Sampling Soil

Topic: Mining and Rehabilitation

You will need

- Plastic tube (PVC pipe ~2.5cm diameter)
- Jar with similar diameter or white paper
- Paper, pencils.

Background Information

In Western Australia bauxite occurs at a depth of approximately 50cm consisting of the caprock layer and friable bauxite layer (loose gritty layer beneath the hard caprock) to an average depth of 4-8m. Above the caprock is the soil layer which consists of overburden and topsoil.

What you need to do

- Select an area of soft soil in a garden bed (somewhere where nobody will trip)
- Insert the pipe into the ground approximately 40cm, cover the top of the pipe with your hand and pull from ground being careful not to allow soil to spill from the pipe
- If using paper carefully empty the soil in a line on the paper
- If using a jar empty into the jar without mixing layers
- Draw the soil sample using different colours for the different layers
- If there is no colour difference, check the sample to see if there are any other differences at different depths.

Extension/Alternatives

- Create a soil profile from the samples that have been taken.
- Are there any observable differences between the top of the sample and the bottom?
- Compare the different samples that have been collected.

Final question

If there are apparent differences, brainstorm the causes.

Western Australia Curriculum Links

Society and Environment: Place and Space, Resources, Active Citizenship - Ecological Sustainability
Science: Earth and Beyond, Natural and Processed Materials

Values

Environmental Responsibility