

## NCTM Standards and Expectations

### DATA ANALYSIS STANDARDS GRADES 3-5

NCTM STANDARDS	3-5 NCTM EXPECTATIONS
Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them	<ul style="list-style-type: none"> <li>• Design investigations to address a question and consider how data-collection methods affect the nature of the data set</li> <li>• Collect data using observations, surveys, and experiments</li> <li>• Represent data using tables and graphs such as line plots, bar graphs, and line graphs</li> <li>• Recognize the differences in representing categorical and numerical data</li> </ul>
Select and use appropriate statistical methods to analyze data	<ul style="list-style-type: none"> <li>• Describe the shape and important features of a set of data and compare related data sets, with an emphasis on how the data are distributed</li> <li>• Use measures of center, focusing on the median, and understand what each does and does not indicate about the data set</li> <li>• Compare different representations of the same data and evaluate how well each representation shows important aspects of the data</li> </ul>
Develop and evaluate inferences and predictions that are based on data	<ul style="list-style-type: none"> <li>• Propose and justify conclusions and predictions that are based on data and design studies to further investigate the conclusions or predictions</li> </ul>

*NCTM Principals and Standards for School Mathematics 2000*