

Creating Teachable Moments in Science

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INTRODUCTION

Is anything more rewarding in a teacher's day than the "teachable moment" when all the students are listening and connected? It's the "aha" moment when students connect what they are learning with prior knowledge in significant and lasting ways. Students and teachers alike treasure these teachable moments, which help to validate the instructor's preparation and presentation. They change a routine assignment into an adventure in discovery. Incorporating discrepant events into a science lesson is a proven method to help create more of these teachable moments.

WHAT IS A DISCREPANT EVENT?

- In science classes, a discrepant event is a demonstration with an outcome that can surprise students and cause them to rethink their understanding of scientific concepts.
- A discrepant event helps to focus students' attention and enhances concept retention.

DISCREPANT EVENT #2: THE SUPER TENNIS BALL

Objective: Ask questions and predict outcomes about the changes in energy that occur when objects collide.



DISCREPANT EVENT #3: THE NEWSPAPER TREE

Objective: Develop models to show that organisms have unique and diverse life cycles, but all share birth, growth, reproduction, and death in common.



CONCLUSION

We, as Seventh-day Adventist teachers, have the privilege and responsibility of taking these teachable moments beyond just a scientific explanation. We can connect science with social, moral, and spiritual lessons. Plan, present, and participate in the joy of creating a teachable moment in your next science class.

Feel free to use these discrepant events in your classroom!

LINK TO REFERENCES

<http://circle.adventist.org/files/jae/en/jae201578011408.pdf>

DISCREPANT EVENT #1: BERNOULLI'S TABLE TENNIS BALL

Objective: Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.



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