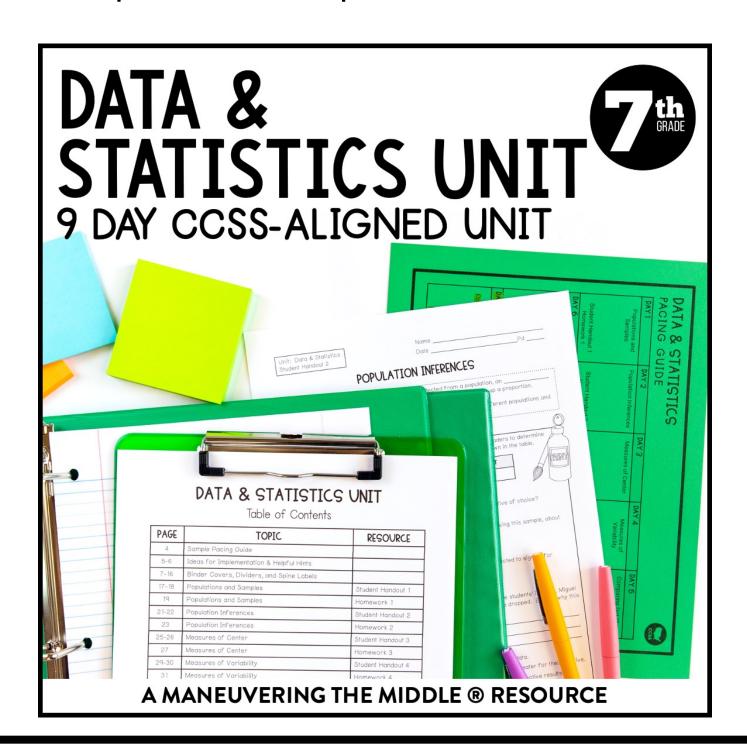
learning focus:

- compare two populations based on random samples and use data to make inferences
- √ determine measures of center and variability
- compare the shapes, centers, and spreads of dot plots and box plots





a 9 day CCSS-aligned unit CCSS: 7.SP.1, 7.SP.2, 7.SP.3, 7.SP.4

ready-to-go, scaffolded student materials

DATA & STATISTICS UNIT

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student friendly + real-world application

nit: Data & Statistics tudent Handout 2	Name Date	Pd		s	kill	
	TION INFERENCES				_	icati
OPULATION TNEEDENATION	as been collected from a population, an population can be made by setting up a population can be used to compare different	proportion.			ppi I	Carr
se the information below to answer the Eastside Middle School conducted a si hich elective they were most likely to pr SPA 6TH GRADE	A video company randomly so adult subscribers and asked there preferred genre of TV shows.	m their aph at right to	TV SHOW DRAMA GENRE	MADULTS ACTION		
. How many students were surveyed?	a. How many total subscribers	were s	OLIVIC			
. What percentage of students surveye . There are 350 students in the 6 th grad ow many students can be expected to s	b. What percentage of subscrit	Homework 2		Name Date		Pd
	sample, how many adult subscrit	Action Committee	nior High newspaper sta			times with two
. Of the 350 students in the 6 th grade, t leater?	d. What percentage of subscrib	samples of 40 to	andomly selected studer shown below.		entire 600-membe	er student population.
The school decides to drop any elective ays that since only 6 students would like or is not correct.	e. Mark each of the following si More teens were surve Adults liked dramas ma	eyed that I. Read each that I headling	SAMPLE #1 SAMPLE #2 neadline and explain if the EA HEADLIN		7	HEADLINE D
Mark each of the following statement:	ways they get home from school	on infer only sele OVER 300 STU WANT TO S AFTER 8:00	TART MOST POPUL	AR WITH STUDE	PERCENTAGE OF NTS WANT TO F AT 7:45 AM	LESS THAN 100 STUDENTS WANT TO START AT 9:00 AM
Over half of the students at Ea Combined, the Spanish and art	represent the data?	200 1 100 201				
Out of the 350 students at East	TRANSPORTATION HOM					
	P :	Headline C:				And the second
	BUS CAR TRANSPORTATION					10 12 17
	Summarize today's lesson:	your under	standing of population in	nferences to answe	r the questions be	low.
			ard randomly samples 80 ne next school year. The			
		-	OPPOSED	UNDECIDED	IN FAVOR]
		a. If 1,200 stud	ents are in the district, t	24 now many students	45 can be expected to	oppose school
higher l	evel —	uniforms?				
analysis			s that based on the surv Do you agree or disagre			cided or opposed

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streamline your planning process with unit overviews





STANDARDS

7.SP.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

7.SP.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions

7.SP.3 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of

7.SP.4 Use measures of center and measures of variability for numerical data from random samples to



√ key vocabulary



BIG IDEAS

- · Statistics are a way of exan
- A statistic is only valid if the
- Measures of center and vari

DATA & STATISTICS PACING GUIDE

DAY 2

DAY 3



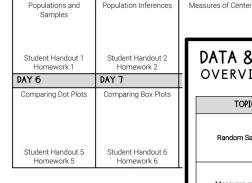
DAY 5

Data and Statistics

sample pacing calendar

ESSENTIAL QUESTION

- · How can you determine wh
- · How can statistical informa
- · When two populations overl
- What constitutes a random



DATA & STATISTICS OVERVIEW

DAY 4

Measures of Variability



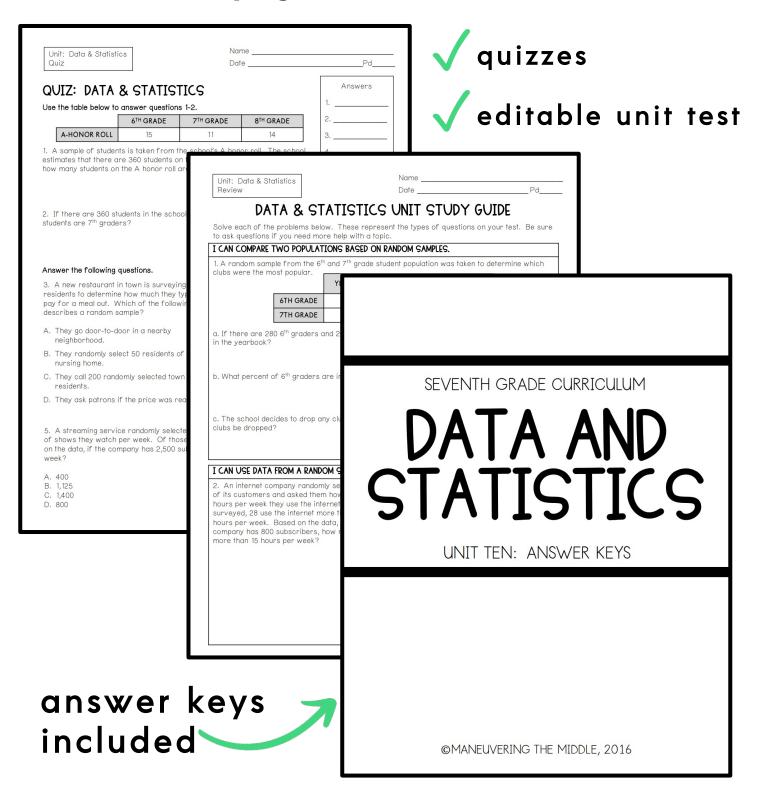
TOPIC	TEACHING TIPS				
Random Sampling	This is a great opportunity to get students out of their seats and working with others. Ask them to create a short (2-3) question survey and use it to collect data amongst their classmates. Based on their data, students should be able to determine their sample and if it was random or not. Ask students to make improvements on their collection methods to ensure it is a random sample.				
Measures of Center	Students need to be able to recognize that the mean and the median are two different measures of center, and one is a better judge based on what the data set looks like. When the data is skewed, the median is the best representation. When the data is symmetric the mean is the best representation.				
Measure of Variability	I think this is a great discussion when looking at the statistics of a professional basketball team. There will be specific measurements (height) that have less variability, but then there will be others that have great variability (number of free throws, number of points scored).				
Comparing Data Sets	Students tend to struggle with the "wordiness" of these types of questions. Encourage them to see each answer choice as a true or false statement. Take a quick poll of your classroom regarding the time in which they go to bed each evening. Then, ask the girls (or one half of the class) to put their sticky note on the board in the appropriate column. Have the other half of the class do the same on another graph. Use the sticky notes to create either a dot plot				

teaching ideas



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unit study guide + assessments



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