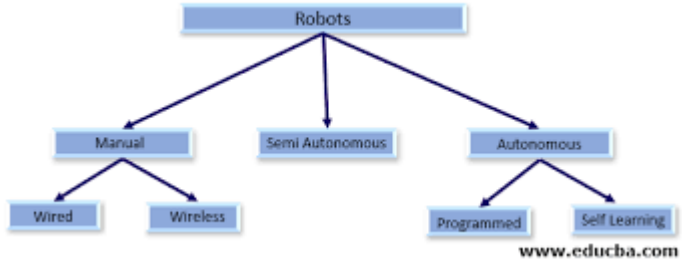
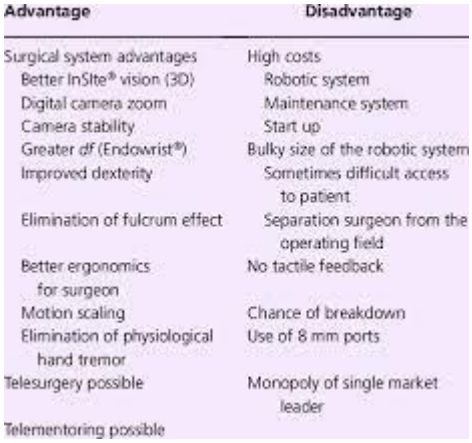
BASIC 7

WEEKLY LESSON PLAN – WEEK 12

Learning Indicator(s)	**B7.4.3.1**		
Performance Indicator	**B7.4.3.1.1 Review the various applications of robotic machines in society**		
Week Ending	03-12-2022		
FORM	B.S.7		
Subject	Computing		
Reference	Teacher Resource Pack, Learners Resource Pack, Curriculum		
Teaching / Learning Resources	Personal Computer, Smart Phone, Word Chart		
CORE COMPETENCIES	**Core Competencies:** CI, CC, CL, CI 6.1, CC 7.4		
DAYS	**PHASE 1 : STARTER**	**PHASE 2: MAIN**	**PHASE 3: REFECTION**
MONDAY **29-11-2022**	Learners brainstorm to explain the meaning of Robot and give examples of Robotic machines in the society.	1. Discuss with Learners applications and uses of robots in the society. 2. Assist Learners to classify Robots 3. Learners brainstorm to explain uses of Robots in manufacturing, health, education, assembling and packing, transport, surgery, laboratory research, mass production of consumer and industrial goods, taking pictures. **Robotic Applications;** 1. Collaborative Robots. These collaborative robots are built to work together with other robots, on enormous assembly lines. ... 2. Robotic Painting. ... 3. Robotic Welding. ... 4. Robotic Assembly. ... 5. Material Removal. ... 6. Part Transfer and Machine Tending. **Types of Robots;**	**Core Competencies;** 1. Recognition of societal issues emanating from the use of digital technologies 2. Explain ideas in a clear order with relevant detail, using correct construction and structure of speech.

		❖ **autonomous mobile robots (AMRs),** ❖ **automated guided vehicles (AGVs),** ❖ **robotic arms,** ❖ **cobots,** ❖ **humanoid robots**  	
THURSDAY **02-12-2022**	Review Learners knowledge on the previous lesson.	1. Discuss the meanings and uses of the types of Robots. 2. Assist Learners to identify prospects and challenges of using robots in various operations. **Challenges of Using Robots;** • Manufacturing procedures. • Facilitating human-robot collaboration. • Creating better power sources. • Mapping environments. • Minimizing privacy and security risks. • Developing reliable artificial intelligence. • Building multi-functional robots. 	**Core Competencies;** 3. Recognition of societal issues emanating from the use of digital technologies 4. Explain ideas in a clear order with relevant detail, using correct construction and structure of speech.

Advantage	Disadvantage
Surgical system advantages	High costs
Better InSite® vision (3D)	Robotic system
Digital camera zoom	Maintenance system
Camera stability	Start up
Greater dF (Endowrist®)	Bulky size of the robotic system
Improved dexterity	Sometimes difficult access to patient
Elimination of fulcrum effect	Separation surgeon from the operating field
Better ergonomics for surgeon	No tactile feedback
Motion scaling	Chance of breakdown
Elimination of physiological hand tremor	Use of 8 mm ports
Telesurgery possible	Monopoly of single market leader
Telementoring possible	