Abiotic and Biotic

# Breakthrough Denver

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| **Getting Yourself Ready** | | | | |
| **Materials**: Writing Utensil, 2 poster boards, markers, whiteboards, expo markers, and Positive attitude. | | **Your Preparation**: PowerPoint presentation, Prepare Abiotic Biotic Worksheet, Find Abiotic biotic video or create one Making sure both classes are on the same page | | **Agenda (w/times)**: Review of Food webs and Trophic levels. (5 minutes) Introduction of abiotic (5 minutes) Introduction of Biotic (5 minutes) differences between the two (5 minutes) Abiotic biotic game (15 minutes) Class abiotic/biotic poster (10 minutes) Questions/homework review (5 minutes) |
| **Getting Your Students Ready** | | | | |
| \***Do Now**: Answer questions on whiteboard “what do you think is the difference between Abiotic and biotic organisms?” | | | | |
| **Objective**: To have an understanding of Abiotic biotic and differences between the two. | | | **Proving behavior**: Abiotic biotic game, poster board on Abiotic and biotic organisms. | |
| **Purpose**: We are doing this because Abiotic and biotic organisms are in the environment. | | | | |
| **Teaching** | | | | |
| Step 1: | Say: Does anybody know what Abiotic is? Abiotic is an organism that is non living but still contributes to the environment. Have students write down three examples of Abiotic organisms on whiteboard. Examples of Abiotic organisms are light, climate, temperature, and even soil.  See: Students will see examples of abiotic organisms and tell each why the organism is abiotic.  \*Do: Students are taking Cornell notes. | | | |
| Step 2: | Say: If abiotic organisms are non living then biotic organisms must be living. Biotic organisms are organisms that are caused by living organisms. Students will guess the types of things that are biotic and identify why it is biotic.  See: Students will see examples of both abiotic and biotic organisms and identify which one is it living or non-living.  \*Do: Students will still be taking down Cornell notes. | | | |
| Step 3: | Say: What are the differences between abiotic and biotic organisms? Students will be given examples of abiotic and biotic organisms and it is up to them to distinguish what type of organism type they are (abiotic or biotic). Also students will be giving each other examples of abiotic and biotic organisms and it is up to the other student to guess which type it is.  See: Students will be seeing the PowerPoint on abiotic and biotic organisms.  \*Do: Students are taking Cornell notes. Also students are breaking into partners and distinguishing the difference between abiotic and biotic organisms between the two. | | | |
| Step 4: | Say: This game has been passed down from breakthrough generation to breakthrough generation. Now I as a teacher and former student am passing this highly respected game to you. The game is called, Abiotic biotic. There are two players and the class or one more person is a judge, this game is similar to rock, paper, and scissors but only better. The judge will say either abiotic or biotic and the students will say abiotic, biotic, and either an abiotic or biotic term. Then it is up to the judge to tell who had the more respectable answer.  See: Students will see an example of the game.  \*Do: students will play the game first everybody with the class as the judge then splitting into groups. | | | |
| Step 5: | Say: Students will separate from groups and sit back down in the seats. Now as a class they will have one poster, it will be up to the class to decide how the poster will be formatted, but it must have the definition of an abiotic organism and a biotic organism and give examples of each group.  See: See the example I made on my PowerPoint. They cannot copy my poster type  \*Do: Students will complete poster. | | | |
| Step 6: | Say:  See:  \*Do: | | | |
| **Practice** | | | | |
| \***Structured Practice** (3-4 additional examples led by teacher with gradually quickening pace, helping students approach automaticity by manipulating time, materials, and group size) | | | | |
| Time:  Materials:  Group Size: | Example 1 | | | |
| Time:  Materials:  Group Size: | Example 2 | | | |
| Time:  Materials:  Group Size: | Example 3 | | | |
| Time:  Materials:  Group Size: | Example 4 | | | |
| \***Guided Practice** (the proving behavior of the objective monitored by the teacher) | | | | |
| Assignment: (from proving behavior) Quick reflection on the difference of abiotic and biotic organisms | | | Criteria for Mastery: Reflection | |
| Independent Practice (Homework) | | | | |
| Explain Homework: 1. Abiotic and biotic worksheet  2. Write a paragraph on how you think abiotic and biotic organisms tie into evolution. | | | | |
| **Closure** | | | | |
| Explain Closure:  Every organism has its own purpose but yet each organism’s purpose is different. No organism is the same and there will never be two of the same organism. | | | | |