



Feedback

A Powerful Tool for Raising Student Achievement In Mathematics & Science
Mary Doran Brown
Video Note Taking Guide

Enduring Understanding



- All students can learn rigorous academic material at high standards

Jon Saphier and Robert Gower: The Skillful Teacher



Essential Question



- How can we provide specific and timely feedback to learners in order to improve performance?



Outcomes: By the end of the session, participants will have:



- Identified two types of feedback—evaluative and descriptive
- Reviewed research related to feedback and student achievement
- Practiced creating descriptive feedback matched to standards
- Reflected on newly acquired knowledge and identified next steps for classroom applications

Engage



- **Five Words / Three Words Activator**
 - On your own, list five words that come to your mind when you hear the word “feedback.”
 - Share your individual list with your table group
 - Agree upon three words your team believes best describe feedback
 - Record each of the three words on three index cards found on your table
 - Be prepared to share your three words with the group

Two Types of Feedback



1. Descriptive
2. Evaluative



What Is Descriptive Feedback?



- Specific
- Relates directly to the learning
- Comparison to models, samples, exemplars
- Related to performance, not personal

(adapted from Davies, 2000)

Why Descriptive Feedback?



- The purpose of descriptive feedback is to *provide opportunities for the learner to make adjustments and improvements* toward mastery of a specified standard

Feedback Card Sort



Work with your table group to create categories for the feedback statements that you will find in the envelope. Make as many categories as your team determines appropriate and use the sticky notes to label each category.

Descriptive Feedback



- These “L”s look like “V”s
- I don’t see supporting details in the thesis
- The pianissimo was louder than the forte
- The first sentence tells the reader the main idea
- The two adjectives don’t have gender agreements with the noun
- Your back foot is not coming up high enough to clear the hurdle
- The lab report is missing the explanation of the chemical reactions

Non-Descriptive Feedback



- B+
- Messy!
- You can do better!
- Excellent
- Watch your “p”s and “f”s
- Add a conclusion
- Reread the assignment
- Think about the position of your body
- You aren’t using what you know about adjectives

What Does the Research Say?



- Clear, concise feedback matched to standards will promote student achievement

(O'Connor, 2002)

What Does the Research Say?



Feedback generally produces positive results if teachers manage the form the feedback takes

(Marzano, Pickering, & Pollack, 2001)

What Does the Research Say?



Specific, descriptive feedback that focuses on success and points the way to improvement has a positive effect

(Davies, 2002)



What Does the Research Say?



Students must be given the opportunity to apply the feedback by trying again.


(Black & Wiliam, 1998)

Implications of Descriptive Feedback


- If descriptive feedback helps students make adjustments to learning in order to improve, what are the implications for instruction and assessment?

Key Implication





Students must be given the opportunity to apply the feedback by *trying again*

(Black & William, 1998)



Where to begin?

- What do we want students to know and be able to do?
- How will we know if students have learned ?
- What will we do when students haven't learned it?
- What will we do when students already know it?

(Richard DuFour)

Begin with the Standard



National Council of Teachers of Mathematics (NCTM)

Number and Operations Standard for Grades 3-5

- Instructional programs from Pre-K through grade 12 *should enable all students to understand numbers, ways of representing numbers, relationships among numbers, and number systems*

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Voluntary State Curriculum Standards

- *Standard 6.0 Knowledge of Number Relationships or Computation – Students will describe, represent, or apply numbers or their relationships or will estimate or compute using mental strategies, paper/pencil or technology*
- *Standard 7.0 Processes of Mathematics – Students demonstrate the processes of mathematics by making connections and applying reasoning to solve and communicate their findings*

Scoring Guide



Brief Constructed Mathematical Responses

- **0** The response is completely incorrect, irrelevant to the problem, or missing
- **1** The response demonstrates a minimal understanding and analysis of a problem
- **2** The response demonstrates a complete understanding and analysis of a problem

Maryland State Department of Education

Student Work Samples



■ Complete Response

- Applies reasonable strategy to demonstrate understanding of equivalent fractions and is able to compare and order fractions
- Uses mathematical concepts to demonstrate why the response is correct

■ Minimal Response

- Partially applies reasonable strategy to demonstrate understanding of equivalent fractions and is able to compare and order fractions
- Explanation is partially developed and missing important information about expressing all fractions with the same denominator

■ Irrelevant Response

- Response is irrelevant to the problem

Your Turn!



Work with your group:

- Read the task
- Determine and discuss which of the three student work samples would be a complete response
- Provide descriptive feedback on student work



Reflection



- What did you learn?
- How will it change your current practice?
- How will you continue the conversation?

References



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