DISCRETE MATHEMATICS
Knowledge has Organizing Power

Theme 2
GRAPHS
From Point to Whole

LESSON 5
TREES
The Simplest Level of Life is Most Powerful

Wholeness of the Lesson

A tree is a very simple graph—it is connected but has no circuits. Trees have applications in communication networks, data structures, sorting, data compression, and routing algorithms.
Science and Technology of Consciousness: The simplest level of life is the most powerful. The Transcendental Meditation technique gives us access to the simplest level of our own awareness.

Main Points

1. A tree is a connected graph without any circuits. A tree has the minimum number of edges needed to connect all its vertices.
   Science and Technology of Consciousness: Practicing the Transcendental Meditation technique leads to efficiency in action: do less and accomplish more.[1]

2. A tree traversal represents a tree as a string of vertices that can easily be used by a computer. Different ways of traversing the tree determine different strings of vertices.
   Science and Technology of Consciousness: Knowledge is different in different states of consciousness. By transcending, we contact the field of pure knowledge and bring order to our lives.

3. Rooted trees can be used to represent arithmetic. Different ways of traversing the tree give rise to different arithmetic notations.
   Science and Technology of Consciousness: Knowledge is different in different states of consciousness, but all knowledge is unified in the state of Unity Consciousness.

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[1] *Biological Psychology* 61: 293–319, 2002.

UNITY CHART
Connecting the Parts of Knowledge
with the Wholeness of Knowledge
Trees

1. A tree is a very simple graph: it is connected and has no circuits.

2. A tree traversal gives a string of vertices that embodies the entire tree so that a computer can work with it.

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3. **Transcendental Consciousness** is a field of pure knowledge.

4. **Impulses within the transcendental field:** have infinite organizing power.

5. **Wholeness moving within itself:** In Unity Consciousness, we use the infinite organizing power of own Self to handle all possibilities in life.