SCHOOL; **STANDARD COLLEGE NTUNGAMO**
CLASS; **Senior Four.**
TERM; **Two**
THEME; **THERMOCHEMISTRY**
TOPIC; **ENERGY CHANGES DURING CHEMICAL REACTIONS**
LEARNING OUTCOMES;

1. **Recognise and appreciate the difference between exothermic and endothermic reactions and understand that substances store chemical energy in their bonds.**
2. **Understand and appreciate the importance of exothermic and endothermic reactions in our everyday lives.**
3. **Recognise that the burning of fuels is an exothermic process producing useful energy.**
4. **Understand the concept of eat of reaction and interpret energy profiles of chemical reactions**

SUBJECT COMPETENCY (SC); Investigates chemical reactions.
GENERIC SKILL (GS); Mathematical computation and ICT proficiency.
DOMAIN; Psychomotor.

	IMITATION	**MANIPULATION**	**PRECISION**	**ARTICULATION**	**NATURALISATION**
SCENARIO	The sports club is planning to make a hot pack to treat sports injuries and warming the body in case of coldness using heat produced by components i.e. water and anhydrous calcium chloride. However, the learners do not know how to determine the amount of heat to be produced in the hot pack. A specialist was invited to guide the	The sports club is planning to make a hot pack to treat sports injuries and warming the body in case of coldness using het produced by components i.e. water and anhydrous calcium chloride. However, the students don't know how to determine the amount of heat to be produced in the hot pack	S.3students were performing a certain experiment during a chemistry lesson. They mixed sodium hydroxide and hydrochloric acid. The students noted that their containers became warmer as they kept on adding the acid. However, they could not understand why and how much heat had been generated	S.3 students were performing an experiment during a chemistry lesson. they mixed sodium hydroxide and hydrochloric acid. However, the students noted that their containers became warm as they added the acid. However, their teacher told them that there are other laboratory reagents which behave in the same way.	An organisation operating in fishing ground lake Kyoga organised a workshop to train the local fish dealers on how to make common salt on a small scale which they can use to preserve fresh fish. This involved mixing sodium hydroxide and hydrochloric acid. During the training, the participants noted that the containers kept on becoming warmer as the

	students and was recorded while performing the experiment and the video provided to you.				acid was added and they could not understand why and how much heat had been generated
TASK	Replicate the steps as in the video to investigate the heat produced in the hot pack	Following the instructions below, carryout an investigation to determine the heat produced in the hot pack **<u>Instructions.</u>** -Write the aim of the investigation -Write the hypothesis for the investigation -State the variables of the investigation -List the materials to be used -Write the procedures for the experiment -Record and analyse the data obtained -Write recommendations on the investigation	Carry out an investigation to determine the amount of heat produced during the experiment	Carry out an investigation on the amount of heat released using other available reagents of the same kind other than the ones used above.	Design an experiment to assist the participants of the training to understand this concept