Go-Carts Video Episode

Science Unit

- *Models and Designs*, published by Full Option Science System (FOSS)
- The videotaped lesson is not part of the published unit. Science coaches in Seattle Public Schools developed the lesson so students could have experience in planning and conducting a controlled investigation, skills that are required in the Washington State Science Standards.

Time Required for the Sessions

- Science session: about 60 minutes, starting with making the class scatter plot
- Writing session: about 40 minutes, including independent writing
- These sessions were videotaped in one morning. But in a normal situation, the teacher would have taught the science session during her science time one day and the writing during a literacy time that day or the next day. To help refocus the students’ minds on the science investigation they had done earlier, the teacher would do a shared review at the beginning of the writing session, revisiting what they all had discussed in the shared reflection at the end of the science session.
- Because of the complexity of the lesson, the videotaping began at the beginning of the shared reflection at the end of the science session. For videotaping purposes, only a few students were videotaped as they put together their go-carts, ran their tests, and made calculations of mean distances.

Time of Year

- This episode was videotaped in March, at the end of the *Models and Designs* unit, the students’ second inquiry-based science unit of the year. They will study a third unit in spring.

John Stanford International School (JSIS)

- JSIS offers a dual-language immersion program in Japanese and Spanish to all students.
- Students spend half of each school day learning core subjects in their target (non-native) language, either Japanese or Spanish. The immersion teacher speaks only in the target language for her students.
- During the other half of the school day, students learn other core subjects in English.
- JSIS also has one of the district’s Bilingual Orientation Centers, which serves English language learners who are new to the United States.
Videotaped Classroom

- This teacher has a total of 59 fifth graders during the day. She teaches language arts, science, health, and sometimes social studies in English to half of these students in the morning and does the same with the other half of the students in the afternoon.

- Two bilingual aides help support some of the English language learners about 30 to 40 minutes a day, including during the science-writing sessions.

- An aide in the Special Education Program also supports students in the classroom who receive services in special education. (There are no separate, out-of-classroom services for these students; they are included in the general education classroom setting and receive support as stipulated in their Individual Education Plan.)

- This teacher has taught Models and Designs, one of the three inquiry-based science units she teaches each year, for thirteen years.

Students in the Videotaped Session

- These students are the teacher’s afternoon class of 29 fifth graders, including 11 who are learning English as a second language and some who receive services in special education.

- Students who have attended this school since kindergarten have been learning science through inquiry-based units every year. Some of their teachers also implement the science-writing approach in their classrooms.

School Demographics

- African American: 5.2%
- Asian: 23.8%
- Latino: 16.9%
- Native American: 0.8%
- White: 53.3%
- Free or reduced-price lunch: 15.0%
- Limited English proficiency: 16.1%