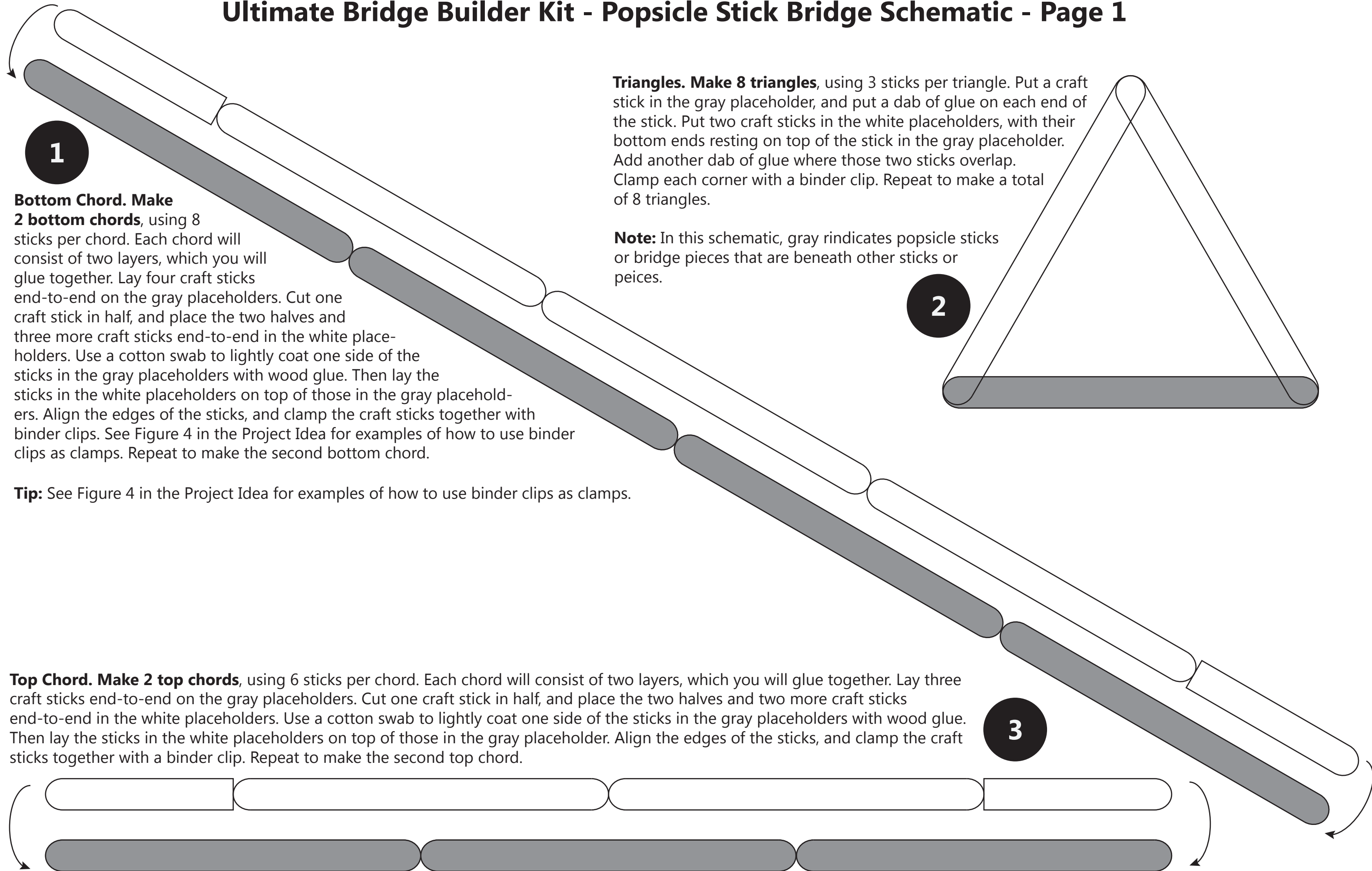


Ultimate Bridge Builder Kit - Popsicle Stick Bridge Schematic - Page 1



1

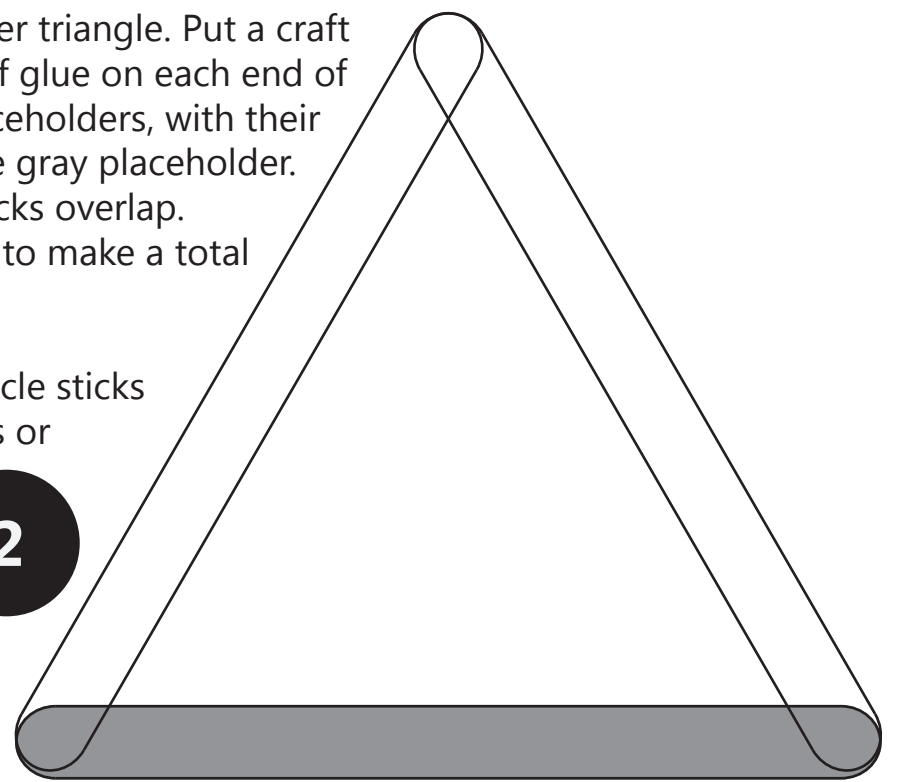
Bottom Chord. Make 2 bottom chords, using 8 sticks per chord. Each chord will consist of two layers, which you will glue together. Lay four craft sticks end-to-end on the gray placeholders. Cut one craft stick in half, and place the two halves and three more craft sticks end-to-end in the white placeholders. Use a cotton swab to lightly coat one side of the sticks in the gray placeholders with wood glue. Then lay the sticks in the white placeholders on top of those in the gray placeholders. Align the edges of the sticks, and clamp the craft sticks together with binder clips. See Figure 4 in the Project Idea for examples of how to use binder clips as clamps. Repeat to make the second bottom chord.

Tip: See Figure 4 in the Project Idea for examples of how to use binder clips as clamps.

Triangles. Make 8 triangles, using 3 sticks per triangle. Put a craft stick in the gray placeholder, and put a dab of glue on each end of the stick. Put two craft sticks in the white placeholders, with their bottom ends resting on top of the stick in the gray placeholder. Add another dab of glue where those two sticks overlap. Clamp each corner with a binder clip. Repeat to make a total of 8 triangles.

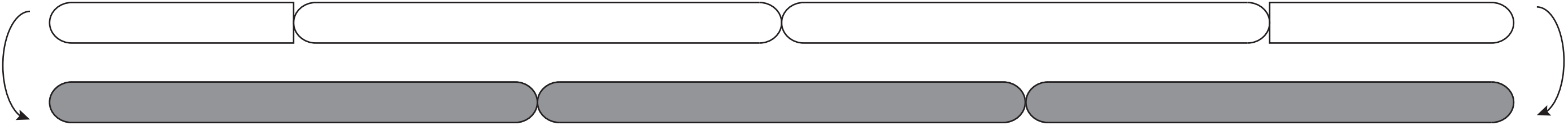
Note: In this schematic, gray indicates popsicle sticks or bridge pieces that are beneath other sticks or pieces.

2



3

Top Chord. Make 2 top chords, using 6 sticks per chord. Each chord will consist of two layers, which you will glue together. Lay three craft sticks end-to-end on the gray placeholders. Cut one craft stick in half, and place the two halves and two more craft sticks end-to-end in the white placeholders. Use a cotton swab to lightly coat one side of the sticks in the gray placeholders with wood glue. Then lay the sticks in the white placeholders on top of those in the gray placeholder. Align the edges of the sticks, and clamp the craft sticks together with a binder clip. Repeat to make the second top chord.



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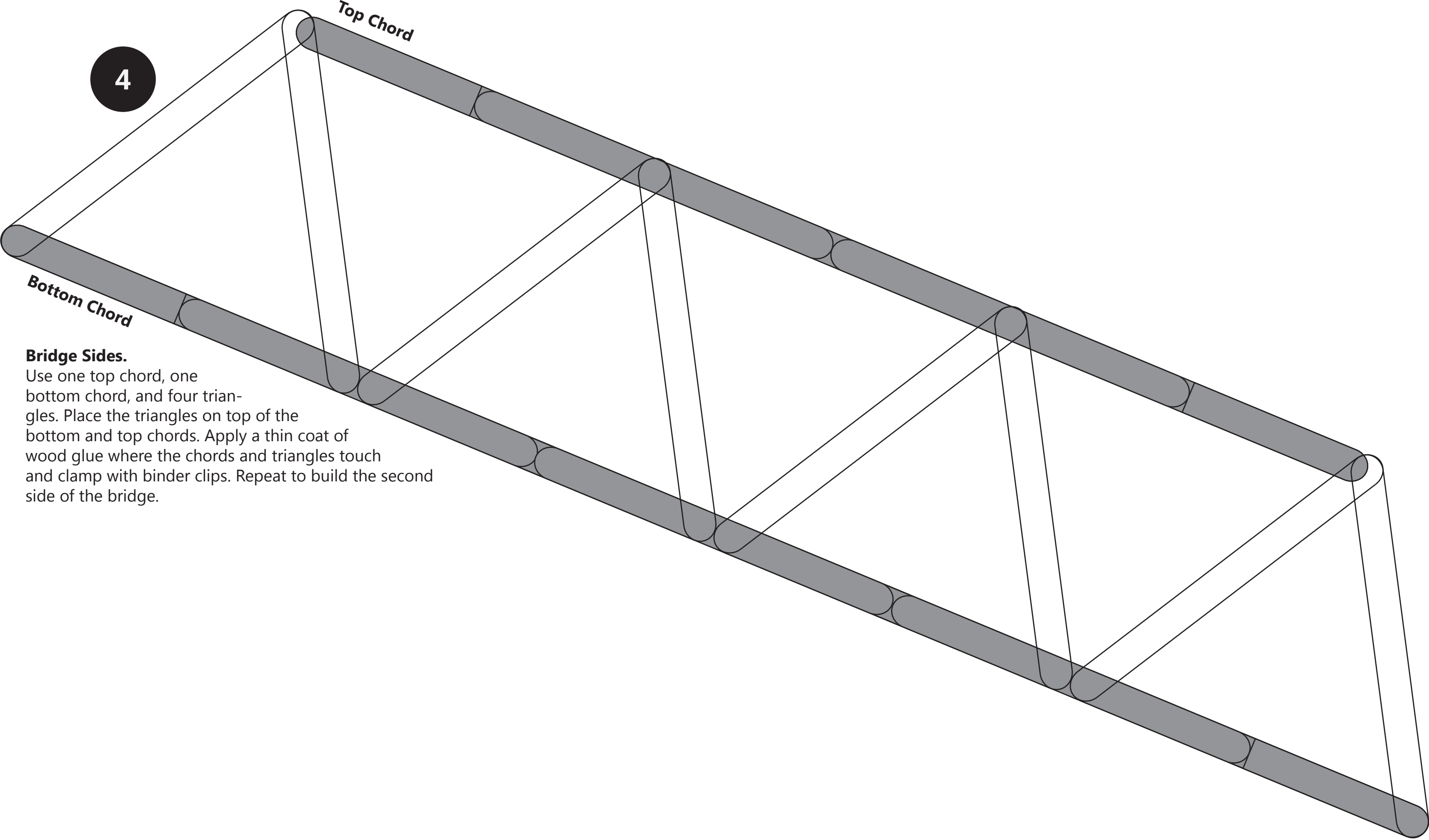
4

Top Chord

Bottom Chord

Bridge Sides.

Use one top chord, one bottom chord, and four triangles. Place the triangles on top of the bottom and top chords. Apply a thin coat of wood glue where the chords and triangles touch and clamp with binder clips. Repeat to build the second side of the bridge.



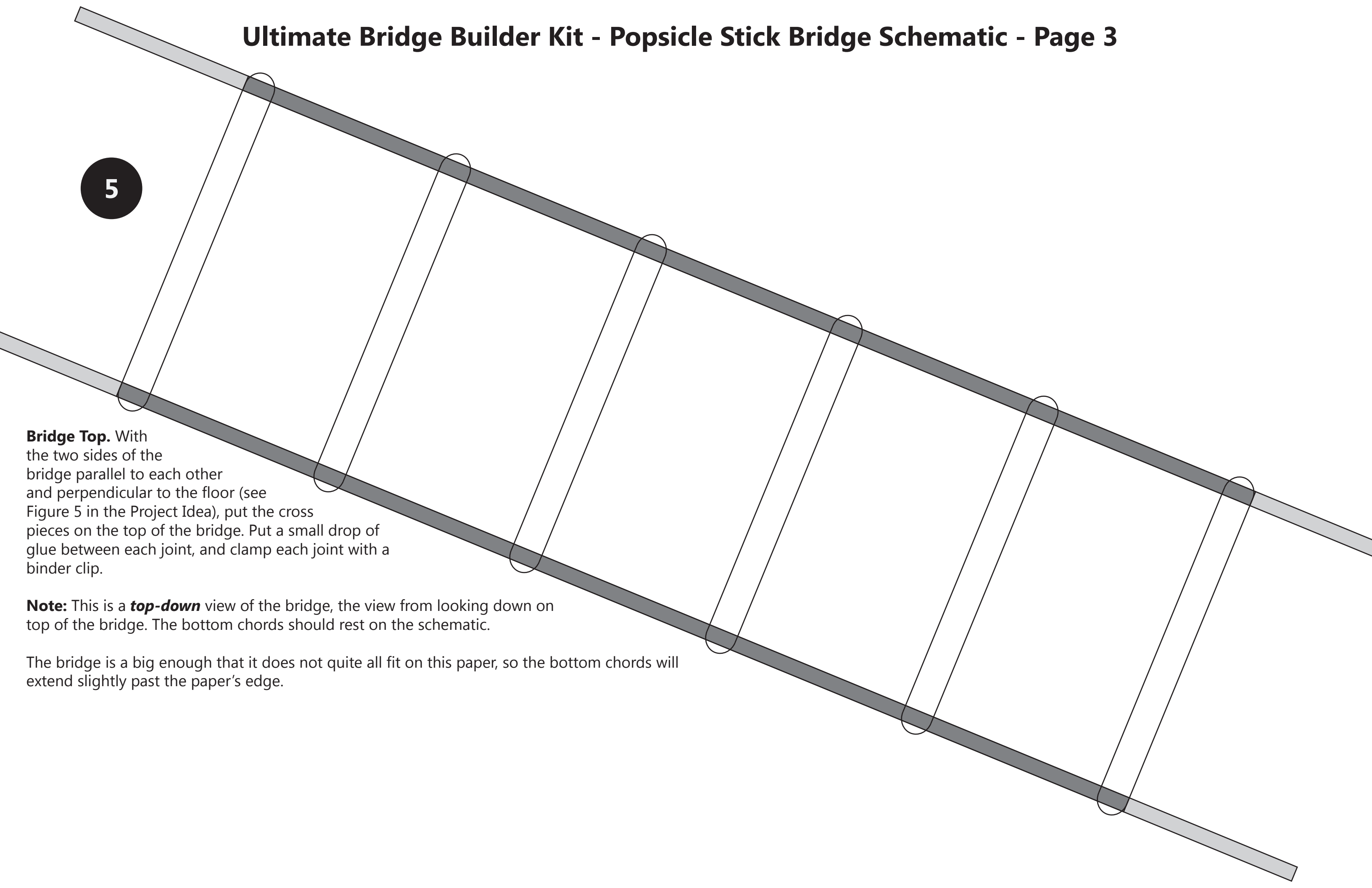
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5

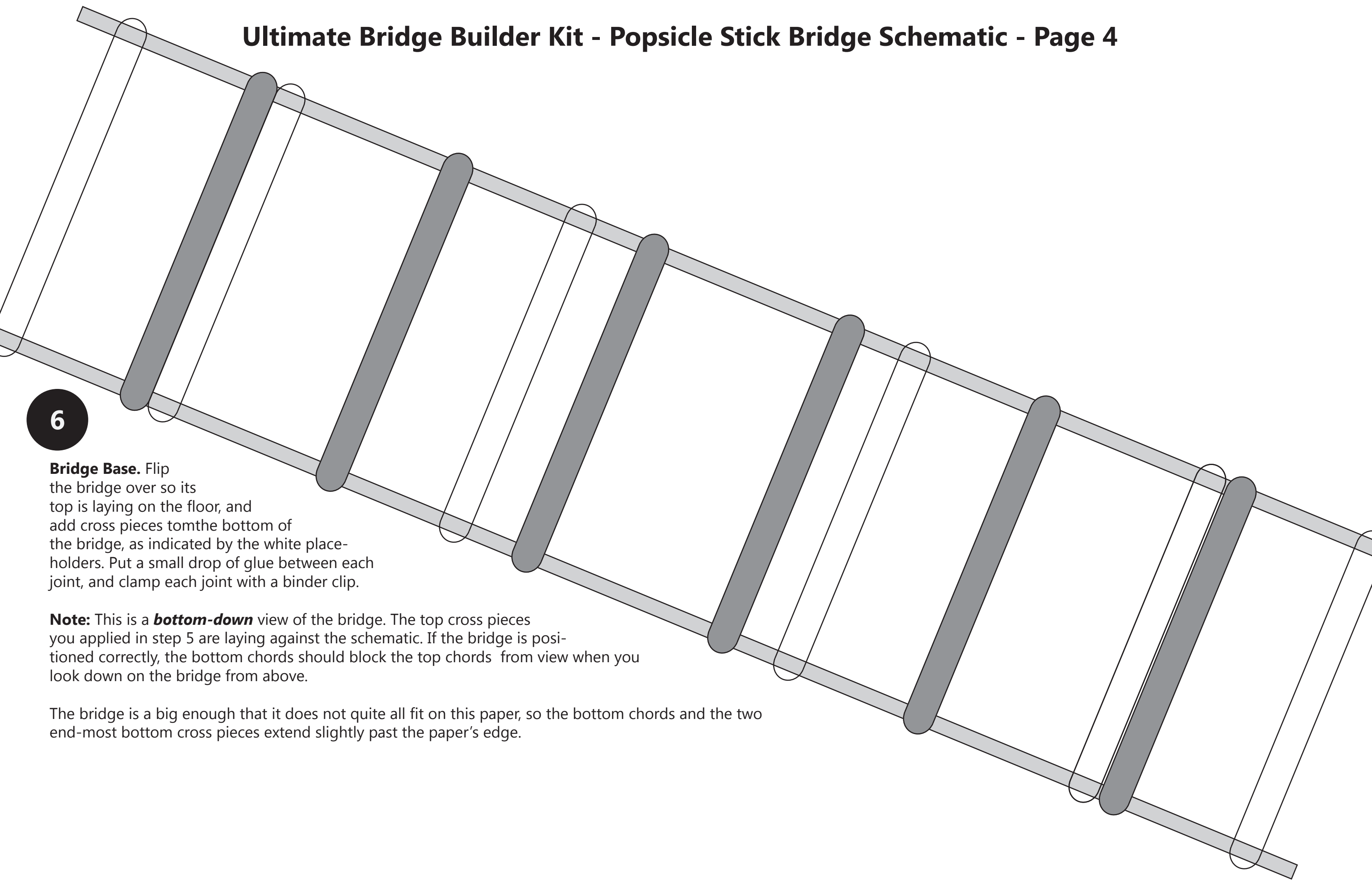
Bridge Top. With the two sides of the bridge parallel to each other and perpendicular to the floor (see Figure 5 in the Project Idea), put the cross pieces on the top of the bridge. Put a small drop of glue between each joint, and clamp each joint with a binder clip.

Note: This is a **top-down** view of the bridge, the view from looking down on top of the bridge. The bottom chords should rest on the schematic.

The bridge is a big enough that it does not quite all fit on this paper, so the bottom chords will extend slightly past the paper's edge.



Ultimate Bridge Builder Kit - Popsicle Stick Bridge Schematic - Page 4



6

Bridge Base. Flip the bridge over so its top is laying on the floor, and add cross pieces to the bottom of the bridge, as indicated by the white place-holders. Put a small drop of glue between each joint, and clamp each joint with a binder clip.

Note: This is a **bottom-down** view of the bridge. The top cross pieces you applied in step 5 are laying against the schematic. If the bridge is positioned correctly, the bottom chords should block the top chords from view when you look down on the bridge from above.

The bridge is a big enough that it does not quite all fit on this paper, so the bottom chords and the two end-most bottom cross pieces extend slightly past the paper's edge.