



**UGANDA NATIONAL EXAMINATIONS BOARD**  
**CONTINUOUS ASSESSMENT OBSERVATION CHECKLIST**  
**545 CHEMISTRY**  
**Senior 3, Term 3**

**Centre/CA No:** ..... **Year:** .....

**Learner's Name:** ..... **Learner ID:** .....

**Instructions to the facilitator:**

1. This observation checklist contains **one** competency, which **must** be assessed by the end of this term.
2. Please **tick** against the indicator(s) the learner has exhibited at every level assessed.
3. Record the **number of indicators observed** in the boxes provided at the end of each level for **Subject Competency (SC)** and **Generic Skill (GS)**.
4. Indicate **N/A** if the learner has not been assessed for a particular level(s).

**Theme:**

Fuel and energy.

**Topic:**

Chemical reaction rates.

**Learning Outcome(s):**

1. Understand and appreciate that chemical reactions take place at different rates.
2. Understand the effect of various factors on the rate of chemical reactions and recognise that many reactions are reversible.

**Subject Competency (SC):**

Carries out investigation on the effect of external conditions on the rate of reactions.

**Generic Skill (GS):**

Critical thinking and problem-solving skills.

**Learning Domain:**

Psychomotor.

**Level 1: Imitation**

**Subject Competency (SC): Imitating the teacher/peer/video clip/laboratory technician, etc., carrying out an investigation on the effect of external conditions on the rate of reaction, the learner:**

- ☐ States and writes the experiment's aim/purpose using relevant/keywords.
- ☐ Identifies the independent variable, correctly.
- ☐ Identifies the dependent variable, correctly.

- ☐ Identifies the controlled variable correctly.
- ☐ States and writes the experiment's hypothesis, using relevant/keywords.
- ☐ Lists all the relevant apparatus/materials required for the experiment.
- ☐ Writes the procedure of carrying out the experiment coherently/logically.
- ☐ Identifies and writes the risk(s)/error(s)/source(s) of error(s) in the experiment to be carried out.
- ☐ States and writes the precaution(s)/mitigation(s) to the identified error(s).
- ☐ Carries out the experiment following the stated procedure.
- ☐ Presents/records data in a logical format.
- ☐ Records data accurately/within error limit/margin.
- ☐ Carries out data analysis using appropriate methods.
- ☐ Interprets data correctly.
- ☐ Draws an appropriate conclusion based on the interpretation made.

**Generic Skill (GS): Imitating the teacher/peer/video clip/laboratory technician, etc., exhibiting critical thinking and problem-solving skills, the learner:**

- ☐ Plans and carries out investigations on the effect of external conditions on the rate of reactions.
- ☐ Sorts and analyses information on the effect of external conditions on the rate of reactions.
- ☐ Identifies problems and ways forward concerning the effect of external conditions on the rate of reactions.
- ☐ Predicts outcomes and makes reasonable decisions concerning the effect of external conditions on the rate of reactions.
- ☐ Evaluates different solutions concerning the effect of external conditions on the rate of reactions.

Level 1 Indicators	
SC	GS

## Level 2: Manipulation

**Subject Competency (SC): Following instructions from the teacher/peer/video clip/laboratory technician, etc., to carry out an investigation on the effect of external conditions on the rate of reaction, the learner:**

- ☐ States and writes the experiment's aim/purpose using relevant/keywords.
- ☐ Identifies the independent variable, correctly.
- ☐ Identifies the dependent variable, correctly.
- ☐ Identifies the controlled variable correctly.

- ☐ States and writes the experiment's hypothesis, using relevant/keywords.
- ☐ Lists all the relevant apparatus/materials required for the experiment.
- ☐ Writes the procedure of carrying out the experiment coherently/logically.
- ☐ Identifies and writes the risk(s)/error(s)/source(s) of error(s) in the experiment to be carried out.
- ☐ States and writes the precaution(s)/mitigation(s) to the identified error(s).
- ☐ Carries out the experiment following the stated procedure.
- ☐ Presents/records data in a logical format.
- ☐ Records data accurately/within error limit/margin.
- ☐ Carries out data analysis using appropriate methods.
- ☐ Interprets data correctly.
- ☐ Draws an appropriate conclusion based on the interpretation made.

**Generic Skill (GS): Following instructions from the teacher/peer/video clip/laboratory technician, etc., to exhibit critical thinking and problem-solving skills, the learner:**

- ☐ Plans and carries out investigations on the effect of external conditions on the rate of reactions.
- ☐ Sorts and analyses information on the effect of external conditions on the rate of reactions.
- ☐ Identifies problems and ways forward concerning the effect of external conditions on the rate of reactions.
- ☐ Predicts outcomes and makes reasonable decisions concerning the effect of external conditions on the rate of reactions.
- ☐ Evaluates different solutions concerning the effect of external conditions on the rate of reactions.

Level 2 Indicators	
SC	GS

### **Level 3: Precision**

**Subject Competency (SC): Carrying out an investigation on the effect of external conditions on the rate of reaction, independently and with minimal errors, the learner:**

- ☐ States and writes the experiment's aim/purpose using relevant/keywords.
- ☐ Identifies the independent variable, correctly.
- ☐ Identifies the dependent variable, correctly.
- ☐ Identifies the controlled variable correctly.

- ☐ States and writes the experiment's hypothesis, using relevant/keywords.
- ☐ Lists all the relevant apparatus/materials required for the experiment.
- ☐ Writes the procedure of carrying out the experiment coherently/logically.
- ☐ Identifies and writes the risk(s)/error(s)/source(s) of error(s) in the experiment to be carried out.
- ☐ States and writes the precaution(s)/mitigation(s) to the identified error(s).
- ☐ Carries out the experiment following the stated procedure.
- ☐ Presents/records data in a logical format.
- ☐ Records data accurately/within error limit/margin.
- ☐ Carries out data analysis using appropriate methods.
- ☐ Interprets data correctly.
- ☐ Draws an appropriate conclusion based on the interpretation made.

**Generic Skill (GS): Exhibiting critical thinking and problem-solving skills independently while investigating the effect of external conditions on the rate of reaction, the learner:**

- ☐ Plans and carries out investigations on the effect of external conditions on the rate of reactions.
- ☐ Sorts and analyses information on the effect of external conditions on the rate of reactions.
- ☐ Identifies problems and ways forward concerning the effect of external conditions on the rate of reactions.
- ☐ Predicts outcomes and makes reasonable decisions concerning the effect of external conditions on the rate of reactions.
- ☐ Evaluates different solutions concerning the effect of external conditions on the rate of reactions.

Level 3 Indicators	
SC	GS

#### **Level 4: Articulation**

**Subject Competency (SC): Carrying out an investigation on the effect of external conditions on the rate of reaction correctly and innovatively, the learner:**

- ☐ States and writes the experiment's aim/purpose using relevant/keywords.
- ☐ Identifies the independent variable, correctly.
- ☐ Identifies the dependent variable, correctly.
- ☐ Identifies the controlled variable correctly.
- ☐ States and writes the experiment's hypothesis, using relevant/keywords.

- ☐ Lists all the relevant apparatus/materials required for the experiment.
- ☐ Writes the procedure of carrying out the experiment coherently/logically.
- ☐ Identifies and writes the risk(s)/error(s)/source(s) of error(s) in the experiment to be carried out.
- ☐ States and writes the precaution(s)/mitigation(s) to the identified error(s).
- ☐ Carries out the experiment following the stated procedure.
- ☐ Presents/records data in a logical format.
- ☐ Records data accurately/within error limit/margin.
- ☐ Carries out data analysis using appropriate methods.
- ☐ Interprets data correctly.
- ☐ Draws an appropriate conclusion based on the interpretation made.

**Generic Skill (GS): Exhibiting critical thinking and problem-solving skills accurately & innovatively while investigating on the effect of external conditions on the rate of reaction, the learner:**

- ☐ Plans and carries out investigations on the effect of external conditions on the rate of reactions.
- ☐ Sorts and analyses information on the effect of external conditions on the rate of reactions.
- ☐ Identifies problems and ways forward concerning the effect of external conditions on the rate of reactions.
- ☐ Predicts outcomes and makes reasonable decisions concerning the effect of external conditions on the rate of reactions.
- ☐ Evaluates different solutions concerning the effect of external conditions on the rate of reactions.

Level 4 Indicators	
SC	GS

### Level 5: Naturalisation

**Subject Competency (SC): Carrying out an investigation on the effect of external conditions on the rate of reaction, with ease, the learner:**

- ☐ States and writes the experiment's aim/purpose using relevant/keywords.
- ☐ Identifies the independent variable, correctly.
- ☐ Identifies the dependent variable, correctly.
- ☐ Identifies the controlled variable correctly.
- ☐ States and writes the experiment's hypothesis, using relevant/keywords.
- ☐ Lists all the relevant apparatus/materials required for the experiment.

- ☐ Writes the procedure of carrying out the experiment coherently/logically.
- ☐ Identifies and writes the risk(s)/error(s)/source(s) of error(s) in the experiment to be carried out.
- ☐ States and writes the precaution(s)/mitigation(s) to the identified error(s).
- ☐ Carries out the experiment following the stated procedure.
- ☐ Presents/records data in a logical format.
- ☐ Records data accurately/within error limit/margin.
- ☐ Carries out data analysis using appropriate methods.
- ☐ Interprets data correctly.
- ☐ Draws an appropriate conclusion based on the interpretation made.

**Generic Skill (GS): Exhibiting critical thinking and problem-solving skills while investigating on the effect of external conditions on the rate of reaction with ease, the learner:**

- ☐ Plans and carries out investigations on the effect of external conditions on the rate of reactions.
- ☐ Sorts and analyses information on the effect of external conditions on the rate of reactions.
- ☐ Identifies problems and ways forward concerning the effect of external conditions on the rate of reactions.
- ☐ Predicts outcomes and makes reasonable decisions concerning the effect of external conditions on the rate of reactions.
- ☐ Evaluates different solutions concerning the effect of external conditions on the rate of reactions.

Level 5 Indicators	
SC	GS