

3D Ocean Bingo

Background information:

To those of us who live on land, the middle of the ocean seems a vast homogeneous area of water, water, and more water. However, to the creatures that live in the ocean, there are many different ecosystems, as different as grasslands are from forests.

The area close to the surface is called the **sunlight zone** (or “euphotic” zone, meaning “good light”). This zone extends down to about 600 feet deep. Here you will find all the organisms that need the sunlight in order to carry on photosynthesis, such as seaweed, algae, diatoms, dinoflagellates, and other phytoplankton. These are the primary producers of the sea, just like plants are the primary producers on land. Because of the abundance of plankton at the surface, there are also an abundance of creatures that eat plankton, such as crustaceans, small fish, and baleen whales. The sunlight zone contains far more animals than any other zone.

The next zone down is called the **twilight zone** (or “dysphotic” zone, which means “bad light”). This zone extends from 600 ft. to about 6000 ft. (You will see variations in these numbers if you read a variety of sources. Not everyone is agreed on exactly where each zone begins and ends. There are no lines in the ocean, after all!) In this region there is very little light. It is dark, but not totally pitch dark. Animals here have special features that help them survive in the dim light, such as bioluminescence (they glow in the dark). Some creatures spend the day in the twilight zone, swimming up to the sunlight zone at night to feed on creatures smaller than they are.

The midnight zone (or “aphotic” zone, meaning “no light”) extends from about 6000 feet deep to the bottom. Here there is no light at all, and crushing pressure. Very few creatures can survive in this zone. Echinoderms such as sea stars and sea cucumbers are common residents, as well as small crabs, tube worms, and some very bizarre-looking fish.

You will need:

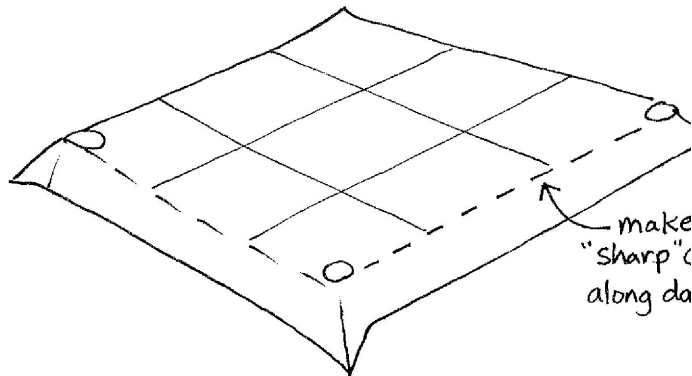
- Photocopies of the pattern pages, copied onto heavy card stock. Each student will need a copy of each zone, so that’s a total of 3 sheets per student. Also make at least one extra set, as you will need a set of cards for the “caller” to use. (If possible, print the sunlight zone on white or yellow or very light blue, the twilight zone on light or medium blue, and the midnight zone on the darkest blue you can get (purple would look nice, too). If you only have white, the game will still work just fine.)
- Scissors
- Paper punch
- Plastic drinking straws, 4 per student
- Clear tape
- Glue sticks
- Some kind of tokens to place on the squares (at least 15 per student)
- Something in which to put the “caller’s” set of cards, such as a small bag or box

Set up directions:

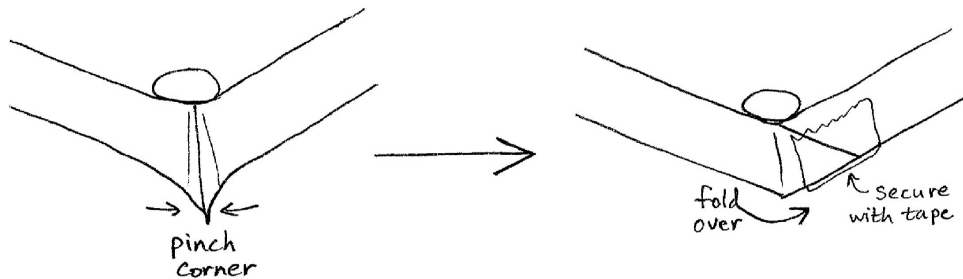
- 1) If all your zones are printed on the same color, such as white, tell the students that they will need to be very careful about working on one zone at a time. Have them cut out the creature pictures on one zone, and immediately paste them onto their board before they go

on to cut other creatures. If your zone pages are different colors, it will be much easier for the students to make sure the creatures get pasted onto the right zones.

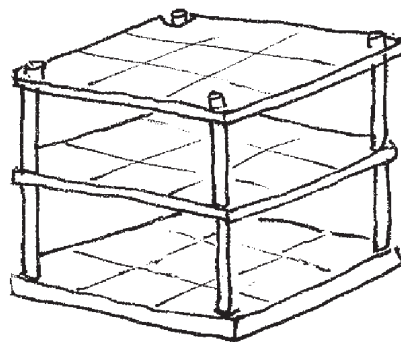
- 2) The idea is to cut out the creatures on the page, and paste them onto the bingo board in random order. Each student's page will hopefully have a unique arrangement of the squares.
- 3) After they have pasted on the creatures, cut around the edges of each board and then punch the holes where indicated.
- 4) Fold on the dashed lines, like this:



- 5) Pinch the corners and fold over, making a square corner. Secure with tape.



- 6) Assemble the game boards and straws, putting the sunlight zone on top and the midnight zone on the bottom. A small piece of tape at each corner should secure them adequately.

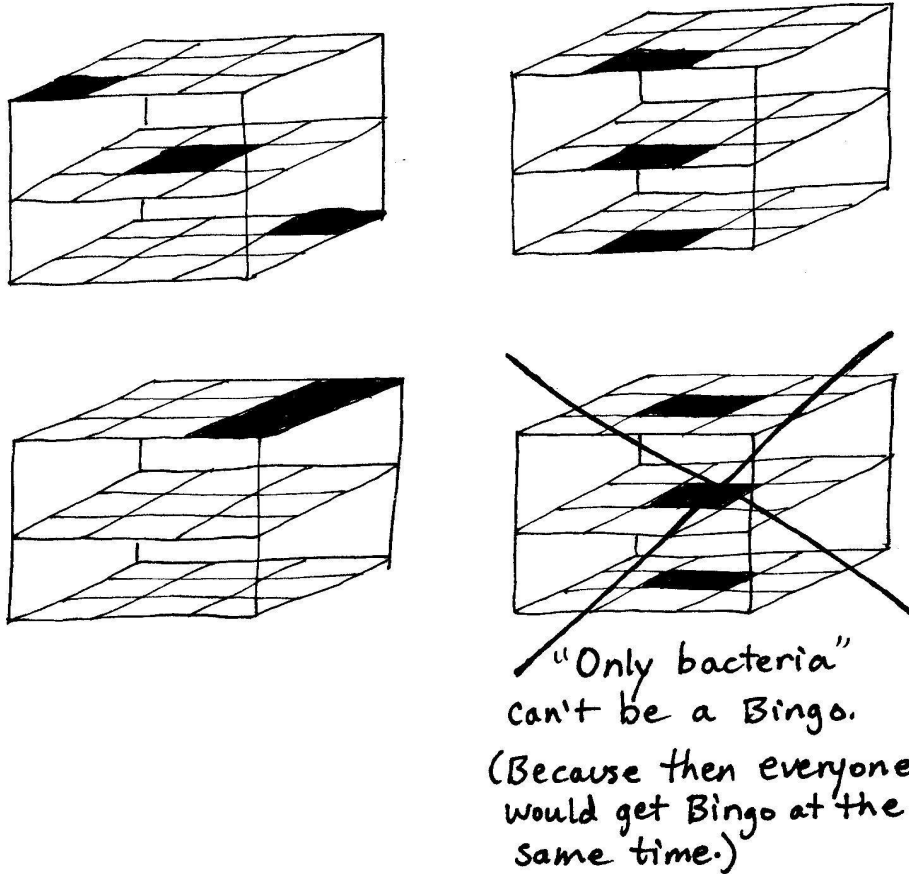


- 7) Cut out one complete set of creatures to be the caller's set. Don't forget to include bacteria in each zone. If all your cards are all the same color, label the bacteria for each zone.

How to play:

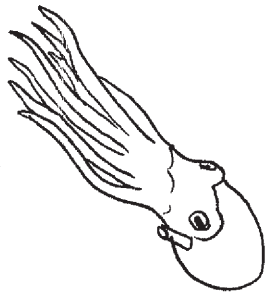
You play just like traditional bingo, with the caller calling out creatures as they are randomly selected out of a box or bag. For bacteria and small crustaceans, the caller must specify which zone.

A bingo can be across just one board, or across all three boards. Here are some examples:

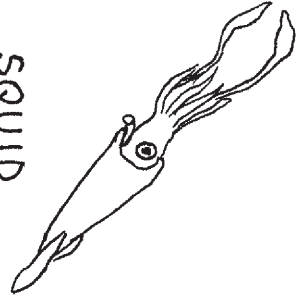


Note that you can't make a bingo with all three center squares. The bacteria can only be used as part of another bingo.

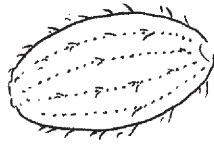
Cut apart these & sea creatures, and glue to empty squares on right (in any order).



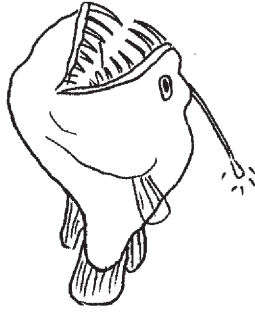
OCTOPUS



SQUID



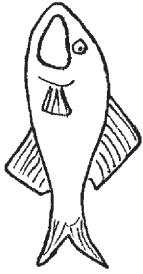
COMB JELLY



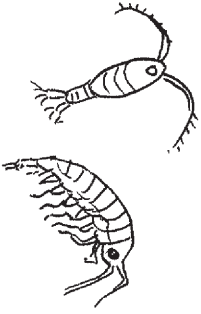
ANGLER



VIPER FISH



FLASHLIGHT FISH



SMALL CRUSTACEANS

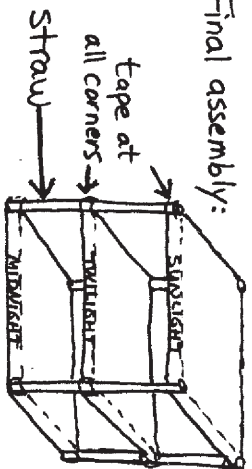


HATCHET FISH



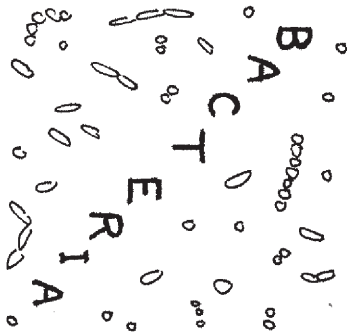
Cut out and fold on dashed lines.

Final assembly:



TWILIGHT ZONE

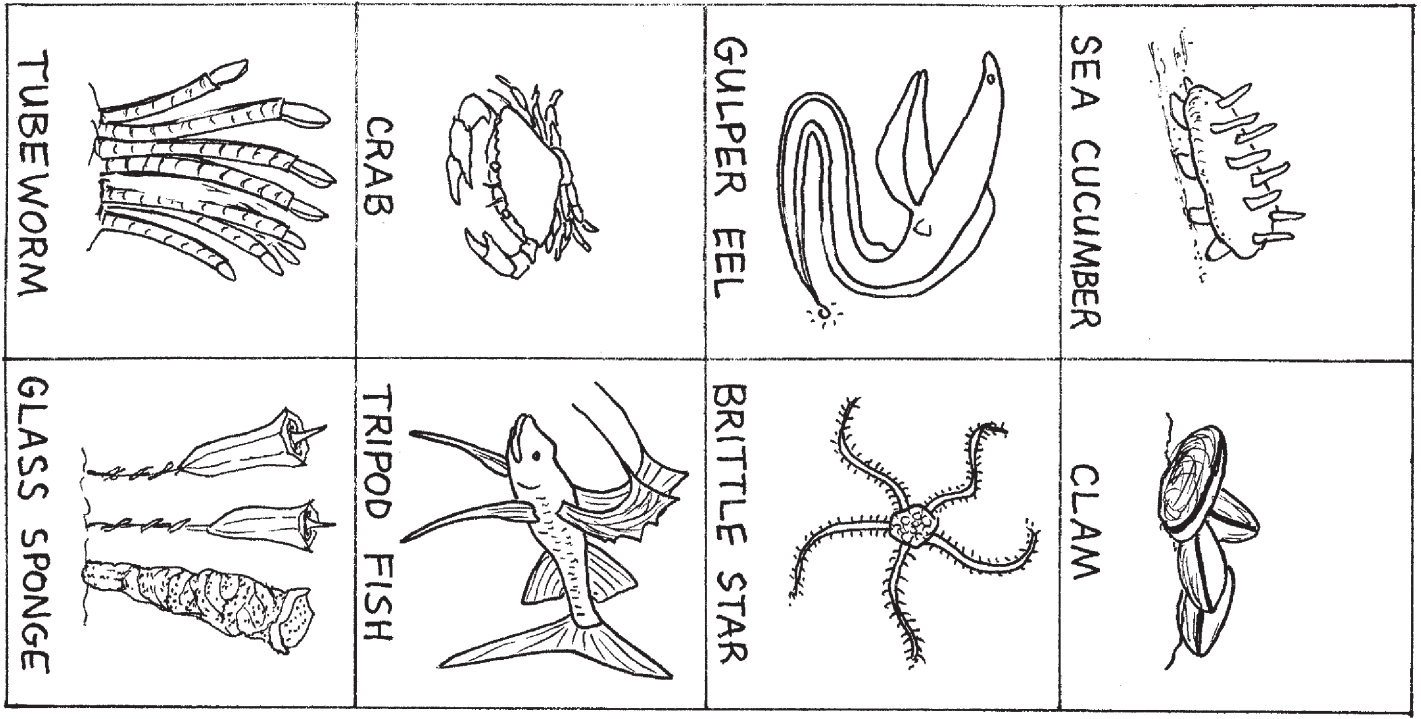
ENZO LHTGILIML



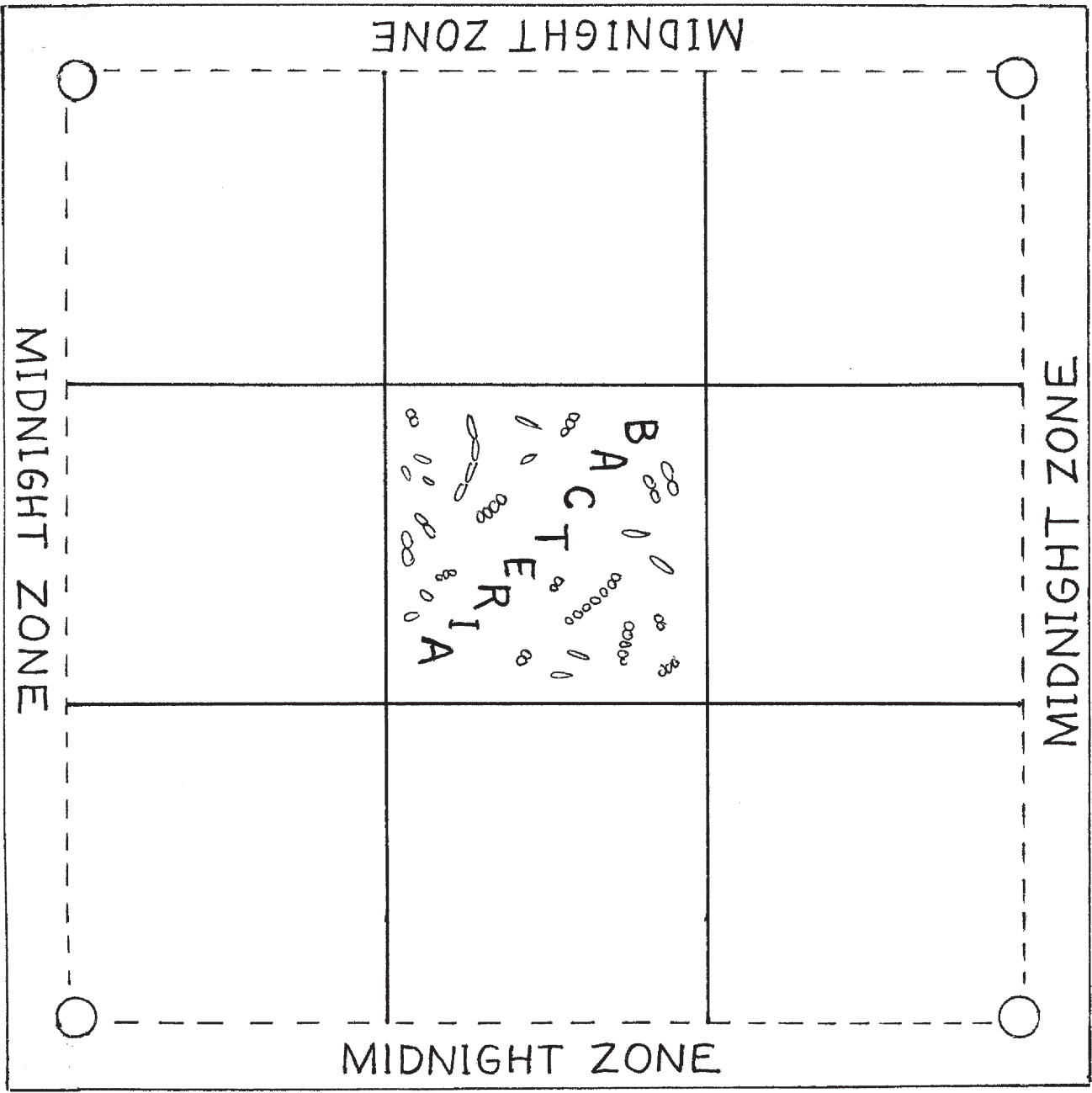
TWILIGHT ZONE

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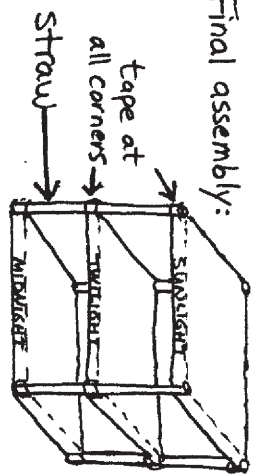
Cut apart these 8 sea creatures, and glue to empty squares on right (in any order).



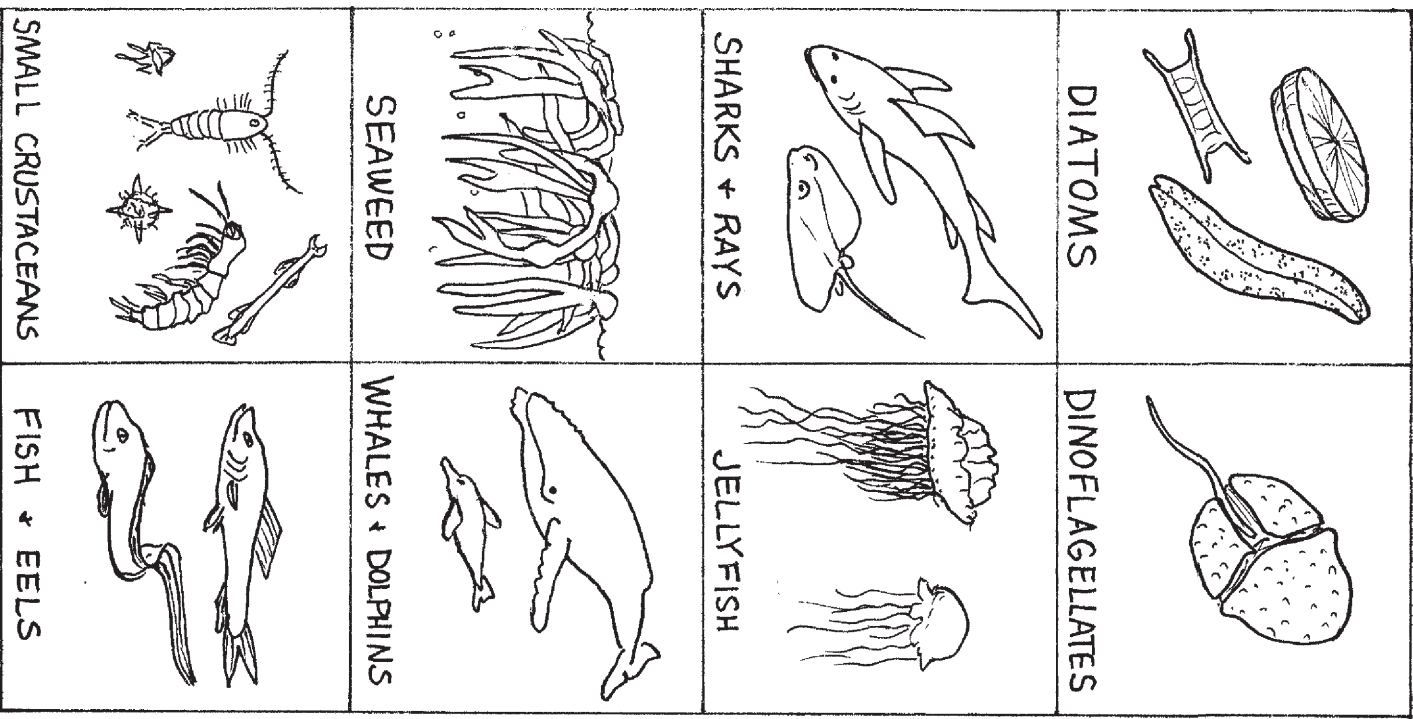
Cut out and fold on dashed lines.



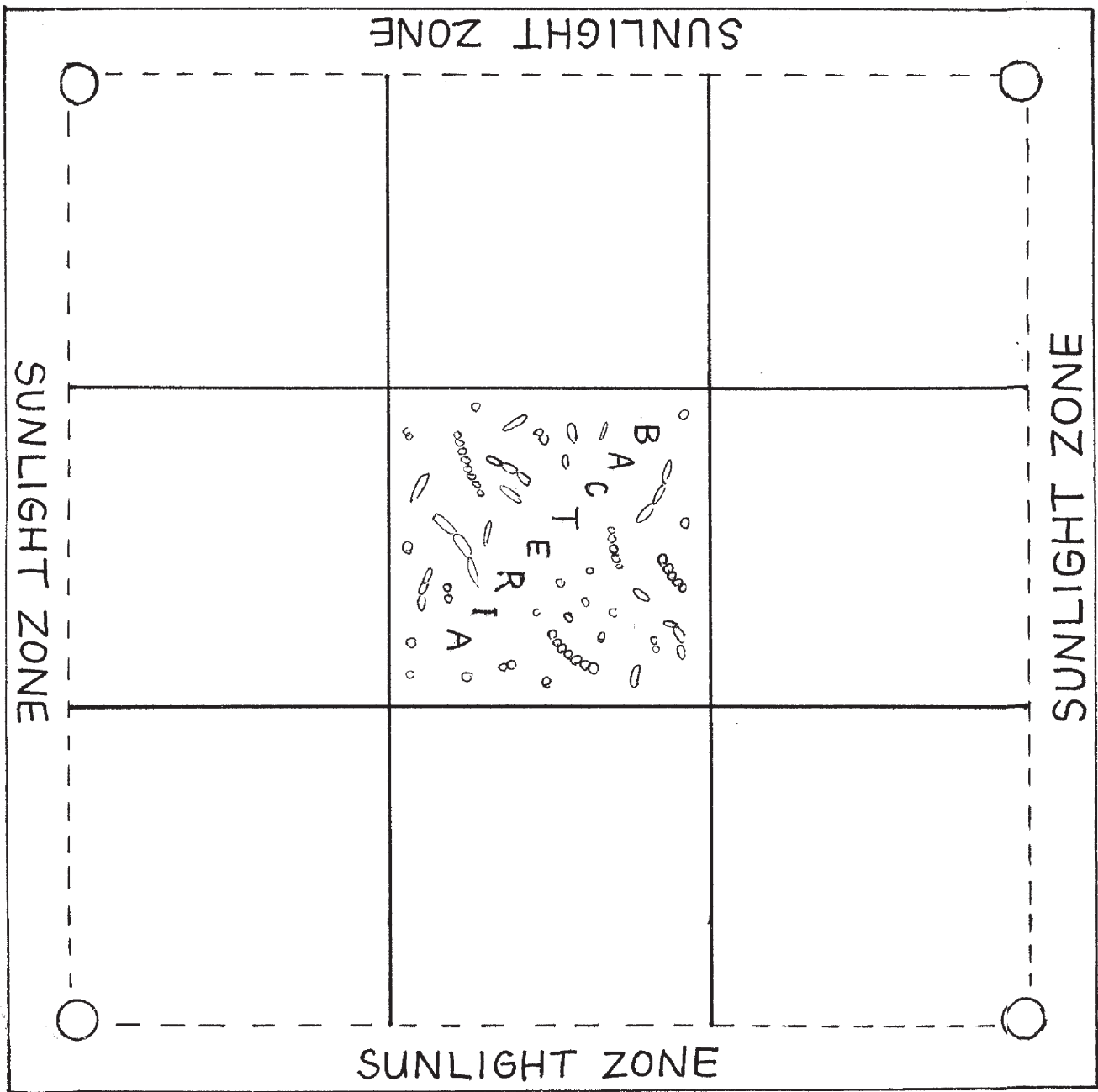
Final assembly:



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Final assembly:

