



Building Mars

A COMMUNITY-BUILT LEGOSCAPE · EAPS · FALL 2026

PHASE 1
TERRAIN

PHASE 2
GEOLOGY

Instruction Sheet - Phase 2

Each square on the finished terrain takes one coloured plate on top, showing what the ground there is made of and roughly when it formed. The ten units are a simplified version of the USGS geological map of Mars^[1], reduced from over a thousand mapped polygons. Follow your sheet closely, and leave what other people have built as you found it.

HOW IT WORKS

1

Find your Mapping Sheet

Take the Phase 2 Mapping Sheet for a baseplate whose terrain is already finished. It covers a 16 by 16 patch of the board, and the letters and numbers along its edges match the ones printed on the Baseplate Template underneath.

2

Read a square

Every square carries a number, and in Phase 2 that number is the geological unit, which is what the ground at that spot on Mars is made of (see the key below).

3

Add one plate on top

Take a plate of that unit from the bins and lay it flat on top of the finished stack. **Go by the number and not by the colour (see the key below).** Printer ink cannot match the plastic, and four of the ten units are shades of blue that sit next to each other around both poles.

4

What not to touch

A **black** square is space, not ground, so leave it empty. Leave the grey stacks underneath alone, and if a square already carries a coloured plate, leave it as it is.

5

When a baseplate is finished

If there is nothing left to add, put a **Mission Accomplished** card on top of it and return the Mapping Sheet to the folder, so nobody hunts for work that is already done.

THE KEY



1 Noachian Highland

Medium Nougat
1,714 plates in the model



2 Hesperian Highland

Olive Green
44 plates in the model



3 Transition

Dark Tan
296 plates in the model



4 Lowlands

Blue
499 plates in the model



5 Impact Basin

Dark Red
141 plates in the model



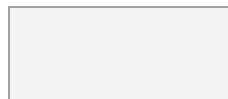
6 Volcanic

Warm Tan
811 plates in the model



7 North Polar Deposits

Sand Blue
24 plates in the model



8 North Polar Cap

White
15 plates in the model



9 South Polar Deposits

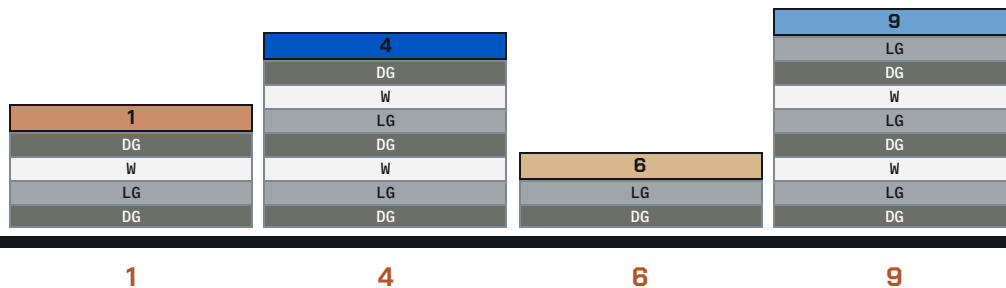
Medium Blue
80 plates in the model



10 South Polar Cap

Medium Azure
4 plates in the model

WHAT A FINISHED SQUARE LOOKS LIKE



The grey stack underneath is the elevation, already built in Phase 1. One coloured plate closes it off, and the number under each stack is the unit that plate belongs to.

DATA SOURCES

[1] Tanaka, K. L. et al. (2014) Geologic map of Mars. *U.S. Geological Survey Scientific Investigations Map* 3292.

QUESTIONS OR COMMENTS?

Gaia Stucky de Quay
gaias@mit.edu

SUPPORTED BY

