USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Web Soil Survey Crossword Puzzle

Soil scientists collect data about the physical, chemical, and biological composition of soil out in the field and with digital and satellite imagery. This helps them map and classify soils. They also make interpretations using the collected data, which involves the evaluation and assessment of soil suitability for different kinds of land use or management. Landowners use soil data and interpretations to effectively manage their property and identify issues, such as the potential for erosion.

The Natural Resources Conservation Service (NRCS), an agency of the United States Department of Agriculture (USDA), provides access to soil-related data and interpretations across America through Web Soil Survey (**https://websoilsurvey.nrcs.usda.gov/**).

On side 2 of this flyer, use the clues and the word bank to fill in the crossword puzzle describing the different data and interpretations that can be explored on Web Soil Survey. *Leave out the spaces when filling in the terms.*

Answer key posted on the 2023 ESW Website:
www.earthsciweek.org/geoscience-innovating

EXTENSION

Go to Web Soil Survey (**https://websoilsurvey.nrcs.usda.gov/**) and create a soil map of an area near you. Explore the data and interpretations in the crossword.

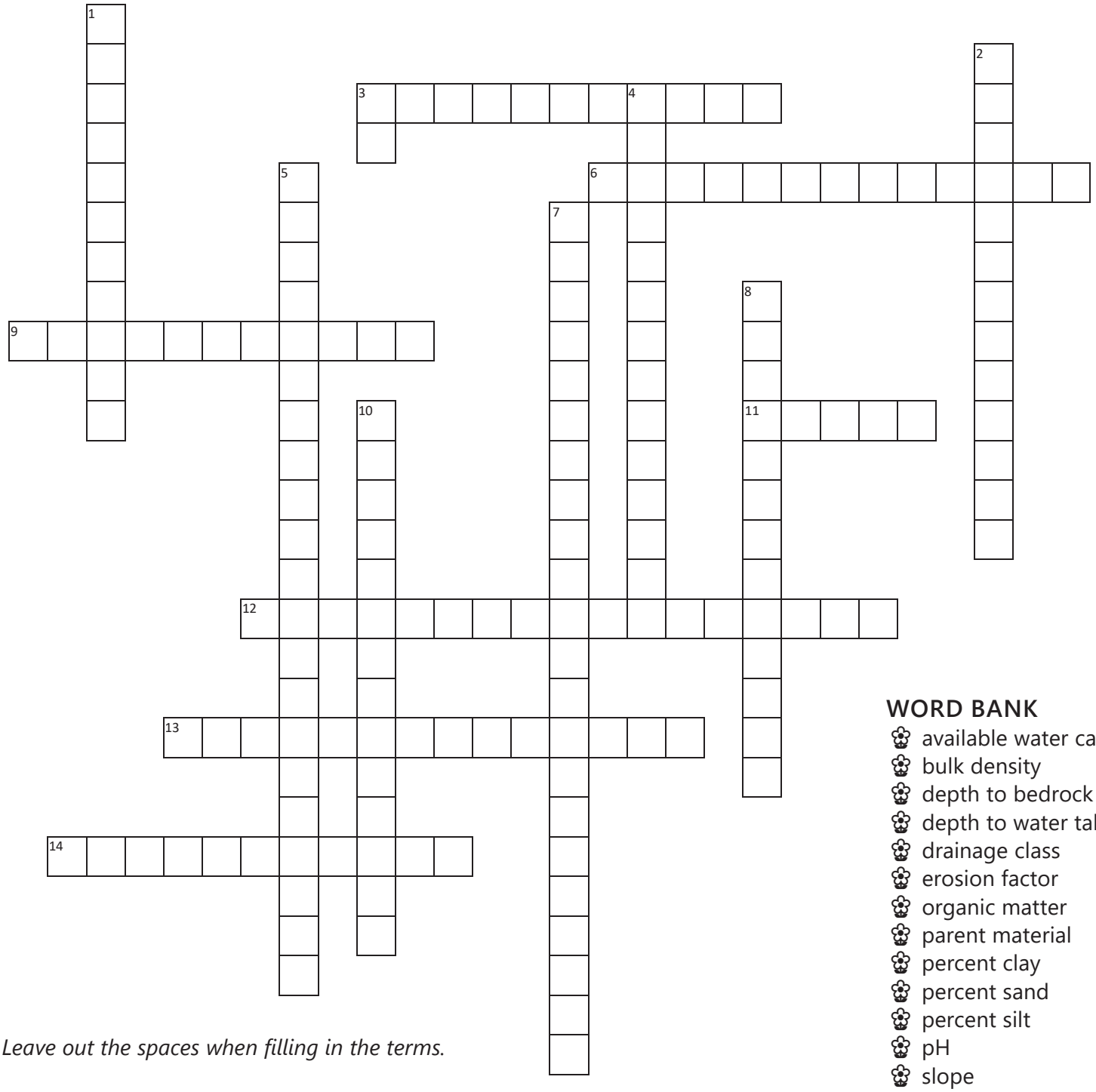
NGSS connections

DCI: Earth's Systems, Earth and Human Activity
SEP: Analyzing and Interpreting Data, Engaging in Argument from Evidence
CCC: Stability and Change, Structure and Function

SDG connections

2: Zero Hunger
9: Industry, Innovation, and Infrastructure
11: Sustainable Cities and Communities

Credit: Pencil icon: The Noun Project



Leave out the spaces when filling in the terms.

WORD BANK

- available water capacity
- bulk density
- depth to bedrock
- depth to water table
- drainage class
- erosion factor
- organic matter
- parent material
- percent clay
- percent sand
- percent silt
- pH
- slope
- soil slippage potential
- surface texture

ACROSS

3. The estimated content of mineral particles that are 0.05 mm to 2 mm in diameter.
6. The frequency and duration of wet periods.
9. The oven dry weight of soil, which helps indicate the pore space available for water and roots.
11. The difference in elevation between two points.
12. Distance to a saturated zone in the soil.
13. A representative distance to a continuous and water restrictive layer of rock.
14. The estimated content of mineral particles that are 0.002 mm to 0.05 mm in diameter.

DOWN

1. The estimated content of mineral particles that are less than 0.002 mm in diameter.
2. Plant and animal residue in the soil at various stages of decomposition.
3. A measure of acidity or alkalinity.
4. The percentages of sand, silt, and clay at the soil surface.
5. The potential hazard that a mass of soil will slip.
7. Quantity of water that is available for plant uptake.
8. Indicates the susceptibility of soil loss by water or wind.
10. The general physical, chemical, and mineralogical composition of material in which the soil forms.