LEARNING AREA: TECHNOLOGY

LESSON PLAN	CONTENT IN CONTEXT	GRADE 8
TERM _____	**PROCESSING** Demonstrates knowledge and understanding of how materials can be processed to change or improve their properties by adapting them to suit particular purposes: • to withstand forces (e.g. tension, compression, bending, torsion, shear); • to increase strength or life-span; • how specific properties suitable for packaging can be achieved.	**DURATION** **8 – 11 weeks**

Statement of the problem

South Africa is a fast growing tourist destination. Our crafters are getting many opportunities to sell their arts and crafts to tourists. Many of these artefacts are made of clay and are therefore fragile (they break easily)
Design and make a packaging for these artefacts.

Selected LO's and AS's	Teaching and Learning Activities	Details of Assessment Forms, Methods and Tools	
LO 1: Technological processes and skills **AS 1: Investigates** **AS 2: Design** **AS 3: Makes** **AS 4: Evaluates** **AS 5: Communicates**	**Activity 1: Different types of materials** Teacher explains and discusses the importance of material in the manufacturing of everyday products. Learners are given examples to explain the different groups of materials, referring to natural and synthetic materials. Teacher also explains how raw materials are processed into industrial materials. Learners do research on two different materials and present the information in the form of a flow chart. They also complete a worksheet to categorise different types of materials.	**Form** **Method** **Tool**	Research Educator Poster presentation (rubric)
LO 2: Knowledge and understanding **AS 1: Processing**	**Activity 2: Forces that act on material** Teacher explains and demonstrates by means of sketches the different forces that affect the suitability of materials, e.g. compression, tension, torsion and shearing. The learners read the case study and answer the questions based on it.	**Form** **Method** **Tool**	Case Study Educator Rubric
	Activity 3: Adapting material to withstand forces Teacher demonstrates the different ways of adapting (change) materials so that they can resist forces. Learners work in pairs and perform practical tasks how to adapt material to resist forces.	**Form** **Method** **Tool**	Practical assignment Educator Rubric

Selected LO's and AS's	Teaching and Learning Activities	Details of Assessment Forms, Methods and Tools	
LO 3: Technology, Society and Environment **AS 1: Indigenous Technology and Culture** **AS 2: Impact of Technology**	**Activity 4: Packaging and types of plastics** The teacher discuss with learners types of packaging, properties of packaging and types of plastics. Learners are divided into 7 groups and each group selects a particular plastic code. The learners (each group) collect as many products related to the specific codes and prepare an oral presentation with references to the properties and uses of that specific plastic chosen.	**Form** **Method** **Tool**	Research Educator Work sheet Rubric
	Activity 5: Negative and positive impact of technological products Teacher briefly explains the process of identifying the negative and positive impact of technological products on our everyday lives. Learners make a list of the advantages and disadvantages of plastic packaging and investigate the properties of the packaging of the various products listed in the table. Learners are also given a list of items and the task to decide what kind of packaging would be most suitable for each of the items.	**Form** **Method** **Tool**	Case Study/Research Educator Questions and answers
	Activity 6: Project The learners are asked to read the case study again and are given the task of designing and making a product to solve the problem. The learners follow the design process and complete their Project Portfolio	**Form** **Method** **Tool**	Project Educator Rubric
Resources: Waste material, pictures, magazines, drawing instruments, tools, products			
Barriers to learning: Example: access to all the necessary resources; learners background knowledge; etc.			
Expanded opportunities and reflections: Refer to Teacher's Guide For The Development of Learning Programmes, page 45.			

STRUCTURES
(Building a Water Tower)
Grade 8

REPORT CARD

Surname and Name: **Grade:** _____

	Form of assessment	Activities	Maximum marks	Mark achieved
1.	Research	Activity 1 (Different types of material)		
2.	Case Study	Activity 2 (Forces that act on material)		
3.	Practical Assignment	Activity 3 (Adapting material to withstand forces)		
4.	Research	Activity 4 (Packaging and types of plastics)		
5.	Case Study/Research	Activity 5 (Negative and positive impact of technological products)		
6.	Project	Activity 6 (problem statement and design brief)		
		(design proposal and specifications)		
		(Initial idea generation)		
		(Development and planning)		
		(Making and evaluating)		
		TOTAL:		
		PERCENTAGE :		
		LEVEL:		