

THIRD TERM

WEEKLY LESSON NOTES – B8

WEEK 11

Week Ending: 08-09-2023	DAY:	Subject: Computing
Duration: 60mins		Strand: Computational Thinking
Class: B8	Class Size:	Sub Strand: Artificial Intelligence
Content Standard: B8.4.4.1 Discuss Artificial Intelligence Concepts	Indicator: B8.4.4.1.1 Discuss Artificial Neural Networks (ANN) and compare intelligence in humans, animals and machines	Lesson: 1 of 2
Performance Indicator: Learners can understand and compare intelligence in humans, animals, and machines, highlighting similarities and differences.		Core Competencies: CC8.2: CP6.1
Reference: Computing Curriculum Pg. 39		
Activities For Learning & Assessment		
Resources		Progression
<p>Starter (5mins)</p> <p>Revise with learners to review their understanding in the previous lesson.</p> <p>Share performance indicators and introduce the lesson.</p> <p>Main (35mins)</p> <p>Brainstorm learners to discuss on what intelligence is and its significance in various contexts.</p> <p>Ask learners to share their thoughts on how intelligence might differ between humans, animals, and machines.</p> <p>Divide the learners into small groups and assign each group one of the three categories: humans, animals, or machines.</p> <p>In their groups, learners research and list down the characteristics of intelligence exhibited by their assigned category.</p> <p>After research, each group presents their findings to the class, highlighting similarities and differences in intelligence across the three categories.</p> <p>Discuss as a class the limitations and capabilities of each intelligence type in processing information.</p> <p>Guide the discussion by asking questions such as: What are the strengths of human intelligence? What are the limitations of machine intelligence? How do animals process information differently from machines and humans?</p>		<p>Pictures and Charts</p> <p>Discussing Artificial Neural Networks (ANN) and compare intelligence in humans, animals and machines</p>

<p>Assessment</p> <ol style="list-style-type: none"> 1. What is intelligence? 2. How can we define intelligence in humans? 3. List one major similarity and one major difference between human and machine intelligence. 4. How does animal intelligence differ from human intelligence in terms of problem-solving? 5. Can machines ever truly possess emotions, or will they always mimic them? Explain your answer. <p>Reflection (10mins)</p> <p>Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.</p> <p>Take feedback from learners and summarize the lesson.</p>		
<p>Homework/Project Work/Community Engagement Suggestions</p>		
<ul style="list-style-type: none"> • What is a limitation of human intelligence when compared to machine intelligence? • In what scenario might an animal have a processing advantage over a machine or human? • How might understanding the intelligence of animals help in designing better AI systems? 		
<p>Cross-Curriculum Links/Cross-Cutting Issues</p>		
<p>None</p>		
<p>Potential Misconceptions/Student Learning Difficulties</p>		
<p>None</p>		

Week Ending: 08-09-2023	DAY:	Subject: Computing
Duration: 60mins		Strand: Computational Thinking
Class: B8	Class Size:	Sub Strand: Artificial Intelligence
Content Standard: B8.4.4.1 Discuss Artificial Intelligence Concepts	Indicator: B8.4.4.1.1 Discuss Artificial Neural Networks (ANN) and compare intelligence in humans, animals and machines	Lesson: 1 of 2
Performance Indicator: Learners can talk about strong and weak AI, and understand the basics of hologram science and its application in creating a 3D mixed reality intelligence.		Core Competencies: CC8.2: CP6.1
Reference: Computing Curriculum Pg. 39		
Activities For Learning & Assessment		
Starter (5mins) Revise with learners to review their understanding in the previous lesson. Share performance indicators and introduce the lesson. Main (35mins) Introduce the terms "strong AI" and "weak AI" and ask if anyone knows the difference. Explain the difference between strong AI (AGI) and weak AI (ANI). Strong AI possesses human-like general intelligence, while weak AI performs specific tasks without consciousness or understanding. Engage learners in a class debate: "Will we ever achieve strong AI?" Divide the class into two groups: one arguing for the possibility and one arguing against. Introduce the concept of holograms and their basic principles. Explain how mixed reality (MR) combines physical and digital elements to create immersive experiences. Discuss the potential application of holograms in creating 3D mixed reality intelligence, such as virtual assistants or interactive educational tools. Divide learners into small groups and provide them with a specific scenario (e.g., designing a holographic interactive learning tool). In their groups, learners brainstorm and discuss potential benefits and challenges of using holograms to enhance intelligence and learning.	Resources Pictures and Charts	Progression Discussing Artificial Neural Networks (ANN) and compare intelligence in humans, animals and machines
Assessment		

1. Define strong AI.
2. What is weak AI?
3. List a primary difference between strong AI and weak AI.
4. Why might some experts argue that strong AI is a distant or unreachable goal?
5. Do you believe that machines with strong AI would have rights similar to humans? Why or why not?

Reflection (10mins)

Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.

Take feedback from learners and summarize the lesson.

Homework/Project Work/Community Engagement Suggestions

- How does a hologram differ from a regular photograph?
- In what way does mixed reality combine physical and digital elements?
- How could holograms be used to enhance a classroom learning experience?

Cross-Curriculum Links/Cross-Cutting Issues

None

Potential Misconceptions/Student Learning Difficulties

None