

Subject: Science

Grade: Tenth - Physical Science

Standard: #1 Science Habits of Mind

Key Concept: Communication in science is vital to allowing one group of scientists to understand what another group has accomplished.

Generalization: Writing clear step-by-step directions for following a procedure is an essential communication skill.

Background:

Students are beginning their study of physical science and have been reviewing various science process skills. They are being a discussion of the importance of communication in science.

This lesson is tiered in *content* according to *learning style*.

Note: Each group is formed by a verbal learner, a kinesthetic learner and an analytical learner. Students may have their choice of procedure.

In each tier, the analytic learner will write out the procedure, step-by-step; the verbal learner will read the instructions exactly as written; and the kinesthetic learner will perform the action, exactly as read.

Tier I:

Procedure: How to make a peanut butter and jelly sandwich.

Tier II:

Procedure: How to brush your teeth.

Tier III:

Procedure: How to get completely dressed in the morning.

Assessment:

Teacher observation and student interviews during the investigation will serve as formative assessments. Completion of the procedure may be assessed with a prepared rubric. Students should refine their directions until the procedure can be carried out exactly as written and result in an accurate performance.

Class discussions should center on the importance of clear, concise directions and the results of poor directions with missing steps. Students should share the number of times the directions had to be revised and suggest ways to improve accuracy for future experiments.