**Symphony of Soils P:2 December 5th is World Soils Day**

Put your answers on the back or a separate sheet of paper. Fill out the tables and fill in the blanks on this sheet of paper.

1. What did the UN General Assembly declare 2015 to be?
2. Where does soil begin?
3. The mineral material that comes from the glaciers does not have any organic matter. Does this make this a glacier soil? Why or why not?
4. What are two nutrients that are provided by the coral that comes up on the beaches?
5. What is found on beaches that is one of the three elements of soil?
6. What is loess?
7. What is alluvium?
8. What percentage of soil was developed by transport?
9. What is the most productive soil? Why?
10. What is a mollisol? How much mollisol does the U.S. have?
11. What are the following soils or where are they found?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Soil Type | Entisol | Inceptisol | Utisol | Oxisol | Andisol | Histosol |
| Where or what is it? |  |  |  |  |  |  |
| Soil Type | Vertisol | Spodosol | Gelisol | Aridisol | Mollisol |  |
| Where or what is it? |  |  |  |  |  |  |

1. What does one soil scientist compare soil microbiology to?
2. What percentage of organisms have not even been identified yet?
3. What is the process of photosynthesis?
4. What are exudates?
5. How many bacteria are in a teaspoon of soil surrounding the roots?
6. How is a plant putting out cakes and cookies to feed bacteria and fungi that will ultimately protect roots from disease causing organisms?
7. What are three nutrients that are released by a protozoan when it eats a bacterium?
8. What is the poop loop?
9. What is the nutrient that is the limiting factor for plant growth?
10. What role do bombs have in plant fertilization?
11. Who were the poster children for the Green Revolution?
12. What are the lungs of the soil?
13. What are two issues associated with plowing?
14. How much of the world’s soil has been lost?
15. What do earthworms do for the soil?
16. What nutrient is key for life in the soil?
17. What are soils starving for?
18. 70% of all water used is for what purpose?
19. What is salinization of soil?
20. Fill out this water runoff chart:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Soil type | Conventional Soil | Organic Soil | Organic soil and compost | Organic soil, compost and mulch |
| Run off description (goes through tube) |  |  |  |  |
| Run through description (on bottom of bottle) |  |  |  |  |

1. What is the coolest beetle on the planet? What does it do? (P.S. This is a sign of fertility and is a great way to get pregnant. Do NOT wear any dung beetle jewelry or clothing until you are married!)
2. Cover crops add \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the soil. The cover crop is beneficial because it releases the nutrients slowly.
3. Excess nitrogen is a problem to water systems because:
4. Honoring the law of return, how long will it take to rekindle life in the soil (using cover crops and compost)?
5. How many pounds of pesticides are used annually?
6. “Everything we are is made of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.”
7. How do restaurants and farmers have a relationship?
8. What is Blue Hill Restaurant?
9. How is a recipe for compost like a recipe for food?
10. It took 125 years to use the first trillion barrels of oil, it will take \_\_\_\_\_\_\_\_\_\_\_ years to use the next trillion.
11. What will happen when there is not oil, coal or natural gas to agriculture?
12. What production is the primary cause of the dead zone in the Gulf of Mexico?
13. It takes 1,700 gallons of one to produce \_\_\_\_\_\_ gallon of ethanol.
14. “Trade a system that mines oil for a system that mines \_\_\_\_\_\_\_\_\_\_\_\_.”
15. What changes must be made to feed 6.5 billion people?
16. There would be several soil solutions made if we could get the “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_back in the soil.”
17. What did the city of Burlington, Vermont do to help the soils of their city?
18. “Fertility is the power of the soil to keep producing.” What does this mean?
19. What does the Biblical story of Adam and Eve have to do with soil?