

Faculty of Education – Early Childhood Education

ECE 3213

Implement scientific investigations which address commonly held misconceptions in scientific concepts held by ECE children.

Task 2: Implement scientific investigations in your class to enhance students' understanding and eliminate their misconception

- **CLO3:** Implement developmentally appropriate, play-based science activities which address commonly held misconceptions in young children.
- **Competency:** Planning for Science Teaching and Learning
- **Focus Area:** Focus area: Student-centered teaching strategies and techniques, use of appropriate learning technologies

Instructions:

Based on your observation:

- Identify the key scientific concepts of the lesson
- Identify the science domain for these concepts
- Identify one scientific concept and one related misconception then identify a constructivist strategy to teach it and to address the misconception
- Which materials do you need to apply while conducting this investigation in ECE class?
- Explain in details how to apply this investigation in your class
- Attach pictures of your investigation
- Reflect on this teaching experience

- Constructivist teaching and learning strategies in ECE
 - **Inquiry-based Learning (IBL):** *to answer a question*
 - **Project-based Learning (PBL):** *to produce a project*
 - **Problem-based Learning (PBL):** *to solve a problem*

TP School		MST Name	
Student		HCT ID	
Grade	<i>e.g. KG 1, Gr 1 etc</i>		

Science Lesson:	
Science Domain	
Key Scientific Concept of the Lesson	
Identified Misconceptions	<i>e.g. What is the inaccurate understanding of any of the concepts of the lesson</i>
Constructivist TA Strategy	<i>e.g. Inquiry-based Learning (IBL)</i>
Materials Used	
Nature of the Investigation	<i>e.g. Individual, Peer Work, Group</i>
Investigation	<p><i>Question:</i></p> <p><i>Activity:</i></p> <ul style="list-style-type: none"> - <i>Data Collection:</i> - <i>Data Analysis:</i> - <i>Conclusion:</i>
Reflection	<ul style="list-style-type: none"> - Was this investigation effective? Explain - Did this investigation reduce students' scientific misconception? Explain how - How can you make this investigation better?

Part 2: Reflection

Students' scientific misconceptions in ECE appear due to several inputs they receive or experience during early or later years from stories, pictures, videos and visual materials that have fictional representation of science related topics.

- **Observe and reflect on the following strategies applied to overcome ECE students' misconceptions**

1. Which strategies did you/ your MST applied in class to reduce students' misconceptions?
2. To what extent do you find it effective? Why?
3. Give examples/ scenarios from your class (One at least)

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|----------------------------------|--------------------------|
| ▪ Presenting actual models | <input type="checkbox"/> |
| ▪ Providing reflective questions | <input type="checkbox"/> |
| ▪ Watching videos | <input type="checkbox"/> |
| ▪ Doing experiments | <input type="checkbox"/> |
| ▪ Other (Specify) | <input type="checkbox"/> |

Reflection