



A car runs on a road that divides desert and former desert that has undergone reforestation efforts. How is this possible?





- What do you need for plants to grow?
- How did scientists choose which plants to use?
- How long does reforestation take?
- What effect do you think having vegetation has on the area?

## Soil is crucial!

Although there are many factors that help plant growth in an area, one of the main things you need to consider is your soil. Soil provides nutrients to the plants and helps root formation keep plants in place. Water is necessary for growth too but soil helps control moisture to help plants absorb it over time.









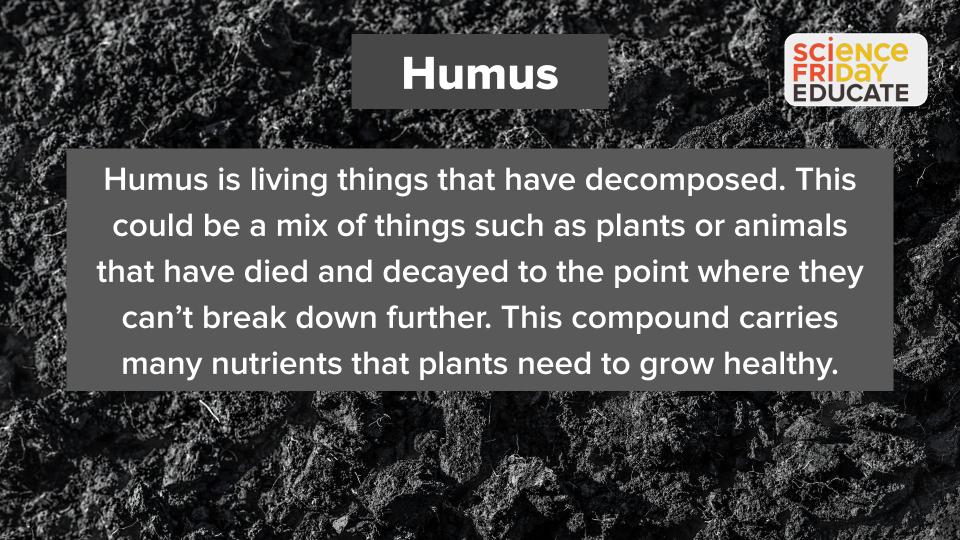
Soils you buy at the store are usually made up of different percentages of these materials based on the needs of the plants they are made for.

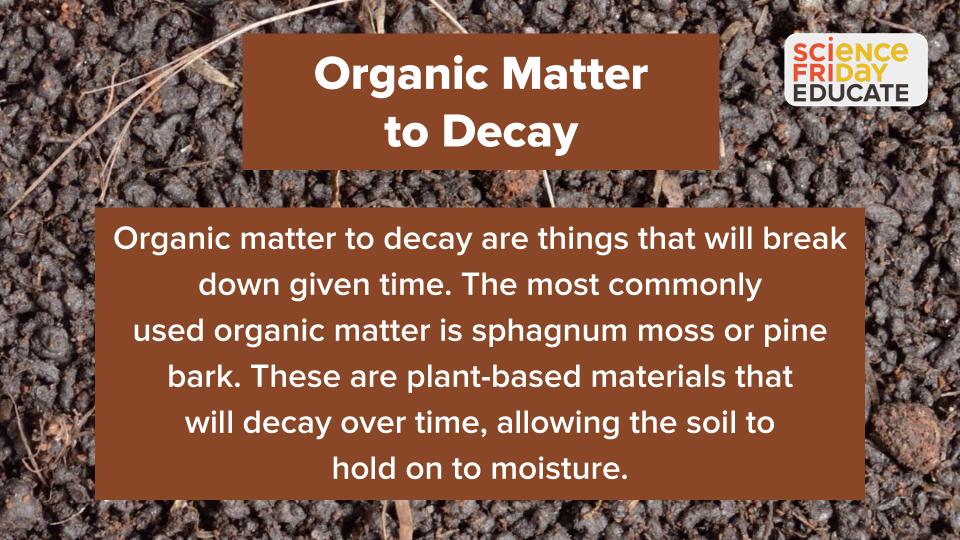


## Sand



Sand is used to promote drainage and aeration, allowing water and air to flow through the soil. Depending on the coarseness of the sand, it will allow more or less water and air to pass through it. Sand also helps soften the soil.







SCIENCE FRIDAY EDUCATE

Perlite and/or vermiculite are used to improve drainage in soil. This allows excess water to be removed from the soil and prevents root rot. Perlite is puffed-up pieces of volcanic glass, which allows space for water to flow. Vermiculite is an expanded mineral that is like small rocks, which allow less water to flow through. Perlite and vermiculite stop soil from compacting and becoming a solid mass.

## For each sample, think about the following questions.



- What color is the soil? Is it light or dark? Why do you think it is this color?
- Does the soil seem sandy? Is the soil very solid or soft?

- Are there pieces in the soil? What are the pieces made up of?
- If you put water in the soil, do you think it would absorb the water or would it flow through the soil easily?