

Fourth Grade
Trailblazers Unit 5

“Using Data to Predict”

North Carolina Standard Course of Study

<http://www.ncpublicschools.org/curriculum/mathematics/scos/2003/k-8/24grade4>

MTB Correlation to NCSCOS

<http://www.kendallhunt.com/uploads/2/CORR-NC-MTB2.pdf>

Unit Activities

- Students look for patterns in point graphs. When appropriate, they draw best-fit lines and make predictions based on the graphs.
- Students investigate averages. They learn to find the mean and review how to find the median value of a set of data.
- Students continue to explore averages. They find the circumferences of their classmates’ heads and represent the data using means.
- Students look for the relationship between the drop height and the bounce height of a tennis ball and a Super ball. They collect, record, and graph the data, using the data to make predictions.
- Students read a story about two students who work together to compete the *Bouncing Ball* experiment.
- Students use patterns in tables and graphs to make predictions and solve problems.
- Students solve word problems based on a graph that gives the average speeds of the winners of the Indianapolis 500 since 1911.

Unit Vocabulary

Best-fit line	Extrapolation	Interpolation	Average	Mean
Median	Circumference	Mean	Fixed variable	Manipulated variable
Responding variable				

Fourth grade glossary link: <http://www.kendallhunt.com/index.cfm?PID=234&PGI=0>

Unit Manipulatives/Supplies

Ruler	String	Envelopes for storing flash cards	80 connecting cubes/each student pair	Roll of adding machine tape or ball of string
Meterstick	Scissors	Adhesive tape	Calculator	Crayons
Tennis ball/student group	Super ball/student group	2 metersticks/student group	Masking tape	

Unit Assessment Indicators

- Can students draw and interpret best-fit lines?
- Can students find the median and mean of a data set?
- Can students identify and use variables?
- Can students measure length in centimeters?
- Can students use patterns in data tables and graphs to make predictions?
- Can students collect, organize, graph, and analyze data?
- Can students solve open-response problems and communicate solution strategies?
- Do students demonstrate fluency with the multiplication facts for the square numbers?
- Can students write the two number sentences in the fact families for the square numbers?

Unit Literature

- None Recommended

Unit Software

- *Graph Master* provides practice with collecting data and creating graphs.
- *Kid Pix* helps students create their own illustrations.
- *Math Mysteries Measurement* provides practice with multistep problem solving involving distance, weight, and capacity.

Websites to Explore

- Rainforest Math – Click on level D or E - Choose *Space - Data* on the bottom row. Also choose *Measurement - Length* on row three.
<http://www.rainforestmaths.com/>
- Revise Wise Math – Interpreting Data
http://www.bbc.co.uk/schools/revisewise/maths/data/11_act.shtml
- Revise Wise Math – Finding Mode, Median, and Mean
http://www.bbc.co.uk/schools/revisewise/maths/data/12_act.shtml

You Can Help Your Child

- Encourage your child to tell you about the *Bouncing Ball* lab. What data did his/her group collect? What predictions did the group make?
- Discuss averages (family height / ages / sports).
- Look up examples in the newspaper of where averages are used (weather patterns, sports section)
- Predict the outcome of ballgames & discuss patterns

- In this unit, we continue reviewing the multiplication facts focusing on the third group of facts, the square numbers ($3 \times 3 = 9$, $4 \times 4 = 16$, $5 \times 5 = 25$, etc.) Your child can practice these facts using *Triangle Flash Cards*.