Physics/Science/Math Day Planning Checklist

Time		Activities
Early in School Year		1. Determine date of Physics Day
		2. Secure permission for field trip
		3. Secure transportation - line up buses, cars, etc.
		4. Attend Teacher Orientation run by the park
		5. Set up fund-raising
Mid-year		6. Use ride examples in class lectures and demonstrations
		7. Include ride-based problems in class assignments
		8. Include ride-like situations in labs
		9. Double-check transportation
		10. Purchase instruments needed at the park
		11. Line up chaperone(s)
Last two months		12. Collect money and parent permission forms
		13. Order tickets from park
		14. Final check on transportation
		15. Prepare excuse list for office
		16. Confirm chaperone(s)
		17. Make arrangements for computer lab time
Last week(s)		18. Conduct review activities with students
		19. Prepare students for project
		20. Prepare equipment and printed packets
		21. Make plans for non-attending students
		22. Make plans for substitute teacher(s)
		23. Organize students for the field trip
On P/S/M Day		24. Transport students and equipment to the park
		25. Manage multimedia equipment you are taking
		26. Be available for students at the park
		27. Transport students back to school
After P/S/M Day		28. Return equipment to storage locations
		29. Distribute any data or multimedia to students
		30. Collect work due from students
		31. Oversee the production of projects
		32. Oversee the evaluation of student work

The following pages contain some more details on the checklist above.

Details from Planning Checklist

Early in School Year

1. The dates for Physics/Science/Math Days are posted on the Physics Day web site as soon as they are known, usually in early summer. Go to: http://www.physicsday.org
2. Most schools have a two- to four-step process for obtaining field trip permissions. Get this done as early as possible, even before school opens if you can.
3. Lining up transportation can be a taxing ordeal. Get this done as soon as you can, preferably within the first week or two of the school year. Saves lots of headaches later.
4. Paramount's Great America and the Teacher Steering Committee holds an annual Teacher Orientation in the fall. This is usually late September or early October. The exact date will be published on the Physics Day web site. In addition, cards are mailed out to each school during the first week of September. There's no cost to teachers for attending, and normally you are allowed to bring guests. Members of the Steering Committee conduct the day's activities but leave time for you to enjoy the park during the afternoon.
5. Some schools find a need to raise funds to support their field trip to Great America. Costs for transportation can be very high. If you need to raise money, it's best to start early.

Mid-Year

6. We support the use of examples from amusement park rides during class presentations. They help to bring life to your class since students are innately interested in roller coaster and other attractions. Photographs taken during a previous year's P/S/M Day can spice up the presentation, too.
7. Using calculations based on amusement park rides helps students to see the value of knowing how to make these calculations. Take advantage of the interest and also the clear way that designers and riders are subject to the rules of nature while at the amusement park.
8. It is possible to simulate some aspects of roller coasters and other rides in labs. Students may not be aware of this until you point it out and help them bridge the gap between classroom instruction and the "real world".
9. Around the end of first semester is a good time to double-check your transportation arrangements. Has the cost gone up? Have all the buses you need been earmarked for you or is someone holding a big surprise. Don't wait until the last minute to learn bad news.

10. If you need additional instruments for taking measurements at the park, be sure to order them with time enough to receive them and assemble them. If you are going to make your own, the same holds true.
11. If you will need chaperones to help bring your classes to the park, now is a good time to line them up. Don't overlook asking teachers from other departments like English and Social Studies. They are often the most enthusiastic upon returning when they see the amount of work and quality of work your students do a the park.

Last Two Months

12. When deadlines for the current year become known, you can determine when student permission forms and money for their tickets must be turned in. Some teachers report they have the best response by giving the students no more than a week's leeway to complete these important tasks. Be organized!
13. Once you get a head count and have your money in hand, submit your order to the park. Don't wait until the last minute as they will be processing orders from several hundred schools, all within a short time frame. Fill out your order form clearly so they don't have to guess.
14. It doesn't hurt to make a final check on transportation about now. This will allow you to sleep easier knowing this important facet of the trip is in good order.
15. Most schools will require you to submit an excuse list for the field trip. If you don't know what the easiest way to do this is, ask. Many schools use an attendance program that makes it fairly easy to construct an excuse list. Make sure you've followed all the school rules and procedures.
16. If you are taking chaperones along, be sure they are confirmed. Also let them know what you expect them to do during the day, whether it's simply monitoring the buses en route, or if you expect them to help in other ways.
17. Some teachers have their students complete multimedia projects upon return from the park. Arrangements need to be made in advance so you will be able to use the lab as you envision.

Last Week(s) Before Going

18. Consult the pages in your packet, or on the web site, about Measurement. Students need to know how to use the instruments and have some practice doing so. Activities like

finding the height of the school's flagpole, the width of a building, and their pace help them to learn how to conduct their work at the park. If you are using electronic instruments, practice in the lab is very useful. Some suggestions are given on the web site.

19. If you are going to do a multimedia project, students need time to get organized, What data do they need to collect? What photographs? What video? One measure of project quality is how much time students are given to get prepared and another one is the amount of decision-making they have in what their project's final form will take.
20. You need to get your equipment ready. This includes traditional and electronic accelerometers. Make plans to hand them out to students so they get the tools they will need and you don't spend the final morning tearing your hair. Plan what you are going to do with your packets. Print what is needed for your class. One quick suggestion: If you put a distinctive colored cover on your packet, you'll be able to spot them easily in the crowds of students.
21. If some students will not be going, they need to have an equivalent assignment to complete back at school. One suggestion is contained on the Physics Day web site under Curricular Activities.
22. If you are going to need a substitute teacher, make sure you've arranged for one well in advance. Leave them specific plans in as detail a form as possible. Remember, they are hard-working professionals, too.
23. Make sure your students know where to go, when to be there, what is expected of them in the way of behavior, what is not acceptable behavior, what to do in an emergency, and the amount of work they are expected to complete while at the park. One suggestion is for you to carry a list of phone numbers where you can contact their parents in the unlikely case something goes wrong. With several thousand students at the park, it is likely that several may become ill during the day through no fault of the park. Be prepared.

On Physics/Science/Math Day

24. The big day! Have a plan for loading your students onto buses or other transportation. In one school, each bus has an adult in charge. He/she checks students off a copy of the master list as they board the bus and hands them their pass to the park. Prior to this, another chaperone has handed out the worksheet packets and ziplock bags containing

their instruments. At the park, the teacher in charge reviews the various lists and determines which students are actually in attendance and those who aren't.

25. If you are taking school digital and video cameras, be sure you have a plan for transporting them and checking them out at the park. Students who need them for their projects could be enlisted to help in this process.
26. Have a specific place in the park where you will be at specific times. Students can be asked to check in with you, or they can simply know that you are going to be there to help them out. Don't tie yourself down all day, but it is important that you be visible to your students who need help.
27. Be sure you have a plan for getting them back onto the buses to return home. Have a meeting place and time, then move to the buses. It's important to check students onto the buses again so you will know that they indeed returned home with you.

After Physics/Science/Math Day

28. Part of your management chores will be to return the measuring instruments to storage after they are all returned.
29. If you served as a central point for digital and multimedia data, make sure you've worked out ways for students to get it for their projects.
30. Collect student work: Some teachers collect everything when the students get back to school. Others have them keep it over the weekend and collect it on Monday. Still others collect their work, but give it back to them to complete their calculations in class the following class day. Whichever method you use, let the students know and stick with your plan. You can always do it differently next year.
31. If you are doing project, and there are lots of reasons for doing a multimedia project based on data they collected at the park, allow enough time for them to get a satisfactory end product. Keep them on task, but don't short cut them on how much time it takes to make a quality project.
32. Whether there is a project or not, your final task will be the evaluation of their work. Because most measurement methods yield numbers that are in the 10-20% error range, don't expect miracles in their final calculations. Look for signs of learning, of relating classroom concepts to the experiences they had at the park, and of creative thought in their approaches to the tasks you gave them.