

Data Display Lesson Plans—A Note for Teachers

I have created these lesson plans to provide a tool for introducing three data displays to your students. While not common to elementary instruction before 2000, these data displays began to appear in professional standards, state standards, and elementary textbooks in the 1990s. They began to appear on standardized tests created after about 2005 because they are now common to state standards and to upper elementary textbooks. These data displays introduce concepts that will be developed in more advanced mathematics classes. I have reviewed several sets of standards and several textbooks before deciding to create these lesson plans. These data display types are introduced at grades 4–6 in all state standards that I have reviewed and in all textbook series that I have reviewed except one. Since they are commonly taught and occur on standardized tests, I believe they should be introduced to your students if you are not already teaching them.

I looked for online presentations that might be used. I did not find anything that I thought would be good for elementary instruction. I did find some short Khan Academy videos that would be good for instructing the teacher if you are unfamiliar with these data displays, and I recommend them to you; but I did not find any online presentations that I thought would be good for elementary students.

I also found multiple lesson plans for each display type on teacherspayteachers.com. If you don't like my lesson plans or want to provide additional instruction without creating your own lessons, I recommend that you look there. I saw several plans that I thought would be good for less than \$5.

I have tried to create lesson plans suitable for students in grades 4–6. But my experience is high school math, and I had some difficulty limiting the lessons only to the introductory information about each display type. I used data that would fit nicely with the display and an introduction to the concepts and did not introduce some next-step concepts—for instance, I used odd numbers of data points in the examples for box-and-whisker plots and did not introduce values for quartiles that fall between data points.

I have used language in these lesson plans that mirrors the language I found in texts for grades 4–6 and in state standards. If the lessons use terms that your students are not familiar with, you should introduce them to those terms—other students at their grade level understand those terms.

You may feel that your students are not developmentally ready for some of the math concepts introduced by these displays. If so, good for you! I'm inclined to agree with you, especially when it comes to box-and-whisker plots for 4th-grade students . . . but results from the Iowa assessment indicate that many students *are* developmentally ready because they outscore the sample of AACS students by pretty wide margins on questions that cover these display types. So don't just dismiss these display types—standardized test scores indicate that most students are developmentally ready to understand simplified forms of them.

Finally—nothing in these lesson plans is copyrighted. They have been developed to help you, so feel free to copy, cut/paste, and modify at your pleasure to help you introduce these display types to your students.

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