PATTERNS & BIVARIATE DATA

Unit Plan

LESSON	RESOURCES
Before the Unit (Pages 6 – 12)	• Weekly Warm Up Sheet • Exit Tickets • Lesson Plan Template • Vocabulary • Pre-Assessment
(1) Constructing & interpreting scatter plots (8.SP.1) (Pages 13 – 24)	• Four Warm Ups • Construct and Interpret Scatter Plots Notes • Interpreting Scatter Plots Fold and Flip Notes • Constructing Scatter Plots Worksheet • Interpreting Scatter Plots Worksheet Interpreting Scatter Plots with Real Data Worksheet
(2) Determining & predicting with lines of best fit (8.SP.2 & 8.SP.3) (Pages 25 – 34)	• Five Warm Ups • Determining Line of Best Fit Notes • Determining Line of Best Fit Worksheet • Scatter Plots and Line of Best Fit Quiz
(3) Two-way tables (8.SP.4) (Pages 35 – 45)	• Four Warm Ups • Two-Way Tables Notes (2 pages) • Frequency and Relative Frequency Notes • Two-Way Tables Worksheet (2 pages) • Relative Frequencies Worksheet
End of Unit (pages 46 – 55)	• Review Sheet • Review Tabbed Mini Book • Unit Exam

Name_____ Date _____

PATTERNS & BIVARIATE DATA PRE-ASSESSM

PRE-ASSESSMENT

Read each question carefully. Show your work on a separate sheet of paper if necess

1) Complete the table for the equation.

$y = \frac{1}{3}x - 8$

X	Y
-3	
0	
3	
6	

2) Complete the table for the equation.

$y = -3x + 2$

X
-1
0
1
2

3) Graph the equation.

$y = 2x - 6$

4) Graph the equation.

$y = -\frac{3}{2}x + 4$

Name_____ Date _____

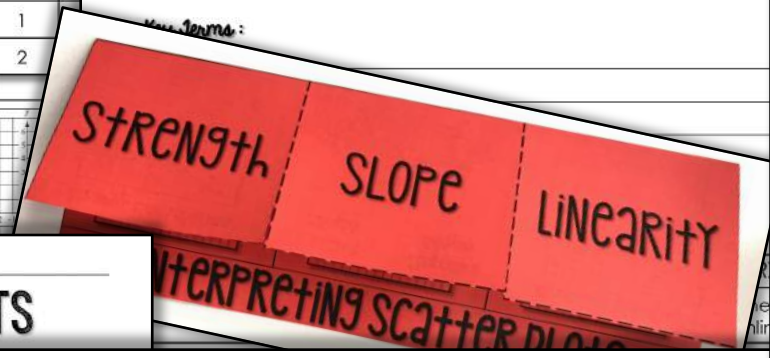
CONSTRUCT & INTERPRET SCATTER

Notes

What is a Scatter Plot?

•

Key Terms :



Name_____ Date _____

INTERPRETING SCATTER PLOTS

Practice

Directions : Label each scatter plot using one term from e

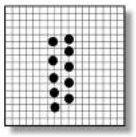
TERMS TO DESCRIBE STRENGTH	TERMS TO DESCRIBE SLOPE	TERMS T
Strong or Weak	Positive, Negative, or Zero	

1)

Strength : _____

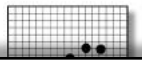
Slope : _____

Linearity : _____



2)

Strength : _____



5)

Strength : _____

Slope : _____

Linearity : _____

6)

Strength : _____

Name_____ Date _____

DETERMINING LINES OF BEST FIT

Notes

What is a Line of Best Fit?

•

Steps to determining the line of best fit :

1. _____
2. _____

for each scatter plot. If you are unable to draw a line of best fit, be

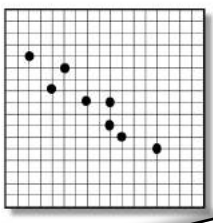
Name_____ Date _____

DETERMINING LINES OF BEST FIT

Practice

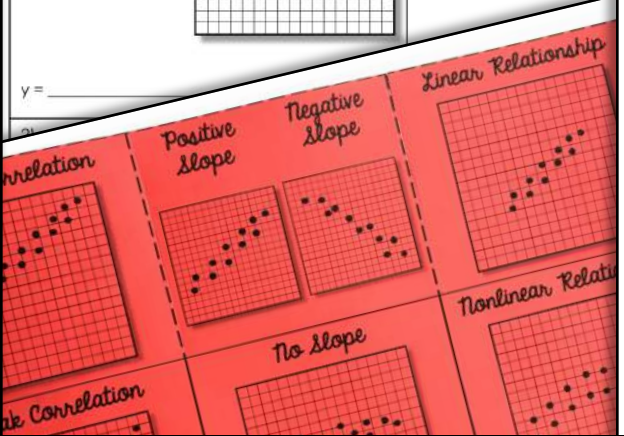
Draw a line of best fit for each scatter plot. Write an equation for each line. Assume each ax

1)



y = _____

4)



Name_____ Date _____

SCATTER PLOTS & LINES OF BEST FIT

Quiz

1) Construct a scatter plot using the data given in the table below.

WATER DEPTH (FEET)	TEMPERATURE (°F)
25	34
10	50
6	75
5	60
12	56
10	69
20	41
15	46
15	47
12	55
2	82

TWO-WAY TABLES
Warm Up

Skill : Complete Function Tables

Create a function table for the given equation.

3

X	Y

2) Create a function table
equation.

$y = -4x + 3$

Name _____ Date _____

TWO-WAY TABLES
Warm Up

Skill : Two Way Tables

Create a two-way table for each set of data.

way table from the given data about whether or not students are
whether or not they enjoy watching movies.

F	M	F	F	M	F	M	F	M	M	F	F	F	M
Y	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	N	Y

Name _____ Date _____

TWO-WAY TABLES
Notes

What is a two way table?

•

Examine the Parts of a Two-Way Table :

The two-way table below displays data from a studer

Name _____ Date _____

TWO-WAY TABLES
Practice

ble for each set of data :

graders was
its own a tablet
a cell phone.
e a tablet but
19 students do
phone or a

Name _____ Date _____

RELATIVE FREQUENCIES
Practice

Snack preference based on age range.

	Ice Cream	Cookies	Fruit	Total
Under Age 18	240	32		
18 and Older				65
Total		51		70

1) Complete the two-way table above.

2) Create a relative frequency table using the two-way table

Name _____ Date _____

PATTERNS & BIVARIATE DATA UNIT
Study Guide

Creating Two-Way Tables

ead the given scenario.
e two separate
s of information.
e options for one
at the top of each
nd the options for the

Line of Best Fit

What is it?

A line that refers to a trend in data. It shows a positive or negative correlation (or no correlation at all). The line suggests a possible mathematical relationship between two sets of data.

How do I find it?

ve Tabs + Front & Back Covers

RELATIVE FREQUENCY

hat is relative frequency?

	21	24	45
Swimming	8	18	26
Fishing	13	6	19

elative frequency table using the
table above :

Swimming		
Fishing		
	Male	Female

WAY

350

Name _____ Date _____

PATTERNS & BIVARIATE DATA
Unit Exam

Show your work whenever possible. Use a separate sheet of paper if you need more room!

1) Construct a scatter plot for the given
Errors on Violin Test vs. Hours Practic

NAME	HOURS PRACTICED
Ana	0
Jason	2
Manuel	3
Safa	2.5
Michael	1
Josef	4
Polly	3.5

2) Draw a line of best fit.

3) Write an equation for the

4) Use the line of best fit
have if they practice

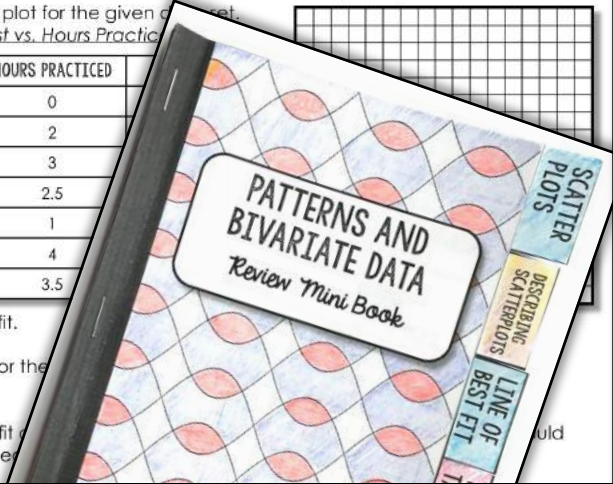
uld

hat is a line of best fit?
A line that suggests a possible mathematical relationship between two sets of data.

How to draw a line of best fit :
Draw a line through the points so that an equal number of points lie above and below the lin

LINE OF BEST FIT

TWO-W TABLES



Unit Prep
PATTERNS AND BIVARIATE DATA UNIT

SUGGESTED TIME FRAME : ONE DAY

Resources Included:

- Weekly Warm Up Sheet
  - Copy weekly for each student. This provides them with an organized place to keep their warm ups each day and makes it simple for grading.
- Exit Tickets
  - This sheet includes 5 exit tickets that can easily be cut or torn by students and turned in each day. Provide students with a single problem to solve or question to respond to at the end of each class.
  - Exit ticket problems are not included since classes work at different paces.
- Lesson Plan
  - A blank lesson plan template is included for you to print and record your daily lesson(s).
- Vocabulary
  - Two versions of the vocabulary sheet are included. One pre-filled with words from the unit and one blank.
- Pre-Assessment
  - A short one page assessment

Lesson 1 : Construct & Interpret Scatter Plots

PATTERNS AND BIVARIATE DATA

SUGGESTED TIME FRAME : THREE - FIVE DAYS

- Four Warm Ups
- Construct and Interpret Scatter Plots Notes
- Interpreting Scatter Plots Fold and Flip Notes
- Constructing Scatter Plots Worksheet (for homework or independent practice)
- Interpreting Scatter Plots Worksheet (for homework or independent practice)
- Interpreting Scatter Plots with Real Data Worksheet (for homework or independent practice)

ESSENTIAL SKILLS

- Gather, organize and display bivariate data.
- Analyze data points on a scatter plot and describe the relationship.
- Investigate patterns of association in bivariate data.

Lesson 2 : Lines of Best Fit

PATTERNS AND BIVARIATE DATA UNIT

SUGGESTED TIME FRAME : THREE - FIVE DAYS

- Five Warm Ups
- Determining Line of Best Fit Notes
- Determining Line of Best Fit Worksheet (for homework or independent practice)
- Scatter Plots and Line of Best Fit Quiz

ESSENTIAL SKILLS

- Analyze bivariate data to make inferences or predictions.
- Investigate patterns of association in bivariate data.
- Analyze data points on a scatter plot and describe the relationship.

Lesson 3 : Two-Way Tables

PATTERNS AND BIVARIATE DATA UNIT

SUGGESTED TIME FRAME : THREE - FIVE DAYS

- Four Warm Ups
- Two-Way Tables Notes (2 pages)
- Frequency and Relative Frequency Notes
- Two-Way Tables Worksheet (2 pages – for homework or independent practice)
- Relative Frequencies Worksheet (for homework or independent practice)

ESSENTIAL SKILLS

- Gather, organize and display bivariate data.
- Analyze points in a two way table.

End of Unit
PATTERNS AND BIVARIATE DATA UNIT

SUGGESTED TIME FRAME : TWO DAYS

Two days should be allotted for the end of the unit to allow time for review.

Resources Included:

- Study Guide
- Review Mini Book
- Final Unit Exam