



Science Day Adventure

California's Great America is a huge, interactive science lab. While having fun and being thrilled on rides, students have an excellent opportunity to see and feel science in action.

At Great America, science concepts become experiences. Students can feel the effects of gravity, friction, momentum and weightlessness. Students will understand how forces and energy are involved in their observations and how physics concepts are applied in the real world.

In preparation for Science Day, students perform a number of introductory classroom activities. After familiarizing students with applicable science concepts, it's off to Great America to experience them! After all, what description of weightlessness can be compared with the floating sensation experienced on the **Drop Tower**?

HOW TO USE THIS HANDBOOK

The General section of the packet provides general suggestions for planning a class trip to the park, including ideas for utilizing resource materials and references.

Materials

These Upper Elementary Handbook materials are designed to help students and teachers in grades 4-6 to make the most of their Science Day experience by providing pre-visit, during-the-visit, and post-visit activities and suggestions. These materials may be expounded upon or condensed according to the needs of the student. The focus of the observations are on physical sensations as related to ride movement; therefore, the use of measurement equipment, accelerometers, etc. is not required, but can be integrated into the activities at the teacher's discretion. The rides featured in this handbook include water rides (rafts and flumes), gravity rides (roller coasters), circular motion rides, and a momentum ride. Activity sheets as well as teacher support pages are provided for each ride category.

Features of the Teacher Support

For each ride category, the following information is provided:

Type of ride Identification of each ride

Goal One or more desired learner outcomes for each ride experience

Related items A set of science terms with which students will be come acquainted as they experience the ride and apply their knowledge

Concepts An explanation for the teacher of the basic science concepts being investigated for each ride

Pre-Visit Activity Strategies for a hands-on activity or for a teacher demonstration to motivate students and to focus the m on specific science concepts; suggestions for helping students complete the prediction section of the activity sheet, including strategies for introducing key science terms in context

Prediction Suggestions for guiding students in using what they learned in the classroom activity section to make predictions about their forthcoming experiences in the park

At the Park Strategies for helping students make observations, comparisons, inferences, and conclusions and for verifying their predictions at the park and during the ride experiences.

After the Experience Suggested activities that help reinforce science concepts, extend knowledge to related concepts, and provide opportunities for writing experiences and library research.

The Science Day Adventure Report

For subjective reports of students' trip to the park, have each student complete a "Science Day Adventure Report". Students can then share their report and photographs with the class. You may wish to duplicate each of the reports and bind them together to make a class re review of the trip. The reports offer students an excellent opportunity to practice creative writing skills.

Field Trip Alternatives

Although a trip to California's Great America is an excellent science learning experience for all students, it is sometimes difficult to schedule the event as a school field trip. If this is the case, consider trying some of the following:

- Give extra credit to students if they complete the activities on a family visit to the park
- Encourage students to use the activities as part of a school science club program with participation on a volunteer basis, including parental support in providing transportation to the park.
- Share materials with other youth groups. Often these groups schedule spring outings to the park and can integrate learning experiences into their activities.