

SUPPLEMENTARY MATERIALS

for

“Butterfly hunt: the role of density dependence in Batesian and Müllerian mimicry”

by

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On the following pages are the butterflies that can be printed and then cut out and used for the butterfly hunt outlined in this case study. To limit the time required to prepare the activity in advance, we recommend using a paper cutter to cut the butterfly pages into strips so each butterfly is on a square piece of paper, and not trying to cut each butterfly out along its outline. The butterflies represent the 4 different types of butterflies used in the activity. 1) Regular butterflies are harmless butterflies with no warning signals; they are used in the activity to increase the overall number of butterflies per patch and also to decrease the chance of students getting more than 3 noxious butterflies and thus being excluded from the game without having caught any regular or palatable butterflies (students that catch only noxious butterflies and are out of the game after catching 3 are sometimes frustrated by the experience). 2) Noxious models are harmful butterflies that have a warning signal for the predator (or student) to associate with a bad experience. 3) Noxious mimics are also noxious butterflies with similar warning signals to the noxious model. 4) Palatable mimics are harmless butterflies that have warning signals similar to noxious butterflies, but cause no harm. We also included pages in the end with the name of each patch (A, B, C or D) to be printed to indicate to the students within which patch they are hunting and where they should gather; these signs can be taped to the wall near the patch. It is important that the symbols (circle or triangle) be printed right underneath the warning signal in the wings, so that students cannot see them when hunting.

Page Index

Page 2: Regular butterflies

Page 3: Palatable mimic.

Page 4: Symbol of palatable mimic to be printed in the back of page 3. Choosing to double-side print pages 3 and 4 should result in the symbols being perfectly lined up on the back of each butterfly.

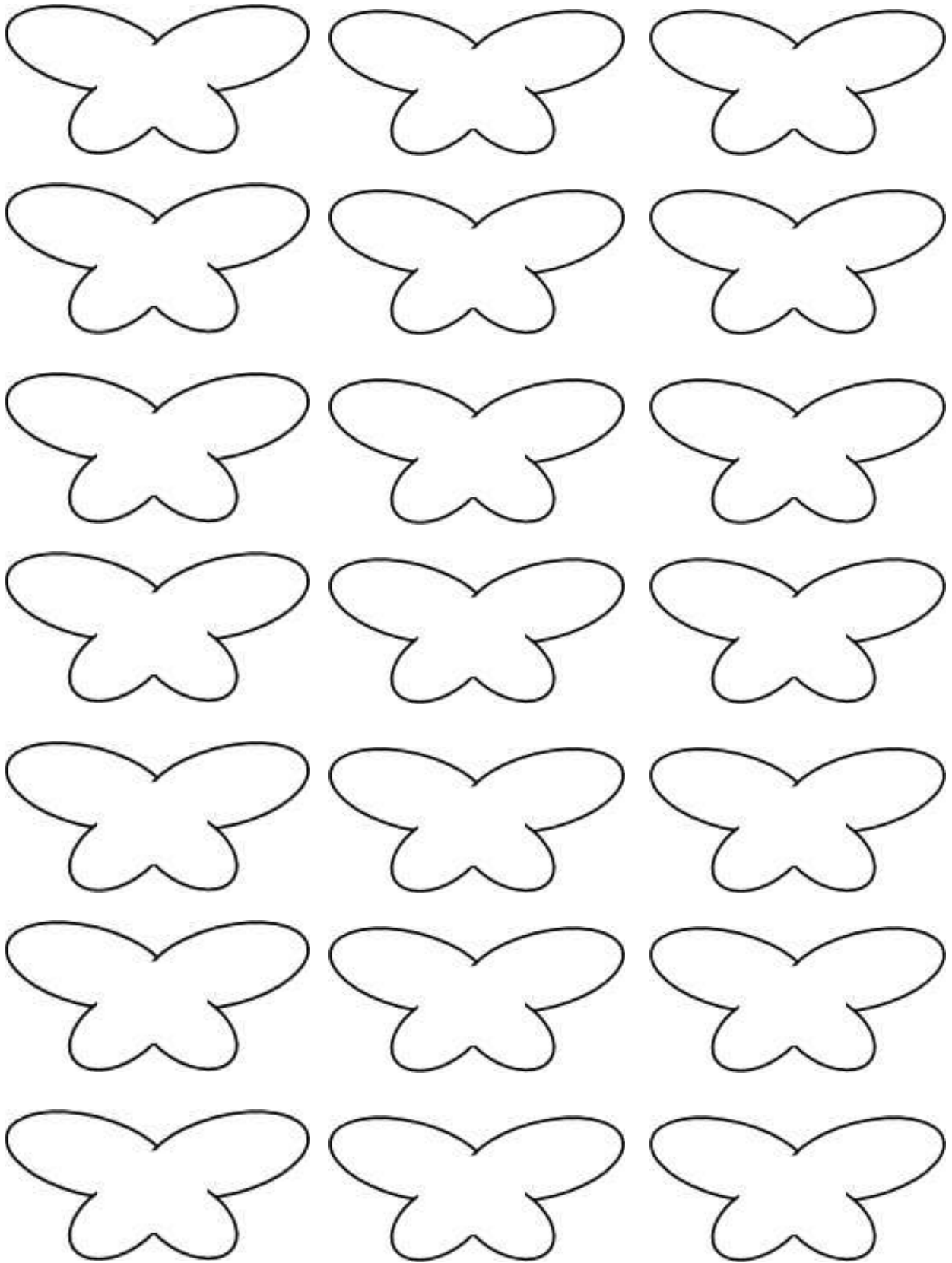
Page 5: Noxious model.

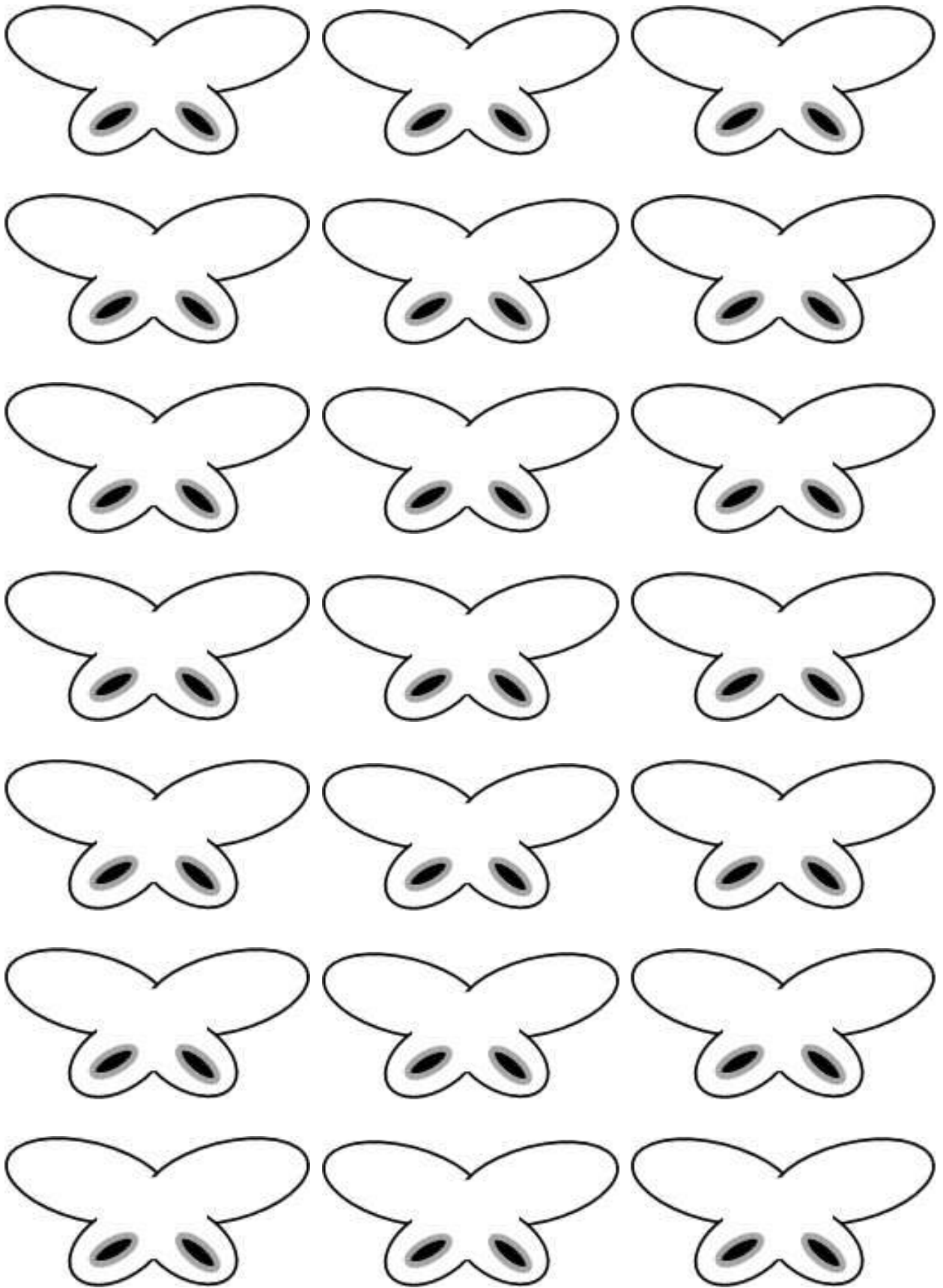
Page 6: Symbol of noxious models to be printed in the back of page 5. Choosing to double-side print pages 5 and 6 should result in the symbols being perfectly lined up on the back of each butterfly.

Page 7: Noxious mimic.

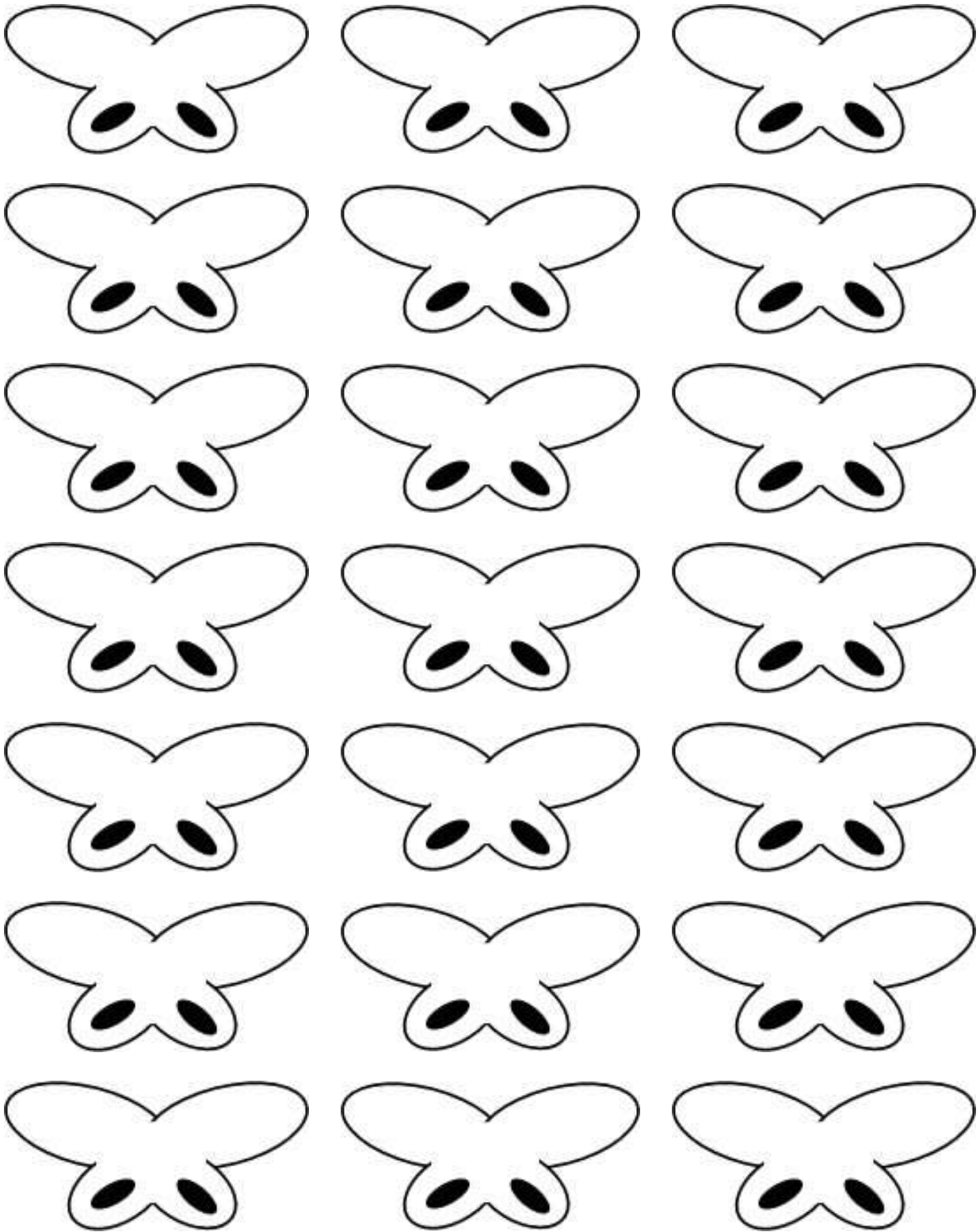
Page 8: Symbol of noxious mimic butterflies to be printed in the back of page 7. Choosing to double-side print pages 7 and 8 should result in the symbols being perfectly lined up on the back of each butterfly.

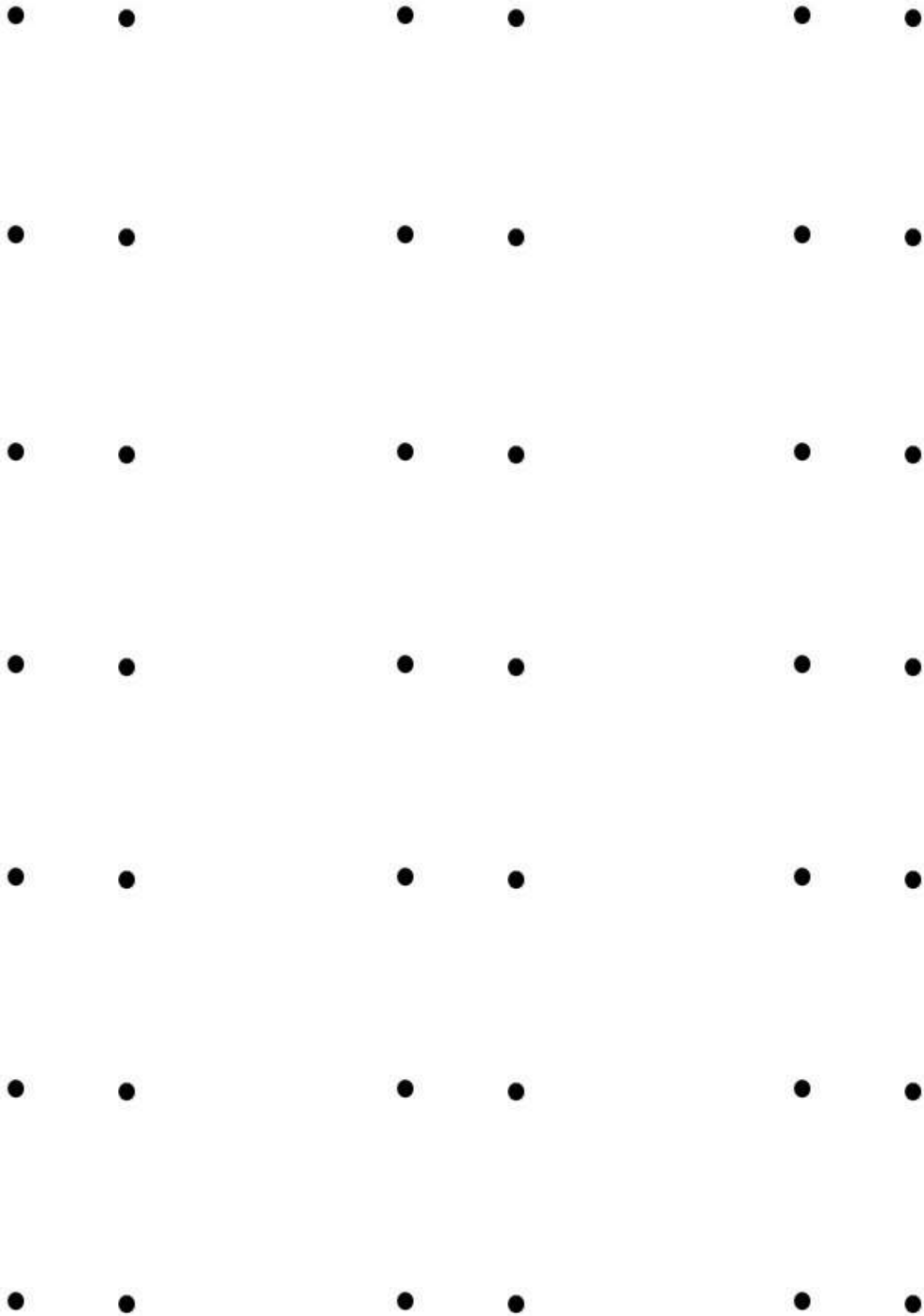
Pages 9 -12: Patches name to identify each butterfly patch where students should gather.

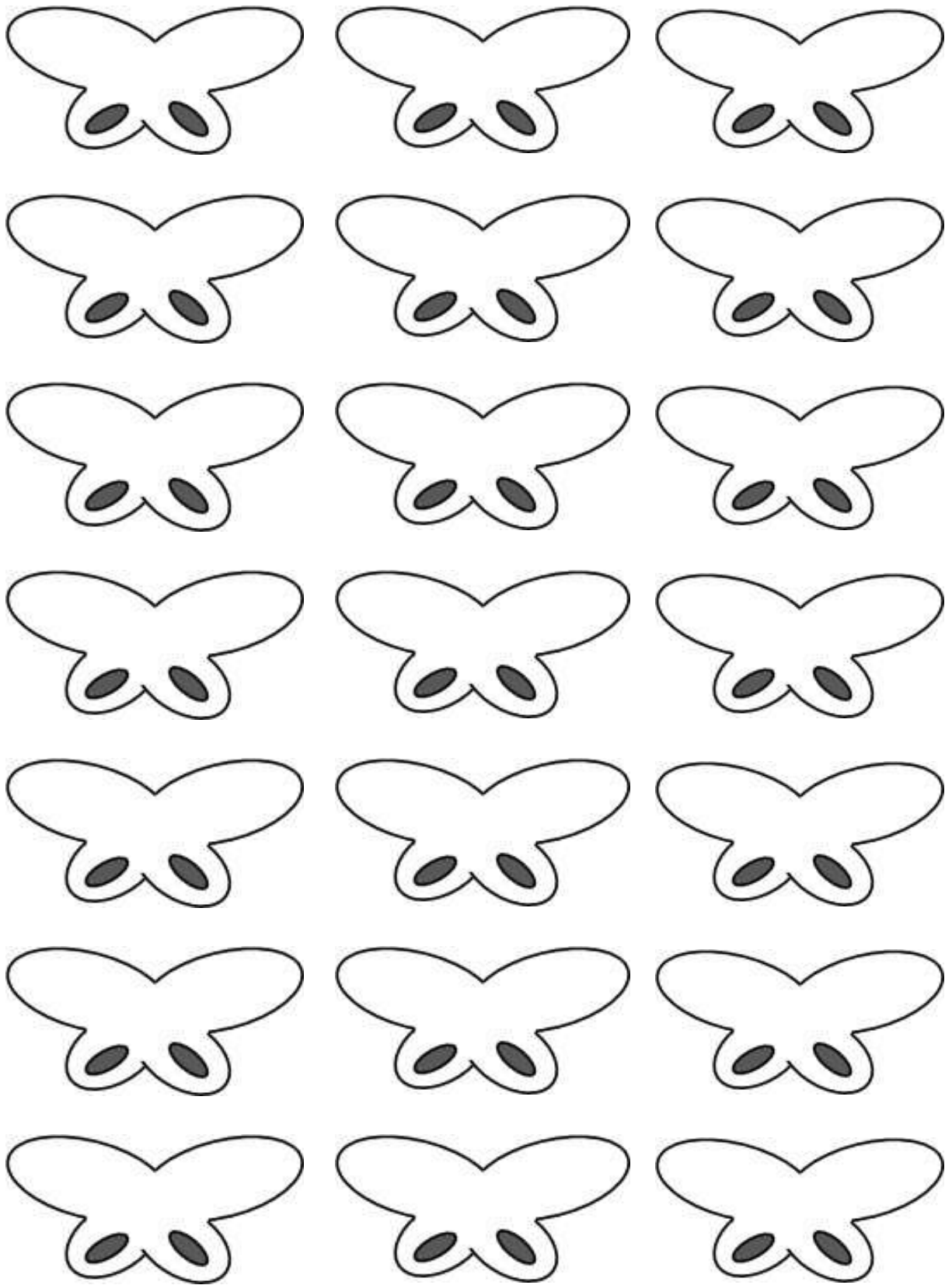


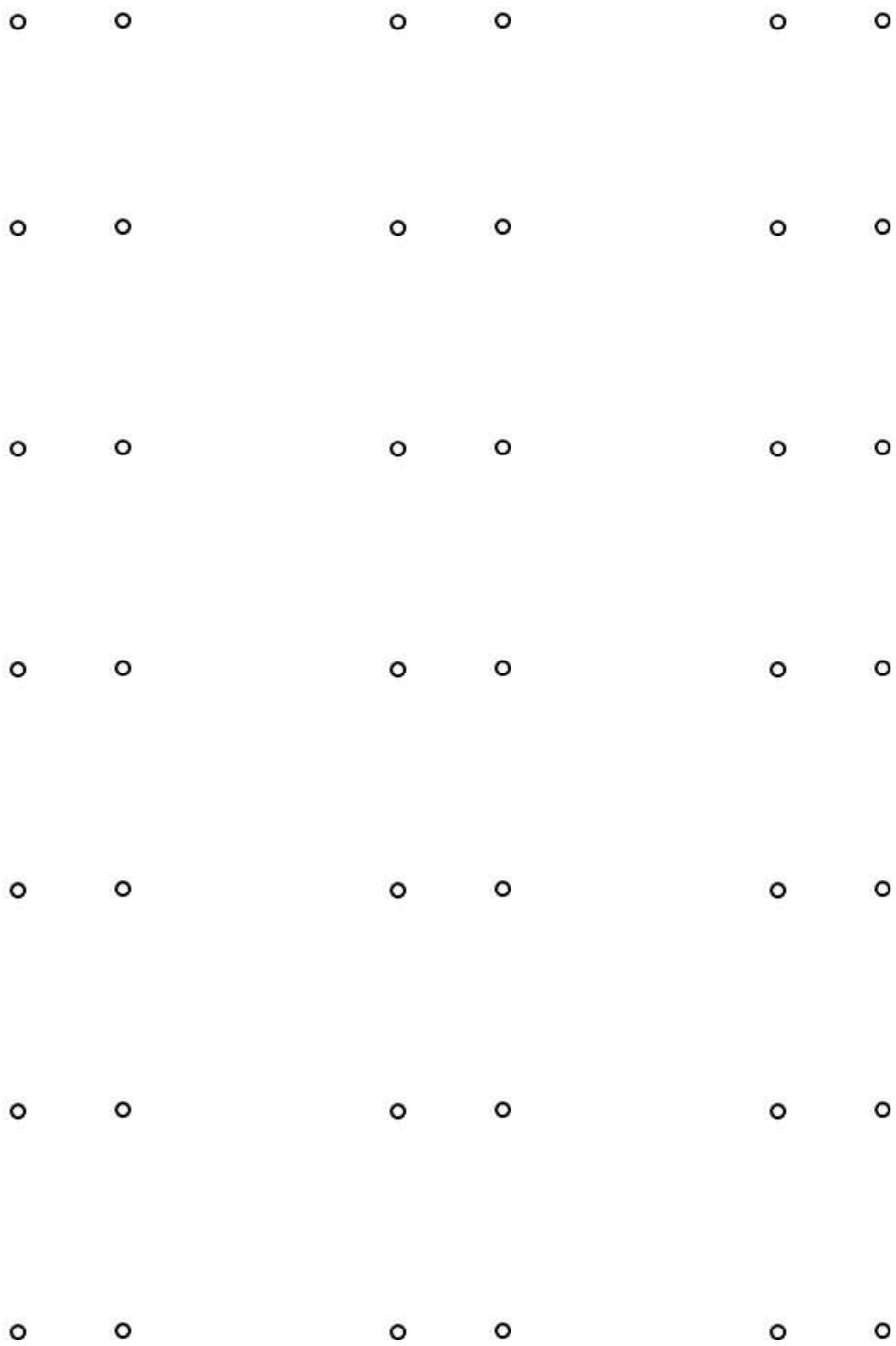












PATCH A

PATCH B

PATCH C

PATCH D