

Science on the Run

Advice for teachers without a classroom

—William J. Hodges—

After eight years of teaching science in my own classroom, I decided to teach in a different school. Although I anticipated the challenge of teaching a new curriculum, I worried about forfeiting the luxury of having my own classroom. As the new member of the science faculty, I knew I wouldn't have a home base; instead I'd be traveling to five classrooms throughout the day. This is difficult for any teacher and provides an even greater challenge to science teachers who are intent on their class becoming a meaningful, lab-based, investigative community. Unfortunately, new teachers are usually the teachers who have to travel.

To survive, traveling teachers need to do a little work at the beginning of the year. They must be completely organized, and they must get the proper cart or carts for their journeys. They also must establish a relationship with the teachers whose rooms they are borrowing. Finally, they must reserve instructional time for setting up and tearing down laboratory equipment.

Organization is key

Organization is the key to being a successful traveling teacher. Teachers in their own room have everything at hand, and students will expect that the traveling teacher will have the same. To be a "real" teacher, the traveling teacher needs to have all of the students' work; copies of assignments for students who have been absent; and a place for attendance, incoming work, and announcements.

The best way to organize all of this is to use a portable file folder. I like the ones that are about the size of a

milk crate and contain hanging folders. The hanging files allow the folders to be reorganized as necessary, and the good ones have tabs on the top that let each folder be labeled. In my folders, I usually put all attendance items in the front; computer sheets, attendance book, seating charts, passes, and all daily tasks reside here. Having all attendance material in the front folder allows teachers to get started quickly.

Behind the attendance, I have a folder for nongraded student work. This is my "inbox." At the end of the day, if I grab this folder, I don't risk leaving anything important behind. After grading the work, I can place it into the "outbox" folders. Each class that I teach requires its own outbox. This allows me to quickly locate and return student work. After the outboxes, I place all of the work I have prepared for students. Lab instructions, worksheets, tests, and other assignments are placed into folders in the order they will be used. When



A mobile cart helps the traveling teacher stay organized and communicate news to the class.



A classroom on wheels.

I finish handing out an assignment, I place that folder at the end of the file folder. I can then easily access this for absent students. For multiple classes, I divide the worksheets section into as many sections as I have classes. Once again, this allows me to access materials for students quickly, maximizing instruction time.

Most teachers have a few desk drawers devoted to pens, pencils, markers, paper clips, and all of the daily needs of teaching. I organize my school supplies by keeping them in a small toolbox. The toolbox has small compartments for staples and other fasteners and large containers for pens and pencils. I also include important emergency repair tools in this kit, including a small screwdriver, tweezers, a spatula, and a metal file.

Rather than carrying around a tool box or file folders, traveling teachers should organize all of their materials on a mobile cart. Once the equipment is organized, I help students get organized as well. Many teachers devote a section of their blackboard to important announcements such as schedule changes, tests, and due dates. I use a small piece of dry erase marker board that I prop up on my cart (or hang from it). This allows me to place my cart towards the front of the room and communicate important items with the class. This dry erase board is about 0.4 m x 0.6 m.

The incredible teaching cart

A traveling science teacher needs a quality cart to carry glassware, chemicals, microscopes, and many potentially hazardous items. A \$50 cart that is prone to mechanical failure is not acceptable when transporting concentrated acids. Teachers should ask for an appropriate cart that is dependable, functional, and maneuverable.

My cart is fairly narrow (0.5 m) and has three levels. Each level is flat and has a small lip that discourages items from falling off. The narrowness makes it maneuverable in the halls, which is important because a shortage of classrooms generally means that the hallways are crowded. This cart is very stable, and it features an enclosed, lockable bottom level.

Organization of the cart is as important as the organization of the file folders. On the top level, I keep my milk crate file folder with the propped up piece of dry erase board in front of the file folder. The files remain accessible to me and the board always faces the classroom. My top shelf is devoted to items that I'll be using that day, such as transparencies, lecture notes, and models.

The middle shelf is a good shelf for lab materials. Beakers, flasks, dissection trays, and any other substances rest well on this shelf and do not get knocked off by a casual elbow or hip. The only disadvantage of this shelf is its height. Sometimes it's cumbersome to keep bending down to retrieve or put away lab materials.

The bottom shelf is completely enclosed and has two doors that open along its entire length, so it can be used for many purposes. The first aid kit, any dangerous materials such as chemicals and razor blades, and surprise items reside here. Few teaching gestures make a greater impact than reaching down into that unseen compartment and pulling out a plastic bag of dead frogs. Anything students shouldn't have access to can be stored on the bottom shelf.

For all its many advantages, the cart has one disadvantage—it won't hold 12 microscopes or any other large load. In these cases, I bring along a second cart. I use an extra large cart (2 m x 1 m) with three shelves, enlisting a

student to help push one of the two carts. Although it takes more work to move the equipment around, I never let the inconvenience limit lab investigations.

Maintaining good teacher relationships

To ensure that the traveling goes smoother, it is important for traveling teachers to introduce themselves to all of the teachers whose rooms they share. When entering their domain, traveling teachers should act as a guest. As soon as possible, travelers should ask these teachers to inform them if anything is wrong with the classroom after the students leave. As with all relationships, communication is critical. This is the first step in building this relationship. Furthermore, be aware that all teachers have different “hang-ups” that drive them crazy. Travelers should find out each teacher’s rules and enforce them to maintain positive relationships.

Teaching science from a cart is not easy. . . . Traveling teachers can either embrace the life-on-the-run work style or get downtrodden from the rigors of moving stuff around

Once a collegial relationship has been established, it is important to request information from each of the teachers whose rooms are shared. Not all rooms will be the same, so each teacher should be asked the same questions. The following list is not complete, but it is a helpful starting point:

- ◆ Where do children need to go during fire drills? Tornado drills?
- ◆ Where are the safety devices of the room (for example, fire extinguishers, fire blankets, and eye washes) and how are they operated?
- ◆ How does the technology in the room operate (for example, televisions, remote controls, video-cassette recorders, videodisc players, and computers with passwords)?
- ◆ Is there any wall space or bulletin board space available to post grades, current science articles, or other information?
- ◆ Is there a cabinet available in which I can store long-term experiments?
- ◆ Is there a blank seating chart for the room?

Intentions should be correctly established during the first meeting with other teachers. Most people are gracious in providing the above information and can be counted on to help with other information as the year progresses.

It’s not easy being mobile

Does teaching from a cart change instruction? Yes. Traveling teachers are at a disadvantage. Every laboratory exercise takes five minutes more to set up and tear down because experimental setups cannot be left for future classes. To minimize this unproductive time, travelers should instruct students to set up lab equipment at the beginning of class and make them responsible for putting items back. Teachers using a cart are difficult for students to find outside of class time. These teachers need to find a room where they can be found before and after school and let students know where and when they are available. Failure to have a consistent meeting place will lead to frustrated students. Finally, teaching from a cart suggests novice status; experienced teachers usually have their own rooms. Students therefore often test traveling teachers. The only solution to this problem is to work hard to be the best teacher possible.

Teaching science from a cart is not easy, but most people will be sympathetic towards this plight. Traveling teachers can either embrace the life-on-the-run work style or get downtrodden from the rigors of moving stuff around. I suggest embracing the cart life and personalizing the cart. For instance, I decorated my cart by attaching a large, stuffed penguin to the front. He hangs like a figurehead off the front of a ship. This simple act of decoration amuses people and provides a soft, yet effective prod for pushing my way through crowded halls.

During spirit week, I placed an inflatable palm tree on top of the cart. It was January, and the tree reminded everyone that summer wasn’t too far away. Students soon began customizing the cart by applying various stickers to the frame. As long as the decoration shows a sense of humor and little bit of personality, it will work. The cart can sometimes create a bridge between teachers and students.

Teaching quality science in today’s school is a challenge without having to travel from room to room. Most teachers today, however, must pay their dues. Staying organized and keeping a sense of humor about the situation will make things easier until a room is assigned. As traveling teachers struggle through the school year, they should remember this: At the end of the year, when all the other teachers are grading final exams *and* cleaning their rooms, they only have to worry about the finals. At that point, it feels *very* good to be a teacher without a room.☞

William J. Hodges is a biology teacher at Holt High School, 2809 Fontaine Trail, Holt, MI 48842; e-mail: whodges@holt.k12.mi.us.