**Learning Standards and Indicators**

**The Department of Science Level of Students: M. 2**

**Subject Code: SC20203 Subject: Universal Science 3**

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| **Indicators** | **Key Word**  **(คำสำคัญ)**  **จากตัวชี้วัด** | **Learners’ Key Competencies - Activities** | **21st-Century Skill/**  **Local Wisdom/Thai Wisdom/**  **Sufficiency Economy Philosophy /School Focus** | **Desirables** |
| 1. Explain the term cell, tissue, organ and organ systems | Explain | - communication capability  - thinking capability  - problem solving capability  - capability in applying life skills and  - capability in technological application  - 5E Model  - CIPPA  - Mind Maps  - Group work | - Critical Thinking and Problem Solving  - Communications, Information, and Media Literacy,  - Computing and ICT Literacy,  - Creativity and Innovation, | 1. Honesty and integrity  2. Self-discipline  3. Avidity for learning  4.Dedication and commitment to work  5. Cherishing Thai-ness  6. Public-mindedness  7. Gentlemen of Assumption College |
| 1. Compare a cell to an organism | Compare |
| 1. Name the organs and explain the structures , functions and operations of digestive system, respiratory system, excretory system, circulatory system, reproductive systems of human including human nervous system. | Name  Explain |
| 1. Explain relationship between various human systems and apply the knowledge to use. | Explain  Apply |
| 1. Explain what a mixture is | Explain |
| 1. Explain the terms solute , solvent , solution and suspension | Explain |
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| 1. Explain the meaning and compare properties of solutions and suspension | Explain | - communication capability  - thinking capability  - problem solving capability  - capability in applying life skills and  - capability in technological application  - 5E Model  - CIPPA  - Mind Maps  - Group work | - Critical Thinking and Problem Solving  - Communications, Information, and Media Literacy,  - Computing and ICT Literacy,  - Creativity and Innovation, | 1. Honesty and integrity  2. Self-discipline  3. Avidity for learning  4.Dedication and commitment to work  5. Cherishing Thai-ness  6. Public-mindedness  7. Gentlemen of Assumption College |
| 1. Describe factors that affect the formation of a solution | Describe |
| 1. Differentiate between solutions and suspensions | Differentiate |
| 1. Describe different methods of separation of mixtures , such as evaporation ,crystallization ,refining and chromatography | Describe |