

PROBABILITY and PREDICTION

4

Grade Level

Alan Harrell Cello

Educational Objectives

The students will:

- Discover the difference between probability and prediction through music-based activities

Concepts/Ideas

- Probability
- Prediction
- Games of chance
- Symbols, patterns
- Weather prediction

Vocabulary

- probability, odds
- prediction, hypothesis
- weather patterns: fronts, high pressure, low pressure, precipitation

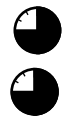
Presentation Outline: Activities & Participation

Session 1

The students will explore the concept of probability through the following activities:

- Discuss the dictionary definition of probability and how probability is encountered in everyday situations.
- Using a felt dart board and a die (provided by the musician), participate in a game where six different musical selections have different probabilities of being played.
- Assign colors and emotions to the musical selections, and act out each one.
- Observe how probability affects the frequency of certain selections.
- Discuss how true probability cannot be controlled.

Completion
Time:



Subject Areas:



Activities & Participation cont'd

Session 2

The students will:

- Review the concepts and activities from Session 1.
- Define prediction and identify the difference between prediction and probability.
- Identify ways in which prediction is used every day: weather forecasting, determining the outcomes of games or contests, scientific experiments, etc.
- Explore prediction in music and how you can predict how a particular piece of music might sound based upon previous experience or knowledge of the composer, his/her style, and the period of time in which he/she lived.
- Discuss how prediction is used in weather forecasting. Create a weather system using musical selections for each weather variable (high/low pressure, warm/cold fronts), rehearse and act out according to cues from the musician.

Repertoire

- Johann Sebastian Bach, *Six Suites for Cello* (unaccompanied)
- Franz Joseph Haydn, *various excerpts*
- Dmitri Shostakovich, *various excerpts*

LTM Lesson Connections

This classroom presentation will serve as a companion for the following lessons in the Grade 4 binder:

- “Weather or Not”
- “Boom Whacka Whacka Whacka”
- “Probable Cause”
- “Cause and Effect”