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| **Desired Results for the Day** |
| Day’s Objective: | SWBAT count brain reactions in female midshipman fish in order to understand the brain’s activity to hearing male calls. |
| Content/ Skill Standards Addressed:* Interpretation of data leads to development of additional hypotheses, the formulation of generalizations, or explanations of natural phenomena. (3.1a)
* Reproduction and development are necessary for the continuation of any species. (4.1a)
* Some characteristics give individuals an advantage over others in surviving and reproducing, and the advantaged offspring, in turn, are more likely than others to survive and reproduce. The proportion of individuals that have advantageous characteristics will increase. (3.1g)
 | Learning/Language Strategies Addressed:* Making predictions
* Drawing inferences
* Analyzing data

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| **Assessment Evidence****(Questions to assess student understanding of the day’s content, skills, and learning strategy)** |
| What does the green blob represent? What does the red dot represent?What doe brain activity tell us about hearing specific sounds?How does brain activity in female fish contribute to their mating behavior?How does reading these scans relate to human brain scans? |
| **Mini Lesson (20% of period)** |
| Purpose | Aim: How can counting brain images for reactivity help us better understand the mating behavior of Midshipman Fish?Do Now: Read the background information and discuss the mating behavior of male and female fish.  |
| Build Background | Teacher and student will review the information about the toadfish and demonstrate how to count the brain images.  |
| Key Vocabulary | n/a |
| Instructional Steps | 1. Student and teacher read over the background information and discuss the Midshipman Fish.
2. Teacher describes how to count the images of the brain for reactivity,
3. Students work individually or in groups to count and tally the reaction sites.
4. Students create a bar graph.
5. Students answer analysis questions and write a conclusion.
6. Student shares their conclusion with the class.
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| **Work Period/ Guided Practice (60% of period)** |
| Independent Work (Steps and directions) | 1. Students will count the reactions for each of the three types of fish (from powerpoint slide). Teacher walks around to help.
2. Students will complete the data table and create a graph. Teacher walks around to help.
3. Students will answer the analysis questions and write a conclusion.
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| **Wrap-Up (20% of period)**  |
| Assessment of Day’s objective | Students read their conclusions to each other and then to the class.  |
| Reflection Questions | Which fish had the most reactions? Which fish had the least reaction? What does this all mean? |
| Homework |  n/a  |
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