# STEM Education and Development

### Week Three

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# Review from Previous Week

Group work/Individual work:

Go to chapter 8 and draw the diagrams of all the Perspectives of STEM Education in one page.

- Single-Disciplines
- STEM as Reference for Science and Math
- Separate Science and Incorporate Technology, Engineering or Math
- STEM Equals a Quartet of Separate
- Science and Math Connected Technology or Engineering
- Coordinate Across Discipline
- Combining Two or Three Disciplines
- Integrated Disciplines
- STEM as Transdisciplinary Course or Program



Multidisciplinary

Disciplinary



Students learn concepts and skills separately in each discipline. -

Students learn concepts and skills separately in each discipline, but in reference to a common theme.



Students learn concepts and skills from two or more disciplines that are tightly linked so as to deepen knowledge and skills. Transdisciplinary



By undertaking real-world problems or projects, students apply knowledge and skills from two or more disciplines and help to shape the learning experience.

| SL | Perspectives   | Figure | Characteristics |
|----|--|--------|-----------------|
| 1. | Single-Disciplines   |        |                 |
| 2. | STEM as Reference for Science and Math                           |        |                 |
| 3. | Separate Science and Incorporate Technology, Engineering or Math |        |                 |
| 4. | STEM Equals a Quartet of Separate                                |        |                 |
| 5. | Science and Math Connected Technology or Engineering             |        |                 |
| 6. | Coordinate Across Discipline                                     |        |                 |
| 7. | Combining Two or Three Disciplines                               |        |                 |
| 8. | Integrated Disciplines   |        |                 |
| 9. | STEM as Transdisciplinary Course or Program                      |        |                 |

## Homework

• Develop your STEM Lesson Plan based on one of the perspectives of STEM Education.