

Science Toolkit: Grade 5 Objective 1.D.1.a

Standard 1.0 Skills and Processes

Topic D. Technology

Indicator 1. Develop designs and analyze the products: "Does it work?" "Could I make it work better?" "Could I have used better materials?"

Objective a. Choose appropriate common materials for making simple mechanical constructions and repairing things.

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Science Grade 5 Indicator 1.D.1

Design and Systems

Design Constraints

As students undertake more extensive design projects, emphasis should be placed on the notion that there usually is not one best design for a product or process, but a variety of alternatives and possibilities. One way to accomplish this goal is to have several groups design and execute solutions to the same problem and then discuss the advantages and disadvantages of each solution. Ideally, the problems should be "real" and engaging for the students.

Introduction

Science Grade 5 Standard 1

Children's strategies for finding out more and more about their surroundings improve as they gain experience in conducting simple investigations of their own and working in small groups. They should be encouraged to observe more and more carefully, measure things with increasing accuracy, record data clearly in logs and journals, and communicate their results in charts and simple graphs as well as in prose. Class discussions of the procedures and findings can provide the beginnings of scientific argument and debate. By the end of Grade 5, children will have had multiple experiences applying and practicing all of the listed science skills and processes across the concept areas.