# TERM 1: WEEK 13 (27th April – 1st May) and TERM 2: WEEK 1 (18th – 22nd May)

# Strand 3: Organism Level Biology

## Sub-strand 3.1 Plant form and function

### Lesson Activity 3.1

**The specific learning outcomes (SLO) targeted in this activity are provided below:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Specific Learning Outcomes:** Students are able to | **Skill level** | **SLO code** | **Achieved**  **(Yes / No)** |
| Compare specific features of leaf structure including the organization of the vascular tissue (xylem and phloem) | 3 | Bio3.1.3.1 |  |
| Describe an named specific feature of the leaf structure | 2 | Bio3.1.2.1 |  |
| Name a specific feature in the structure of a leaf | 1 | Bio3.1.1.1 |  |
| Compare specific stem structure including the organization of the vascular tissue and pith | 3 | Bio3.1.3.2 |  |
| Describe a named specific feature of the stem structure | 2 | Bio3.1.2.2 |  |
| Name a specific feature in the structure of a stem | 1 | Bio3.1.1.2 |  |
| Relate these features of adaptation to their environment | 3 | Bio3.1.3.3 |  |
| Describe specific features of root structure including the vascular tissue (stele), pith, cortex and endodermis | 2 | Bio3.1.2.3 |  |
| Name a specific feature of the root structure | 1 | Bio3.1.1.3 |  |
| Explain the functions of leaf, stem, and root in various plant phyla | 3 | Bio3.1.3.4 |  |

**Instructions:**

1. Read Chapter 23 – Plant taxonomic groups, pages 224 – 229
2. Read Chapter 24 – Plant nutrition, pages 233 – 242
3. Read Chapter 25 – Transport of materials in plants, pages 243 – 254
4. If you have access to the internet, refer to Central School’s website: [www.centralschool.edu.vu](http://www.centralschool.edu.vu), Year 12 Biology folder Term 1 Week 12 – 13, to watch videos on plant transport and access other resources.
5. Answer the following questions.
6. A palisade layer is a specific feature of the leaf structure. Name another specific feature of the leaf structure.

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1. Describe the palisade cell layer of the leaf.

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1. Compare the xylem and phloem of the leaf.

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1. A dicotyledon stem contains xylem Name another part of the stem.

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1. Describe the xylem of the dicotyledon stem.

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1. Compare the vascular bundle of the dicotyledon stem and that of the monocotyledon stem.

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1. Explain the adaptive value of the vascular bundle of a dicotyledon stem to its environment.

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1. Name a specific feature of the root structure.

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1. Describe the following features of the dicotyledon roots.
2. xylem

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1. phloem

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1. endodermis

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1. cortex

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1. Describe the following features of the monocotyledon roots.
2. phloem

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1. xylem

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1. pith

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1. endodermis

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1. Explain the functions of leaf, stem, and root in dicotyledons and monocotyledons.

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