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Wednesday-Reading /Writing workshop

1. Read The Soil Solution: is this solution the answer to a problem? What kind of solution are we talking about? What part of the soil is it and what is contained in it?
 - a. No.
 - b. A chemical solution; mixture of 2+ things.
 - c. The aqueous portion of soil that has dissolved matter from soil chemical and biochemical processes and from exchange with the hydrosphere & biosphere.
2. What does the soil solution do besides provide water for plant growth? It's the pathway for the exchange of plant nutrients between roots & solid soil.
3. Obtaining a soil solution is often difficult therefore the best way is to collect drainage water.
4. Read Adjustment of Soil Acidity: What kind of pH do most plants grow best in? If the soil is too acidic what do we do to the soil to reverse it? We do this by adding what compound? We add sulfur to do what to alkaline soils?
 - a. Plants grow best in soil with a pH near neutrality.
 - b. Liming the soil brings down its acidity.
 - c. Calcium carbonate
 - d. To acidify alkaline soils.
5. Read Macro-Nutrients in Soil: What is one of the most important functions of soil for plant growth? What is the difference between macro-nutrients and micro-nutrients? Which macronutrients are obtained from the atmosphere and not the soil? Which macro-nutrients are commonly added to the soil as fertilizers?
 - a. To provide essential nutrients
 - b. Macro-nutrients occur in substantial levels in plants while micro-nutrients occur in low levels.
 - c. Carbon, Hydrogen, Oxygen
 - d. Nitrogen, Phosphorus, Potassium
6. Why are calcium deficient soils uncommon? Acidic soils that get limed produce more than enough Ca for plants.
7. Read Micro-Nutrients in Soils: What are the six micro-nutrients? Boron, Chlorine, Copper, Iron, Manganese, Zinc, ~~Nitrogen~~ Molybdenum.
8. Micro-nutrients are only needed at low levels and therefore what can happen if there is too much? It becomes toxic at higher levels
9. Most of the micro-nutrients serve as components of essential enzymes.
10. From the very brief lesson describe an enzyme. Show a diagram.

