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BASIC 7

WEEKLY LESSON PLAN – WEEK 3

Strand:	Materials for Production		Sub-Strand:	Smart and Modern Materials	
Content Standard:	B7.2.3.1 Demonstrate understanding of the properties of smart and modern materials				
Indicator (s)	B7.2.3.1.1: Explore the general properties of smart and modern materials		Performance Indicator: : Learners can identify examples of smart and Modern Materials.		
Week Ending	21-04-2023				
Class	B.S.7	Class Size:		Duration:	
Subject	Career Technology				
Reference	Career Technology Curriculum, Teachers Resource Pack, Learners Resource Pack, Textbook.				
Teaching / Learning Resources	plastic, wood, metal, ceramics, glass and their composites.		Core Competencies:	• Critical Thinking and Problem Solving Communication and Collaboration.	
DAY/DATE	PHASE 1 : STARTER	PHASE 2: MAIN			PHASE 3: REFLECTION
MONDAY 17-04-2023	Show Learners video and Pictures displaying Smart and Modern Materials.	1. Learners brainstorm to identify examples of smart and modern materials. 2. Assist Learners to describe smart and modern materials. 3. Learners in small groups discuss the main factors that affect the properties of smart and modern materials. 4. Using a Power Point Presentation, explain 5 types of Smart materials. Examples of Smart and Modern Materials;  conductive polymers  colour changing liquid crystals  motion control gels. TYPES OF SMART MATERIALS • Piezoelectric materials. • Shape memory materials. • Chromoactive materials. • Magnetorheological materials. • Photoactive materials.			Reflect on the properties of Smart and Modern Materials. Exercise; 1. Explain Smart and Modern Materials. 2. state 4 examples. 3. Explain 3 types of Smart Materials.

		Smart and modern materials  Factors that affect the Properties of smart and modern materials; ✚ exposure to stimuli, such as electric ✚ magnetic fields, stress, moisture and temperature. ✚ Volume ✚ distribution of forces ✚ yield strength	
THURSDAY 20-04-2023	Review Learners knowledge on the previous lesson.	1. Discuss with Learners the effects of light on smart and modern materials and products. 2. Learners in small groups to discuss the effects of temperature on smart and modern materials and products and report to the class. 3. Assist Learners to explain how moisture affects products made from smart and modern materials and products Photo-chromic materials change reversibly colour with changes in light intensity. Usually, they are colourless in a dark place, and when sunlight or ultraviolet radiation is applied molecular structure of the material changes and it exhibits colour. When the relevant light source is removed the colour disappears Smart Materials <u>Smart materials react to their environment</u> • Smart materials change their properties in response to heat, light, or something else (depending on the material) • They often change back to their original state when the heat or light (or whatever else affects them) is taken away • Some smart materials can let you make totally new products	Summarize the lesson.

Name of Teacher:

School:

District: