

# Turnkey Guidance for The New York State Next Generation Mathematics Learning Standards Statistics Progression Video (Pre-Kindergarten-Algebra II )

Goal: The following offers suggestive guidance on how districts can utilize the Statistics Progression Slideshow as a platform for collaborative conversations on the importance of statistical literacy. The slideshow takes an over-arching look at the progression of the statistics standards, Pre-Kindergarten through Algebra II, and provides an understanding of what the statistics standards require when it comes to student learning and instruction. What follows below are recommended stopping points, discussion points and guiding questions. Both the slideshow and guidance below are not intended to limit discussion and instruction.

## Materials needed :

- x Statistics Progression Slideshow for Pre-Kindergarten-Algebra II
- x [New York State Next Generation Mathematics Learning Standards](#)

## Optional Materials :

- x [Draft K-5 Progression on Measurement and Data \(measurement part\)](#)
- x [Draft K-5 Progression on Measurement and Data \(data part\)](#)
- x [Draft 6-8 Progression on Statistics and Probability](#)
- x [Draft High School Progression on Statistics and Probability](#)
- x [Guidelines for Assessment and Instruction in Statistics Education Pk-12 Report \(GAISE\)](#) of the standards to the session.

## **STOP 1: IN A DATA DRIVEN WORLD** (time stamp 0: 44)

Slide 3: Several images/words are shown that highlight where data appears in daily life.

### Guiding questions :

- x What impact/role does statistics have in the adult daily routine/life? What daily experiences/decisions involve having statistical knowledge? (e.g., weather prediction, when is it appropriate to wear a jacket)
- x What impact/role does statistics have in our students' daily routines/lives? What role can statistics play in supporting culturally responsive instruction?
- x What does "statistically literate" look like in the grade strands (similarities/differences)?
  - o Pre-K thru Grade 2 (e.g., sort and classify, construct and interpret picture/bar graphs)
  - o Grades 3-5 (e.g., construct and interpret scaled picture/bar graphs, line plots with measurement data)
  - o Grades 6-8 (e.g., sampling populations; construct and interpret dot plots, histograms and box plots; graph bivariate data)
  - o Grades 9-12 (e.g., regression line, correlation coefficient, correlation vs causation, normal distribution, sampling distributions, simulation, and inference)
- x How are statistical reasoning and algebraic reasoning different? (e.g., statistical reasoning includes data collection, representation, interpretation, and prediction whereas algebraic reasoning

involves representing, generalizing, and formalizing patterns and regularity in all aspects of

- x When do students begin comparing two or more samples? (e.g., NY-7. SP.3)
- x

