



THEODORE ROOSEVELT

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Hands-On History Activity

READ THE ROCKS: BADLANDS FIELD SHEET

Hands-On History Activity

Read the
ROCK LAYERS
of the
**NORTH DAKOTA
BADLANDS**
a field sheet

Every butte in the North Dakota Badlands is a stack of rock layers, like the pages of a book. The oldest pages are at the bottom. They formed about 60 million years ago, when rivers from the young Rocky Mountains spread sand and mud across a low, swampy land full of trees. Much later, the Little Missouri River cut down through the layers and carved the Badlands. Roosevelt rode past these same bands of color when he ranched here in the 1880s.

Your task is to read the rocks like a geologist.

Use the layer cake on the next page to name the bands you see in the buttes. Then find all five things on the checklist and check each one off when you spot it.

THE LAYER CAKE

Youngest on top

Upland gravel:
old river pebbles

Sentinel Butte layers:
gray-brown sand, clay
and thin coal

Blue-gray clay made
from volcanic ash

Black lignite coal

Red clinker: clay
baked by burning coal

Bullion Creek layers:
yellow-tan, about 60
million years old

Oldest on bottom

Not every butte shows every
layer. Match the colors you
see.

Supplies: a pencil and this
sheet. Binoculars help.

On a phone, open
geology.labs.trlibrary.com and
tap Use my location.



FIND THESE FIVE THINGS

- ☐ A red clinker cap protecting the top of a butte
- ☐ A black stripe of lignite coal in a cliff
- ☐ A petrified stump made of stone (South Unit, including around Painted Canyon)
- ☐ A round "cannonball" concretion (North Unit, Cannonball Concretions Pullout)
- ☐ Rounded river pebbles sitting high above today's river

LOOK, DON'T TAKE



Leave it here. Collecting rocks, fossils or petrified wood is against the law in national parks. Take a photo or make a sketch instead, so the next explorer can find it too.



Stay safe. Stay on trails and off steep slopes. Blue-gray clay turns slick after rain.