Presentation Title
Dive Into Amazing Discrepant Events in the Science Classroom

Park Forest Middle School
Baton Rouge, LA

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http://tinyurl.com/y4qev6s4
Session Overview

● What are discrepant events?

● Why should we use discrepant events?

● Research says....

● Discrepant Activities
Dive Into Amazing Discrepant Events in the Science Classroom

What are discrepant events?

1. another
2. heart
3. But thought
4. LEAST
5. MILLION
6. OIL
7. history
8. musically
9. end
10. B R I N
11. FILE
12. ecapace
13. ECNALG
14. LOVE HATE
15. ALL THINGS

#MoreThanYouCanImagine  #MSA2019
What are discrepant events?

- 1 - 5 minute activities (student-centered/teacher led) guaranteed to ignite student interest in the world of science.
- A discrepant event is a surprising and paradoxical (seemingly absurd or self-contradictory) learning opportunity with an outcome that is usually not what a student would normally expect.
Why should we use discrepant events?

1. Introduce a new concept in science.
2. Assess your students’ understanding or misunderstanding of a topic.
3. Develop inquiry skills. (generating testable questions, planning and conducting experiments, communicating results or evaluating)
4. Strengthen critical thinking skills and problem-solving.
5. Acquire more of a scientific mindset.

When a scientist makes an observation, something may spark their curiosity which will then lead to an investigation or research. This is exactly what inquiry science is – and exactly what NGSS wants us to do!!
Why should we even use discrepant events in the science classroom?

- Students will become “hooked” on science and will become lifelong lovers of learning science!
- These “mini-labs/demos” will leave your students begging you to tell them “how did that happen?...what did you just do?...was that magic?” That’s the kind of engagement we need (and want!) in science.

It’s a win-win!
Research shows that...

Discrepant events appear to have a positive effect on the academic achievement of my students. Pulling all of the posttest data together, the mean test score went up by 11.3%. As a teacher, I consider that a large benefit to be able to raise students’ scores by that amount (Rouwenhorst, 2017).

Discrepant events and organized discussions were implemented into instruction in an attempt to improve and/or clear up identified misconceptions. As the pretest to the posttest outcomes were compared, there was a general 41% improvement for each and every question analyzed, whether it be large or small (Dolgos, 2006).
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Bird In A Cage
https://www.exploratorium.edu/snacks/bird-in-cage
1. Cut the shape of a bird out of a red, blue or green sheet of construction paper.
2. Make sure the eye is dark.
3. Draw a bird cage on a white poster.
4. Stare at the eye of the bird for 15 - 20 seconds and then quickly stare at the birdcage.
The Gong Show
Challenge: Can sound travel through yarn?
https://www.exploratorium.edu/snacks/secret-bells

1. Tie a 2 - 3 meter string around the hook of a hanger.
2. Wrap the string around your fingers and put your fingers in your ears.
3. Hit the umbrella against different objects.
Born To Be A Star
Challenge: Can you make a toothpick move without your hands?
https://www.stevesanglerscience.com/lab/experiments/toothpick-star-table-trick/
1. Bend 5 toothpicks, but don’t break them.
2. Place the middle of the toothpicks together to form a star.
3. Use a dropper to gradually release small amounts of water in the middle of the star.
What a Bag!
Challenge: Is the mass of the bag the same before and after a chemical reaction?
1. Place 15 ml of water in a ziplock bag and close it. Place the tablet on top of the bag.
2. Record the mass of the ziplock bag, tablet, and 15 ml of water together. __________
3. Place the tablet in the bag separately from the water and close.
4. Let the tablet and water mix. Observe. Record the mass again. __________
Balancing Act!

Challenge: Can you balance a soda can on the edge of your table?
https://scienceprojectideasforkids.com/center-gravity-balance-can/

1) Empty all the liquid from soda can. Try to balance the can on its edge.

2) Add 10-15 drops of water into the can. Try to balance it again. Any luck? Add or subtract drops of water into the can until it balances.

Balance a Soda Can on the edge
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Bringing it all together!
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DOOR PRIZES!!!
THANK YOU!!