



# The Impact of Testing Format and Reflection on Student Perceptions of Science

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## Why?

Self reflection and perception are vital to success in school. After students take tests they are given feedback on their performance in the form of a grade, but this doesn't show them what they did well on and where they need to improve. This does not fit the concept of a growth mindset. If students are given the opportunity for more detailed feedback and growth their perception of their scientific abilities should improve.

I have had several students who perceived that they enjoyed science, but were convinced that they were "bad" at it because their test grades were consistently 70% or lower. My hypothesis is that what was really happening was a misunderstanding of a few concepts but overall a strong understanding of the subject as a whole.

## Research Questions

How does assessment formatting influence student recognition and perception of their knowledge of scientific concepts?

How does test format influence student performance and perception of performance?

What is the impact of student completed item analysis on student perception of their science knowledge?

## Who?

7th Grade Life Science Students

65 Total

35 Females

30 Males

12.3% have an IEP

## Value

I believe this AR project has educated me and my colleagues about how we approach summative assessments. As educators, reflection and perception are vital to our success just as they are vital to the success of our students. Therefore, I will continue to structure my assessments in a way that benefits both myself and my students and to have students reflect on their performance.

## What and How?



### Ecosystems Unit

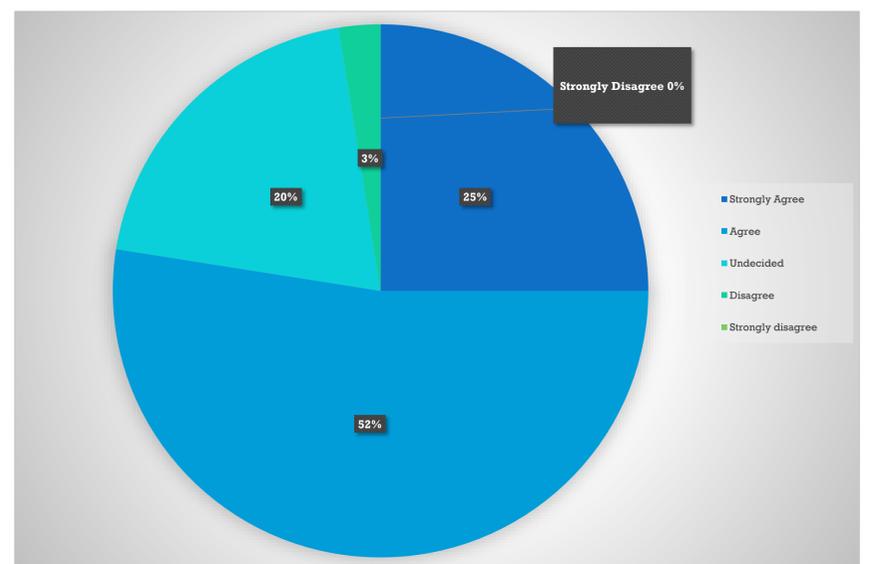
- Interactive Science Notebooks
- Field Trip
- Modeling
- Hands – on activities
- AHA Thesis
- Traditional Assessment
- Test Tracking Sheets



### Cells to Systems Unit

- Interactive Science Notebooks
- Modeling
- Hands – on activities
- AHA Thesis
- Assessment Organized by Topic
- Test Tracking Sheets

## Results



My students prefer questions that are organized by topic rather than type. However, this organization did not improve their test scores, nor did it make them feel more prepared for their test. Overall, test tracking sheets were perceived as helpful although students did not necessarily enjoy completing them. The sheets usually confirmed what students expected about their knowledge but did not feel that completing them made them feel better.

## Thank You

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7th Grade Science Students