

# Teacher Instructions:

Problem Scenario: *“Background Music”*

The Main Problem: **A primary school is thinking of playing background music in the classroom as students work. Is it a good idea?**

Your students will be viewing this problem from a **math** perspective.



**Does "music therapy" work?**

*Students will look at academic statistics to determine if the use of background music has been successful in trials.*

*They will then present an argument to promote or discourage the use of music therapy.*

## Step ①

Review  
Stimulus  
Items

Stimulus Item #1 — Benefits of Background Music

Stimulus Item #2 — Pre- and Post- Test Scores

*\*\*Students should take notes as they review the Stimulus Items.*

***If time allows, students are encouraged to conduct their own research!***

## Step ②

Classroom  
Discussion

Lead a **class discussion** about issues related to the topic. You are being provided a sheet to help you guide the classroom discussion.

## Step ③

Student  
Response

*\*\*\*students should have access to their notes as they enter their answers*

*\*\*\*students may also have access to the Stimulus Items as they enter their answers*

**Product Option:** Have your students **become the test subjects** in a quick experiment. In a computer lab (or using laptops), give students 2 minutes to complete a worksheet of very simple math problems. Have each student record his or her score (the ones that were not finished are marked as wrong). Next, have students repeat the exercise with a nearly identical exam, but this time play calm music in the background. Did their scores improve? Gather statistics from the entire class to see if there's a pattern. Discuss what other factors might be involved (i.e. inconsistencies in the test, improvements from multiple testing, etc.), and why this is may be too small a sample size to make any true conclusions.

**Extended Response:** Have students answer the following questions using the online assessment system. Remind students to use information from the Stimulus Items to support their response.

- 1) **Based on the statistics provided, does providing background music to students improve grades? Support your opinion with data.**
- 2) **What are factors that might cause the data to be misleading as to whether or not background music improves student grades?**

## Step ④

Analysis

Rubrics to grade student entries have been provided, and all questions have been mapped to the content standards. Results can be analyzed through the online system.