

# 2022 MN State Envirothon

## Soils Study Guide Soils



### **Station Learning Goals**

1. Learn the basics of soil formation and composition
2. Learn how to properly identify soil texture, structure, and color
3. Learn the basics of soil chemistry
4. Learn the basics of soil horizons
5. Learn how soils function in our ecosystem
6. Learn the principles of soil health
7. Learn how soil properties affect land use and management
8. Learn to use Web Soil Survey
9. Learn how to apply soil science to the current issue scenario – Waste to Resources

### **Study Guide List** - This is soils, you must dig a little to learn!

#### **Website resources:**

- Soil Science Society of America – [Soil Basics](#)
- Soil Science Society of America – [Soils Overview](#)
- U of M Extension – [5 Factors of Soil Formation](#)
- EPA - [Soil Texture and Structure](#)
- Soil Science Society of America – [Soil Chemistry](#)
- Soil Science Society of America – [Soil and the Environment](#)
- Minnesota - [Principles for High Functioning Soils](#)
- NRCS - [Soil Health Key Points](#)
- Menoken Farm - [5 Soil Health Principles](#)
- U of M Extension – [Soil Biology](#)
- NRCS - [From the Surface Down](#)
- USDA - [Web Soil Survey](#)
- Soil Science Society of America – [Minnesota State Soil](#)

#### **YouTube Resources:**

- [Soil and Soil Dynamics](#) - (9 minutes)
- [Soils in Minnesota and the USA](#) – Soils with Dr. Vern Cardwell (8 minutes)
- [How to Identify Soil Color Using the Munsell Soil Color Book](#) - (6 minutes)
- [Soil Basics: Texture](#) - (4 minutes)
- [How to differentiate and identify Soil Horizons in the Field](#) - (12 minutes)
- [Water Movement in Soil](#) - (3 minutes)
- [Soil Health Principles](#) – Ray Archuleta (24 minutes)