TRAWLING THE HARBOR **simulation**

Oyster Associates & Predators

AMPHIPOD	BARNACLES	BLACKFISH/TAUTOG	BLUE CRAB	BLUE MUSSEL	FLATWORM	GREEN CRAB
A	A	P	P	A	P	P

GOLDEN STAR TUNICATE	JAPANESE SHORE CRAB	MUD CRAB	MUD SNAILS	MUD TUBE WORM	OYSTER DRILLS	OYSTER TOAD FISH
A	P	P	A	A	P	P

RIBBED MUSSEL	SAND WORM	SEA GRAPE TUNICATE	SEA ROBIN	SHORE SHRIMP	SLIPPER SHELLS	SPONGES
A	A	A	P	A	A	A

1. Using your instruments, "trawl" your water tray to remove one associate/predator card. *(Organism A)*

2. Roll the dice and add your results together to determine the quantity of the organism you've found in your simulation.

3. Notate that quantity in the corresponding associate/predator box in the chart above.

4. After each person at your table has had a chance, repeat steps 1–3 for a second associate/predator card. *(Organism B)* **NOTE:** If you get the same quantity from your dice roll, roll them again until you get a different number.

5. Create a ratio of *Organism A* to *Organism B*, and write it below.

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6. What is the unit rate of *Organism A* per one *Organism B*? Write it below.

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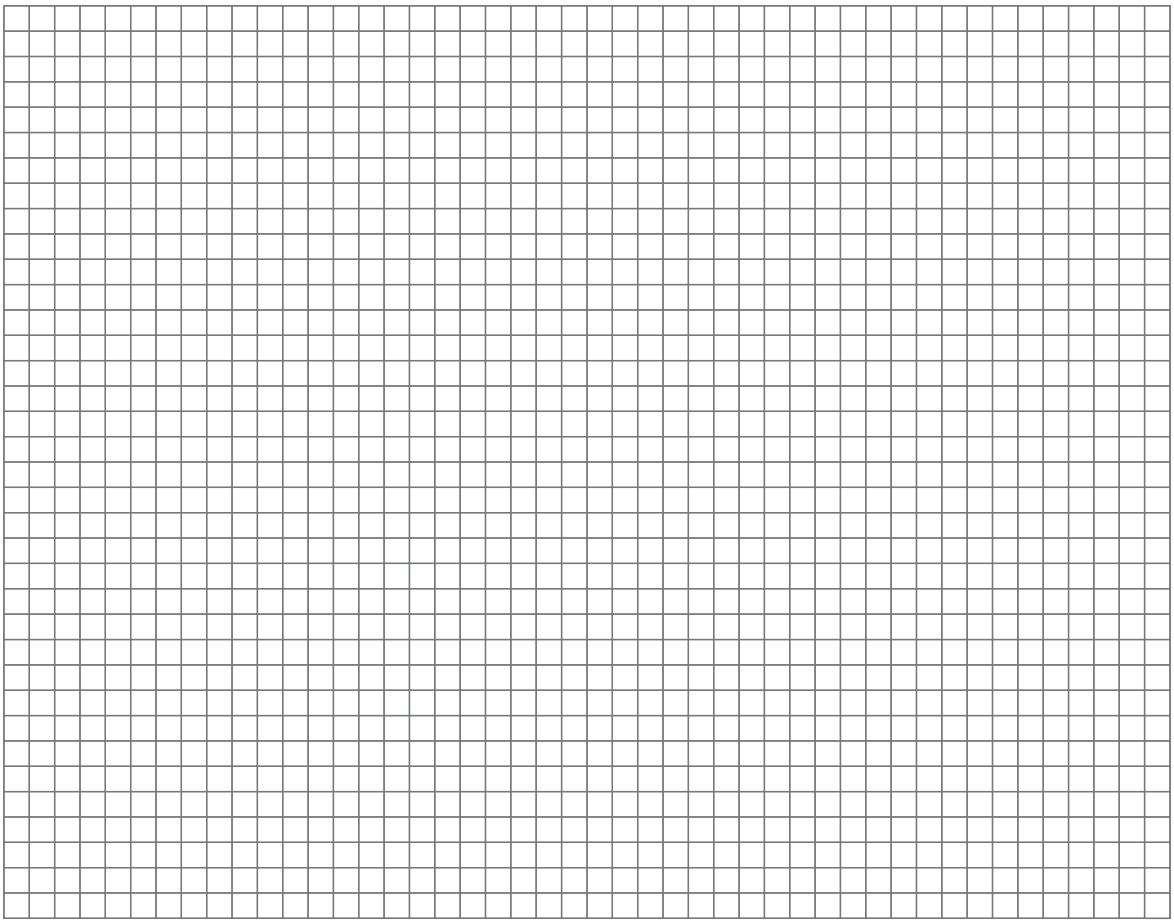
Continue on back

7. Assuming that the relationship is proportional, complete the data table below.

ORGANISM A											1
ORGANISM B	0	1	2	3	4	5	10	15	50	100	

8. Make a graph of your data on the coordinate plane below. **NOTE:** Remember to label your axes and mark out an appropriate scale for each of your axes.



9. Create an equation based on the relationship represented in the table and the graph. Remember to notate what each variable means in your equation.

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1. This activity is a simulation and doesn't accurately represent what you most likely will encounter in an actual field with our restoration station. At the station, we will be collecting lots of data including quantities of the organisms we find there. Once we collect that data, how can we use it to make our simulation activity more accurate as if it's a truer sample of the population?

2. Try altering the instructions so that in your ratio you are comparing associates to predators. Write your details below. *Attach a separate sheet if you need more room.*

3. Investigate how you can turn the exploration into a game. Write your details below. *Attach a separate sheet if you need more room.*

HOMEWORK: ADOPT AN ORGANISM

"Adopt" an organism from your exploration. Research it and create a one-page fact sheet with drawing to be presented to the class and then added to a classroom "handbook" of harbor inhabitants. This book will serve as a resource to current and future students.