRECT/WRONG RESPONSE(S) /ANSWER(S)	TOPIC/CLASS	QL	OTHER INFORMATION
41	<b>a)</b> Chemical change <b>b)</b> Physical change <b>c)</b> Biological change <b>d)</b> Physical change.	Any other	<b>Theme:</b> Managing changes in the Environment. <b>Topic:</b> Changes in the environment.	C	
42	<b>a i) Sanitation</b> is the way of keeping an area clean for public health.// Sanitation refers to steps taken to keep an area clean. <b>ii) Personal hygiene</b> is the general cleanliness of the body and materials we use to clean it. <b>b)</b> Sweeping rubbish from the compound// Picking rubbish from the compound //Proper disposal of rubbish // Slashing bushes around the school // Digging rubbish pits // Burning rubbish at the rubbish pit // // Mopping classrooms, verandahs and offices//Scrubbing inside latrines and bathrooms.		Sanitation/ Personal hygiene, P.4	A	
43	<b>a)</b> Zero grazing		Cattle Keeping, P.6	C	
	<b>b)</b> Farm Yard manure/ Farmyard Manure.			K	
	<b>c)</b> Animals are protected from harsh/bad weather. // Animals are protected from wild animals and thieves. // It is easy to estimate feed intake per animal/quantity of feeds per animal. // There is less wastage of feeds by animals.// It is easy to identify sick animals. // There is less wastage of energy by animals since they do not move long distances. // Distant pastures can be utilized by animals. // It is easy to keep individual animal records. // It is easy to control animal parasites. // It is easy to control animal diseases. // Prevents straying of animals. // Allows re-growth of pastures.// Enables a high stocking rate of farm animals.			C	
44	<b>a)</b> First Class lever		Simple machines,	A	
	<b>b)</b> Let Jjuko's mass be M kgs Load $\times$ load arm = Effort $\times$ Effort Arm			A	<b>Units</b> are needed

	$L \times LA = E \times EA$ $= 40 \times 2.5 = M \times 4$ $= 4 \times \frac{25}{10} = 4M$ $100 = 4M$ $M = 25\text{kgs}$ Jjuko's mass is 25kg		P.7		
45	a) Vena cava	<i>Venacava</i>	<b>THEME:</b> The human body <b>TOPIC:</b> The Circulatory system, P.7	A	
	b) Deoxygenated blood / De-oxygenated blood			C	
	c) Capillaries are many in number for fast exchange of body materials. // They have thin walls to allow easy diffusion of materials.			C	
46	a)i) Flatworms		<b>Theme:</b> World of living things, <b>Topic:</b> Classification of animals, P.6	C	
	ii) Roundworms/nematodes			C	
	b) They improve soil drainage/water infiltration into the soil. // They improve the soil structure.// They aid decomposition of organic matter to release nutrients in the soil. // They breakdown organic matter to form soil. // They soften the soil to improve young plants root penetration. // They help to mix soil.	<i>The die to form humus.</i>		A	Man can't wait for earthworms to die to benefit from them.
47	a) Soil drainage	<i>Soil texture</i>	Soil, P.4	A	
	b) Prevents soil particles from falling into the beaker. // Filters soil from water.// Prevents soil particles from pouring in the water in the beaker.	<i>Prevents soil from seeping downwards.</i>		A	
	c) Sample A			C	
	d) It has small soil pores which allow little water to drain through them. // Clay soil has closely packed soil particles which do not allow water to drain through them easily.			A	
48	a) Increases chances of blood pressure to the victim. //Stains/ discolours the teeth. // Leads to heart attack. // Leads to insomnia. // Leads to loss of appetite. // leads to self neglect. // Leads to dental cavities /Teeth destruction.//	<i>Leads to addiction</i>	Population & Health, P.7	A	
	b) By engaging in gainful activities like farming. //Keeping busy in healthy games and sports like football.//			C	

	Joining good peer groups. // Reporting peers who chew Miraa to responsible adults. // Joining reading groups.				
49	I) Prevents fruits from rotting. II) Conserves soil moisture. III) Prevents overcrowding of plants. IV) Removes unwanted plants.		Growing crops, P.5	C	
50	a) i) Animal dispersal	Any other method	<b>Theme:</b> Living things, <b>Topic:</b> Classification. <b>Sub topic:</b> Fruit & seed dispersal, P.6	C	
	ii) Water dispersal	Any other method		C	
	b) Prevents overcrowding of plants around mother plant. // Allows plants to colonise new areas. // Increases chances of survival of plants. // Prevents extinction of plant species. // Reduces competition for water and mineral salts among plants.			C	
51	a) Left bronchus / Bronchus		<b>Theme:</b> Human Health <b>Topic:</b> Respiratory system <b>Sub topic:</b> Respiratory organs, P.7	K	
	b) Rings of cartilage / Cartilage			K	
	c) It is where exchange of gases takes place.			C	
	d) It contracts and flattens. / Moves downwards and flattens.			C	
52	a) Gas state/ Gaseous state // Liquid state	Liquids//Gases	<b>Theme:</b> Matter & energy <b>Topic:</b> Heat energy <b>Sub topic:</b> Heat transfer, P.5	C	
	b) Convection helps in boiling water. // Enables us to get fresh air in a living room. // Helps to drive out smoke from the kitchen through the chimney. // Helps in formation of land and sea breezes leading to rain formation. // Drives away used air from an environment.	Helps to roast meat // Helps to cook/iron		A	
53	• a) i) <b>Agroforestry</b> is the practice of growing crops with compatible tree species and rearing of animals on the same piece of land at the same time. // This is the growing of crops, trees and rearing of animals on the same piece of land.  ii) <b>Mixed farming</b> is the growing of two or more crops on the same piece of land at the same time.		Interdependence, P.7	C	
	b) Should be fast maturing. // Should be leguminous. / Should be able to fix nitrogen in the soil. // Should be multipurpose. // Should have a light canopy. // Should be deep rooted to utilize nutrients from deeper soil layers. //			C	

	Should not compete with crops for nutrients.				
<b>54</b>	<b>i)</b> Measure one litre of boiled water into a clean container. <b>ii)</b> Measure one teaspoon of salt into the measured water. <b>iii)</b> Measure eight teaspoons of sugar into the measured water. <b>iv)</b> Stir the mixture to form a uniform solution.		Population & Health, P.7	A	
<b>55</b>	<b>a)</b> Crushed Bones/ Bone Meal // Crushed Mukene fish// Crushed eggshells // Crushed Oyster shells		Poultry keeping, P.5	C	
	<b>b)</b> Feeding layers on balanced diet. // Proper housing of layers. // Regular control of parasites. // Using improved breeds of layers. // Selective breeding of layers on the farm. // Proper vaccination of layers.// Treating sick birds. // Provision of adequate light. // Providing layers with water ad lib. // De-beaking to prevent egg eating.		Keeping poultry, P.5	A	



**BELOW ARE SOME OF THE RESOURCEFUL TEACHERS  
(ALSO MEMBERS OF TEACH & LEARN SCIENCE WHATSAP PLATFORM)  
THAT PARTICIPATED IN MAKING THE MARKING GUIDE ABOVE.  
WHEN NEEDED TO IMPROVE GRADES IN PLE SCIENCE, THEY CAN BE CONTACTED TO FACILITATE IN VARIOUS  
SCHOOLS ACROSS THE COUNTRY.**

<b>S/N</b>	<b>NAME OF TEACHER</b>	<b>ADDRESS/SCHOOL</b>	<b>TEL. CONTACT</b>
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4	ARIKO DEOGRATIOUS	ST. AGNES JUNIOR SCH. KAMPALA	0784341680 / 0754554399
5	WATOLYA VICENT	CENTRAL NURSERY & PRI. SCH. ENTEBBE	0706143758 / 0761347002
6	LWANGA STEPHEN	LONDON LIFE JR. SCH. MAGANJO	0759099750
7	OJOK GEOFFREY	JOSHUA PRIMARY SCHOOL MBALE	0784838069
8	JEREMIAH EMUNYU	JOY AND JOLLY NUR. & PRI. SCH. MUKONO	0779292768 / 0754771577
9	OSOMA DAVID	MOTHERCARE PREPARATORY SCH. BUNAMWAYA	0782253272
10	IRIOKO PAUL	NKOKONJERU P/S MBALE	0779308789
11	BATTE GONZAGA	TRINITY PRIMARY SCHOOL	0742834121
12	MAYINJA CHARLES	WAC ACADEMIC CONSULTANCY LTD	0704136202
13	KICONCO OBED TOMAS	VICTORY STEP EDUCATION SERVICES	0776685566 / 0708758922
14	MUGABE BOAZ	SUNRISE KINDERCARE & PRI. SCH. MITOOMA	0779804145
15	GADDAFI NOOR	BUKHAARIY JR. SCH. NAKUWADDE-BULENGA	0751561049
16	OBETE ARON SYLVESTER	INTEGRITY PRI. SCH. MITYANA	0770398208 / 0758492798
17	SSEBAGALA SADAT		0789522801

**PLATFORM'S C.E.O 0752041080**