



# FLOURISH IN INTEGRATED SCIENCE

COMMON MISTAKES  
First Edition

PUPILS & TEACHER'S BOOK 4-7

FREE RANGE SYSTEM



RABBIT



FLOWER



A NANNY GOAT



A FISH



A PARROT



BATTERY



A BSCONDING IN BEES



MEMORY CARD



ELECTRIC FAN

CORRECT YOUR COMMON MISTAKES IN INTEGRATED SCIENCE



## PREFACE

**Flourish in Integrated Science Common mistakes** has been developed basing on the revised Primary Integrated science syllabus as prescribed by the new curriculum of the National Curriculum Development Centre (NCDC). The book contains accurate, relevant and current information covering all the common mistakes in all classes. It is intended to guide both teachers and learners.

This book caters for the interests in terms of simple and concise language used simplified content to cater for all learners and Teachers with different abilities and clear illustrations to make learning enjoyable through observation.

The Common mistakes have been well organized, relevant and easy to understand Science ideas and facts. It is written in a simple language and is well aided with illustrations/diagrams where necessary to ease understanding.

The **Common mistake** is remarkably precise but detailed in content with **no fact left hanging**.

It has been mainly written for all primary classes in a language that is suitable for both rural and urban pupils. The **Common mistake** can therefore be used with minimum teacher guidance.

The **Common mistake** has inbuilt and continuous assessment activities at the end of sub topics. These questions are of help to the learners and Teachers to test their understanding of the concepts covered and are to enable the teachers to track progress as coverage goes on. This also makes the book convenient for individual and class learning by the pupils.

The activities are set basing on the three main levels of assessment at primary level that is to say: **Knowledge, Comprehension and Application**. The questions are carefully set in order to challenge the pupils in thinking, recalling, observing comprehending and applying knowledge and skills in day-to-day life. These tested skills are also key to excellent performance at PLE since it tests all the above levels.

Projects and experiments have been included to make the subject practical and to enable learners discover knowledge and facts by themselves. This is also to promote a positive attitude towards integrated science as a subject.

The **Common mistake** intend to provide learners and teachers with knowledge, skills and desired attitudes and values of basic science, health education, agriculture and the environment that are important to prepare learners for the final assessment of the primary level.

The **Common mistake** is written and developed by experience teachers of integrated science and we welcome all comments on the publication with an open mind for the improvement in the teaching and learning of integrated science. Comments and orders can be communicated directly through the following contacts: Call or WhatsApp: +256788281825/+256707986278//+256786056121.

**25. What type of leaf do cassava plants have?**

**wrong response**

- Compound leaf

**Correct response.**

- ✓ Simple leaf

**COMMENT**

- ❖ The leaflet of a cassava leaf is not completely divided at the leaf blade. This makes it a simple leaf not a compound leaf as many people may think.

**26. Give any two causes of dehydration.**

**Wrong response**

- Diarrhoea.
- Sweating
- vomiting

**Correct response.**

- ✓ Prolonged Diarrhoea.
- ✓ Excessive sweating
- ✓ Excessive vomiting

**COMMENT**

- ❖ The first answers are incomplete because they do not show the degree of the condition that can lead to dehydration.
- ❖ One becomes dehydrated when he/ she has prolonged or severe Diarrhoea, vomits and sweats excessively.

**27. What is electricity?**

**Wrong response**

- Electricity is a form of energy produced by the flow of electrons.

**Correct response.**

- ✓ Electricity is the form of energy produced by charged particles. '
- ✓ Electricity is the form of energy produced by charges.
- ✓ Electricity is the form of energy that involves charges.

**COMMENT**

- ❖ The first answer is wrong because not all types of electricity involves the flow of electrons, that definition is only applied in current electricity but does not apply in static electricity whose electrons are static.

**28. Why are vitamins important in one's diet**

**Wrong response**

- To prevent diseases

**Correct response.**

- ✓ Vitamins make the body healthy and protected from diseases

**COMMENT**

- ❖ Vitamins do not prevent diseases neither do they cure diseases **BUT** they make the body health and resistant from diseases



**56. How do deciduous plants breathe during dry season?**  
**wrong response**

➤ Through stomata

**Correct response.**

✓ Through the lenticels (stomata found on the stem)

**COMMENT**

❖ We should be aware that deciduous plants shed their leaves during dry seasons, therefore the breathing mechanism will only be lenticels

**57. What is respiration?**

**Wrong response**

➤ Respiration is the process by which the body uses oxygen to burn down food to produce energy, Carbondioxide and water vapour.

**Correct response.**

✓ Respiration is the chemical breakdown of food in the body to produce energy.

**COMMENT**

❖ Remember not all types of respiration involves the use of oxygen. We have anaerobic respiration which does not involve the use of oxygen to occur.

**58. How can p.7 pupil at St. peters schools safe guard him/herself from HIV/AIDS?**

**Wrong response**

❖ By being faithful to sexual partner.

✓ **Correct response.**

✓ By abstaining from sex till marriage

**COMMENT**

❖ A P.5 pupil is a child not a married person to be faithful to his/her partner

**59. Mention the vaccine given to young children to prevent them from getting tetanus.**

**Wrong response**

➤ Tetanus toxoid vaccine (T.T)

**Correct response.**

✓ DPT vaccine.

**COMMENT**

❖ Tetanus toxoid vaccine is given to girls and women between 15-49 years and also pregnant mothers not to young children.

**13. Identify one primary sex characteristics common to both boys and girls during adolescence**

**Wrong response**

- ❖ Sweat glands become more active

**Correct response.**

- ✓ Gonads start releasing gametes
- ✓ Development of genital organs

**COMMENT**

- ❖ One should differentiate between primary and secondary sex characteristics. The first response is for secondary sex characteristics which is not required by the question.

**14. How does breastfeeding improve the immunity of a baby?**

**Wrong response**

- Breastfeeding provides a balanced diet to a baby

**Correct response.**

- ✓ Breast milk contains antibodies.

**Comment:**

- Breast milk boosts the baby's immunity simply because it is rich in antibodies which is needed for proper growth of a baby.

**15. Which type of germ causes heart water diseases in farm animals?**

**Wrong response**

- Protozoa

**Correct response**

- ✓ Bacteria

**Comment.**

- ❖ Protozoa diseases in cattle are **Heart water, East Coast Fever and Red water** (HER) is caused by a bacterium not protozoa, therefore we should guide learners to know that not all tick borne diseases are caused by protozoa

**16. What is a skeleton?**

**Wrong response**

- A skeleton is a frame work of bones in the body.

**Correct response**

- ✓ A skeleton is a supportive structure of the body of an organism.
- ✓ A skeleton is a frame work of the body.

**Comment.**

- ❖ Not all skeletons are made of bones. Some are filled with fluid under pressure that supports the body e.g. an earthworm. One should differentiate between a skeleton and human skeleton



**35. Define energy resources?.**

**Wrong response**

- Any component of the environment that man uses to produce useful energy

**Correct response.**

- ✓ Energy resources are materials in the environment that provide people with useful energy.

**COMMENT**

- ❖ We should discourage the use of the word **man** in definition and encourage the use of the word **people** since the word man does not mean woman therefore it is good to use people as a general word.

**36. Name the device that controls the amount of current in a circuit.**

**Wrong response**

- Fuse
- Ammeter

**Correct response.**

- ✓ Resistor

**COMMENT:**

- ❖ Fuse breaks the circuit but does not control the amount of current, but ammeter measures the amount of current but does not control therefore we should teach learners all circuit devices and their role.

**37. Why are people advised to insulate electric wires?**

**Wrong response**

- To prevent electric shocks

**Correct response**

- ✓ To prevent touching live wires

**COMMENT.**

- ❖ Electric shocks cannot happen when one has not touched a live wire remember one can still touch on live wires using insulators like hand gloves, rubber shoes and he is not shocked by electricity.

**38. Why do people who insulate electricity put on shoes with rubber soles?**

**Wrong response**

- To prevent electric shocks

**Correct response**

- ✓ Rubber soles cut the flow of current into the earth

**COMMENT.**

- ❖ The question requires one to explain how rubber soles prevent electric shock. We should always identify and interpret the question stem very well

80. Which body organ does a dog use for regulating body temperature during hot days?

**Wrong response**

- Skin

**Correct response**

- ✓ The tongue

**COMMENT.**

- ❖ Dogs don't sweat during sunny weather but pant which is done using the tongue. Many candidates think that temperature regulation is done only through sweating yet there are other ways of doing so. Remember when dogs are running they bring out their tongue which helps to reduce on the body temperature.

81. State the law of magnetism.

**Wrong response**

- Like poles of a magnet repel each other while unlike poles attract each other.

**Correct response**

- ✓ Like poles of two magnets repel each other while unlike poles attract each other.

**COMMENT.**

- ❖ Poles of one magnet can hardly repel or attract one another because they are attracted to one magnet. Therefore repulsion or attraction can easily occur when two magnets are used thus disqualifying the first response

82. Why is breast milk considered a complete food for the baby?

**Wrong response**

- Sweat duct

**Correct response**

- ✓ Sweat pore.

**COMMENT.**

- ❖ The above two parts of the skin tend to confuse learners in terms of their function. One should note that sweat duct transports sweat to the skin surface and it is therefore the role of the sweat pore to let out sweat

83. Why should you advise your elder sister not to bleach her skin

**Wrong response**

- To avoid cancer / it causes skin cancer

**Correct response**

- ✓ Chemicals for bleaching increase chances of getting skin cancer

**COMMENT.**

- ❖ It is not bleaching that causes skin cancer **BUT** the chemicals used in bleaching one's skin. You should also note that not all types of cancer can be caused by bleaching the skin.



16. What is swarming.

**Correct response**

- ✓ is when part of the bee colony leaves the hive

**Wrong response**

- Is the movement of bees from one place to another looking for a new hive



**COMMENT**

- ❖ The second response is wrong simplify it means absconding because when bees are looking for flowers not all are going to leave the hive but part of the bee colony will only leave the bee hive.

**NB:** But for the primary level we need to mark all and emphasis the differences between absconding and swarming to learners.

17. Why breast milk is called a complete food?

**Correct response.**

- ✓ Breast milk contains all food values.

**Wrong response.**

- Breast milk contains almost all food values except iron.

**COMMENT:**

- ❖ Iron lacking in breast milk is not a food value but a food element under mineral salts.

18. How can we prevent kwashiorkor in children?

**Correct response**

- ✓ By feeding children on food rich in proteins.

**Wrong response.**

- By feeding children on proteins.

**COMMENT:**

- ❖ We don't directly feed on proteins but on food stuffs rich in proteins.

19. Where in the body does respiration take place?

**Correct response.**

In living body cells.

**Wrong responses.**

- In the lungs
- In the body cells.



**122. Identify one air borne diseases that affects the skeleton**

**Correct response**

- ✓ Tuberculosis of the spine/bones

**Wrong response**

- Tuberculosis

**COMMENT:**

- ❖ There are two forms of tuberculosis the one that affects the lungs and the other one that affects the back bone. So tuberculosis of the spine affects the skeleton

**123. State two methods of making temporary magnets?**

**Correct response**

- ✓ Stroking or touch method
- ✓ Induction method
- ✓ Electrical method

**Wrong response**

- Single touch method.
- Double touch method.

**COMMENT:**

- ❖ Single touch method and Double touch method are the groups of stroking methods.

**NOTE**

- ❖ Current electricity is defined as the type of electricity which involves the flow of electrons while static electricity is defined as the type of electricity which does not involve the flow of electrons
- ❖ So the first definition is correct because both current and static electricity have charges.

**124. How are windows doors and ventilators important on a house?**

**Correct response**

- ✓ They help in free circulation of air in the house
- ✓ They help in gaseous exchange in the house

**Wrong response**

- They take out stale air
- They let in fresh air

**COMMENT:**

- ❖ Windows and doors allow fresh air in the house while ventilators take out stale air. This is called gaseous exchange or circulation of air

**135. Why is it not necessary to smoke a VIP latrine?**

**Wrong:**

- It is always clean.

**Correct:**

- ✓ A vip latrine has a vent pipe which drives out a bad smell.

**COMMENT:**

- ❖ Not only VIP latrines are always clean, even ecosan latrines are always clean but they are not smoked.

**136. On which principle does a pin hole work on?**

**Wrong:**

- Light can be reflected.

**Correct:**

- ✓ Light travels in a straight line.

**Comment:**

- ❖ Light can be refracted works in a periscope.

**137. What is the meaning of the word "soil erosion"?**

**Wrong:**

- Soil erosion is the washing away of top soil by its agents.

**Correct:**

- ✓ Soil erosion is the gradual removal of top soil by the erosional agents.
- ✓ Soil erosion is the removal of top soil by erosional agents.

**COMMENT:**

- ❖ Soil is not washed away but it can be removed from one place to another or taken away.

**138. Give a reason why fish are able to live in water**

**Correct response:**

- ✓ Fish have gills for breathing in water
- ✓ Fish breathe in dissolved oxygen in water.

**Wrong:**

- Fish have streamlined bodies which reduce friction during swimming
- Fish has a lateral line used to detect sound in water
- Fish have swim bladders which help to control the depth of fish and prevent it from sinking
- Fish have slippery scales for protection and to reduce viscosity

**COMMENT:**

- ❖ The question requires a learner to give the main reason why fish are able to live in water



**131. A part from stomata, name any other part of a plant used for breathing.**

**Wrong:**

- lenticel.

**Correct:**

- ✓ Lenticels
- ✓ Roots.

**COMMENT:**

- ❖ Observe the spelling of the word. Remember that breathing roots are also used for breathing.

**132. Give any three breeds of rabbits.**

**Wrong:**

- Local breeds
- Exotic breeds of rabbits.

**Correct:**

- ✓ California
- ✓ Chinchilla
- ✓ Rex
- ✓ New Zealand white
- ✓ Angora rabbits.

**COMMENT:**

- ❖ We do not have any local name for a local breed of rabbits that means that most of the rabbits are exotic breeds.

**133. Which plants put a layer of wax on the leaves to cover the stomata?**

**Wrong:**

- Cactus plant

**Correct:**

- ✓ Banana plant
- ✓ Bryophyllum

**COMMENT:**

- ❖ The adaptations of a cactus tree to survive in its environment are;
- ❖ Having leaves modified into leaves
- ❖ Having a fleshy stem
- ❖ Therefore, there is no reason to cover the stomata with a waxy layer.

**134. How are pineapples propagated?**

**Wrong:**

- By means of suckers
- By means of a crown/by use of suckers.

**Correct:**

- ✓ By planting the sucker
- ✓ By planting the crown.

**COMMENT:**

- ❖ Propagation is the way of obtaining new plants from a parent plant. This is only done through planting the plant part e.g. planting a seed/crown/vines of sweet potatoes etc.

176. What happens to pollen after landing on the stigma?

**Wrong:**

- They grow.

**Correct:**

- ✓ They develop a pollen tube.

**COMMENT:**

- ❖ Pollen grains germinate and develop a pollen tube after landing on the stigma. The pollen tube develops towards the ovary.

177. Give three characteristics of living things.

**Wrong:**

- They die/they eat.

**Correct:**

- ✓ They respire/some move/they respond to stimuli/they excrete/they grow/they reproduce.

**COMMENT:**

- ❖ Not all living cells of an organism dies and death stops the life processes that take place in the body of a living organism.

178. In brief, explain how ORS can be prepared locally at home.

**Wrong:**

- Measure one litre of cool clean boiled water.
- Measure one teaspoon of salt into the measured water
- Wash hands with clean water and soap
- Measure eight teaspoons of sugar into the measured water.
- Stir the mixture to make a solution.

Correct:

- ✓ Wash hands with clean water and soap.
- ✓ Measure one litre of cool clean boiled water and put it in clean container
- ✓ Measure one teaspoon of salt and put it into the measured water in a clean container.
- ✓ Measure eight teaspoons of sugar into the measured water in the clean container.
- ✓ Stir the mixture to make a solution.

**COMMENT:**

- ❖ Washing of hands is the first step in the preparation of ORS.





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**RABBIT**



**FLOWER**



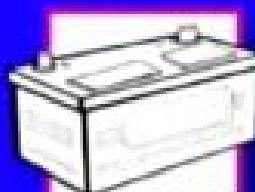
**A NANNY GOAT**



**A FISH**



**A PARROT**



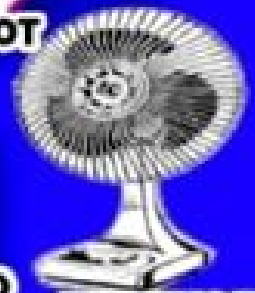
**BATTERY**



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**ELECTRIC FAN**

**CORRECT YOUR COMMON MISTAKES IN INTEGRATED SCIENCE**



**EPIDU PAUL** is a well-known talented teacher who loves teaching Science and is an experienced teacher of Science for over Six (6) years. He is a born of Lalle Sub-County Orwada Village Soroti City West.

He has taught Science in Schools like: Amen Christian Nursery and Primary School, CHILD OF HOPE JUNIOR SCHOOL-MBALE, EASTLAND EDUCATION CENTRE MBALE, KAUTHAR KIDS JUNIOR SCHOOL- MATUGGA, T & M BRIGHT PRIMARY SCHOOL MANAPWA AND ST. PETERS PRIMARY SCHOOL MANAPWA Up to date Handling **SCIENCE**

He has helped children in the above Schools and he is well equipped with REVISION QUESTION PAPERS and Simplified organized Holiday packages.

**Science Integrated Science** is a primary level book written for pupils and teachers and also very useful reference for teacher trainees and colleges.

This **Common mistake** gives basic and applicable skills to pupils that are useful in their daily life when approaching PLE questions.

The explanations are easy to understand and stimulate pupil's and teachers' interest.

Learner's activities in this **Common mistake** form a strong foundation for learning SCIENCE

This **Common mistake** is prepared to meet all the needs of primary level in Science outlined in the new Uganda Primary School curriculum. It also follows the new Curriculum of the National Curriculum Development Centre (NCDC).

This **Common mistake** is also designed with illustrations where necessary to equip teachers and help them prepare children for the upcoming Examinations.

This **Common mistake** has answered all the original questions set by Uganda National Examinations Board (UNEB).

Other books by the same author

1. Flourish in Integrated Science book 5.
2. Flourish in Integrated Science book 6.
2. Flourish in Integrated Science book 7.

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