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Contexts for highlighting signal and noise.

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Summary: During the past several years, we have conducted a number of instructional interventions with students aged 12–14 with the objective of helping students develop a foundation for statistical thinking, including the making of informal inferences from data. Central to this work has been the consideration of how different types of data influence the relative difficulty of viewing data from a statistical perspective. We claim that the data most students encounter in introductions to data analysis – data that come from different individuals – are in fact among the hardest type of data to view from a statistical perspective. In the activities we have been researching, data result from either repeated measurements or a repeatable production process, contexts which we claim make it relatively easier for students to view the data as an aggregate with signal-and-noise components.

Classification: K43 D83 U73

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