

EaD Comprehensive Lesson Plans



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BASIC 8

WEEKLY LESSON PLAN – WEEK 8

Strand:	Computational Thinking	Sub-Strand:	Robotics		
Content Standard:	B8.4.3.1. Discuss Robot Intelligence Concepts				
Indicator (s)	B8.4.3.1.1 Describe the principles underlying the operation of the components of a robot (Controller Mechanical, Sensors)	Performance Indicator: Learners can identify advantages and disadvantages of robots.			
Week Ending	18-08-2023				
Class	B.S.8	Class Size:		Duration:	
Subject	Computing				
Reference	Computing Curriculum, BS7 Computing Textbook, Teachers Resource Pack, Learners Resource Pack				
Teaching / Learning Resources	Personal Computer, Poster, Charts, Video.	Core Competencies:		<ul style="list-style-type: none"> • Communication and Collaboration • Digital Literacy 	
DAY/DATE	PHASE 1 : STARTER	PHASE 2: MAIN			PHASE 3: REFLECTION
THURSDAY	Review Learners knowledge on the functions of the components of a robot.	<ol style="list-style-type: none"> 1. Discuss the uses of robots with the Learners. 2. Learners brainstorm to explain 5 advantages of robots. 3. Assist Learners to identify 4 disadvantages of robots. 4. Discuss with Learners about the fundamental challenges of all robotics. <p>Advantages of Robots;</p> <ol style="list-style-type: none"> i. Robots eliminate dangerous jobs for humans because they are capable of working in hazardous environments. ii. They can handle lifting heavy loads, toxic substances and repetitive tasks. This has helped companies to prevent many accidents, also saving time and money. iii. Robots can offer increased productivity, efficiency, quality, and consistency. iv. Robots can't get bored with their job. v. Until they switch off, they can repeat the same task continuously. 			<p>Through questions and answers, conclude the lesson.</p> <p>Exercise;</p> <ol style="list-style-type: none"> 1. State 5 advantages of robots. 2. Write 5 disadvantages of robots

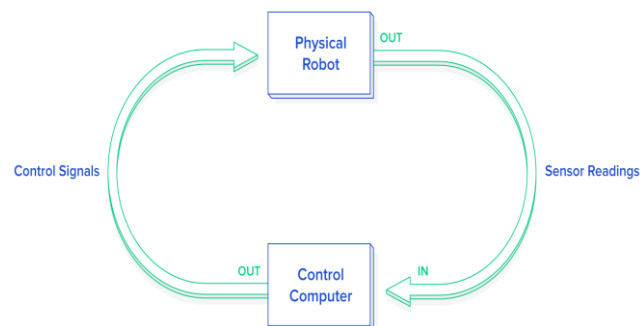
- vi. Robots can be very accurate than humans, that's why robots are used in the manufacturing of microelectronics.
- vii. Robots can work in unsafe environments, their human can't like chemical factories, radiation zone, etc.
- viii. They don't have physical or environmental requirements like human needs.

Disadvantages of Robots;

- Robots can create economic problems because they continuously replace humans.
- Robots can only do what they are told to do, meaning they can't do more than expected without any command (by the way, machine learning and Artificial Intelligence are working on it).
- Current robotics technology can't do any job without human command and can't compete with a human ability. to understand what they can see. Experts are working on developing a robot that can sense better.
- If we think about Robots with practical applications are expensive, and their maintenance is also.

Fundamental Challenges of all robotics;

- It is impossible to ever know the true state of the environment.
- Robot control software can only guess the state of the real world based on measurements returned by its sensors.
- It can only attempt to change the state of the real world through the generation of control signals



FRIDAY	Review Learners knowledge on the previous lesson.	<ol style="list-style-type: none"> 1. Learners brainstorm to describe how robots will change the world. 2. Discuss with Learners about the meaning of “Pick and Place robots”. 3. Assist Learners to identify the one who invented pick and place robots. 4. Show Learners video of how pick and place robot works. <p>How Robots will change the World;</p> <ul style="list-style-type: none"> ➤ Workers will need technological skills, if the human hasn’t any technical skills then he needs socio-emotional skills, particularly in those roles where robots are not good substitutes, such as caregiving and teaching. ➤ We may also see robots as a more integral part of our daily routine. In our homes, many simple tasks such as cooking and cleaning are totally automated. Robots have computer vision and natural language processing, that's why we can see machines can interact with the world more, like self-driving cars, digital assistance, and many hazard systems. ➤ Robotics may also change the shape of the future of the medical department. Surgical robots can perform extremely complex operations easily with perfection, and humans can’t in the future robots do all surgeries independently due to Artificial intelligence. ➤ Robots can adapt to their surroundings; robots have a learning process also so that’s why they can get a more diverse range of applications 	<p>Through questions and answers, conclude the lesson.</p> <p>Exercise;</p> <ol style="list-style-type: none"> 1. What is a Pick and Place Robot? 2. Who invented Pick and Place Robots 3. Describe how Pick and Place robots work.

Name of Teacher:

School:

District: