

2.MD.9

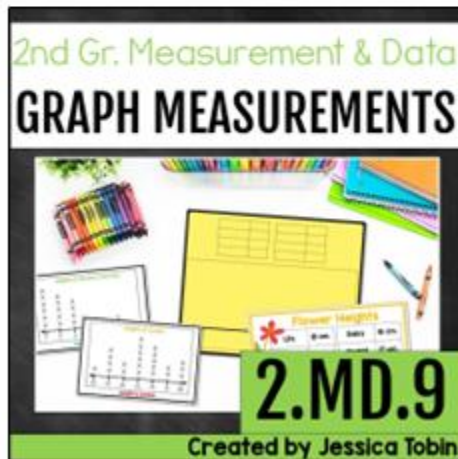
The image displays various educational tools and worksheets for measuring length. At the top center is a large white box with the text "2.MD.9". Below it, a yellow sheet of paper features a grid at the top and a large blank area for drawing or writing. To the left, a set of colorful crayons is shown. In the bottom left, a worksheet titled "Heights of Shrubs in the Park" shows a simple bar graph with three bars of different heights. In the bottom center, a worksheet titled "Heights of Cousins" shows a dot plot with a horizontal axis labeled "Length in Inches" ranging from 50 to 80, and several 'X' marks representing data points. In the bottom right, a worksheet titled "Flower Heights" features a table with a red flower illustration on the left and a table of flower names and their heights in centimeters.

Lily	18 cm.	Daisy	16 cm.
Rose	19 cm.	Orchid	17 cm.
Carnation	15 cm.	Daffodil	15 cm.
Tulip	15 cm.	Sunflower	20 cm.

2.MD.9

This math unit provides lesson plans and math group resources to use while teaching the standard **2.MD.9**, which states that students will be able to...

"Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units."



Using This Unit

Let's look at the structure of this unit.

Pre-Assessment

- A pre-assessment is included that will help give you an idea of where your students are with this specific standard. Give this pre-assessment prior to any lessons on the standard.

Daily Lessons





- Whole Group- The whole group lesson will typically involve an anchor chart or poster to discuss. This should take about five minutes to complete.
- Partner Practice- The whole group activity will be followed up with a partner practice activity. It will build on the knowledge the students learned or reviewed in the whole group lesson. This should take between 5-10 minutes.
- MATH Groups- There are four break-apart groups to do each day. Each rotation can last between 10-15 minutes depending on how long you get for your math block.
 - *Math Writing*- 2 writing options are given each day (one full sized page OR a cut and glue strip for a math journal)
 - *Apply Skills*- You will find a variety of practice resources here, such as printables, interactive notebooks, or partner activities.
 - *Teacher Time*- Small group differentiation can happen here. Most days will include a 'Remediation' activity, an 'On-Level' activity, and an 'Enrichment' activity.
 - *Hands-on Practice*- These centers will give your students chances to get practice with manipulatives and other engaging activities.
- Exit Slip- Every single day will come with an exit slip for students to show what they learned that day. Teacher will cut apart the three strips.

Assessment

- This is to be completed after all lessons and math groups are taught.

Daily Lesson Plans

Each standards-based math unit comes with daily lessons. Some are 3 days, while others may be 5+ days, depending on how complex the standard is. There are **4 main components** of each daily lesson.

2 nd Grade Math: 2.MD.9 Lesson #1	2.MD.9 lesson 1	
I can create a line plot made up of measurement data.		
Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.		
Activities		
Materials		
Whole Group	Today's focus is going to be on reading graphs that deal with measurement. Teacher will either create anchor chart introducing measurement graphs, or teacher will show graphing poster provided. Teacher will then show two examples of measurement graphs and ask the questions on each task card.	
Partner Practice	Teacher will display one graph at a time under a document camera or on the board. Students will participate in a Mix-Pair-Share activity. Students will mix up around the room, pair up with a new partner, and share the answer to the question on each task card. Repeat for all task cards.	
Math Groups	M- Students will write about measurement line plots. Teacher will choose the full page writing sheet OR the cut apart strips for math journals. A- Teacher will either copy the two printables front/back for students to complete with pencils or slide them into sheet protectors for students to complete with dry erase markers. T- Teacher Time is not differentiated today. Teacher and students will work together to set up their input and first output page in the interactive notebook. H- Students will draw a task card, use the graph attached to find the answer, then record their answer on the recording sheet.	
Exit Slip	Students will complete an exit slip independently. Students will trade papers with a nearby classmate and grade their paper with a marker/pen while teacher reviews answers as a whole group.	

Whole group activity: This activity will typically include an anchor chart mini poster, plus some sort of teacher modeling activity.


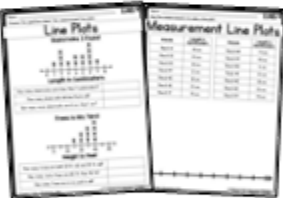


Partner practice: This will be a hands-on partner activity following the whole-group.

M.A.T.H. groups: (Explained in depth on next page) There are four groups/centers.

Exit slip: There are 3 exit slips to a page to cut out and administer for student learning.

M.A.T.H. Groups

Each day comes with four group activity suggestions and materials for 'M.A.T.H.' groups. This is your small group time, splitting the class up into four groups to rotate around the room, participating in different activities for 10-20 minutes a piece.

M	Math Writing	2 options... worksheet or cut/glue notebook strips	
A	Apply New Skills	Worksheet or interactive notebook activities to apply the skill learned in whole group	
T	Teacher Time	Differentiated time for 3 levels (remediation, on-level, enrichment)	
H	Hands-On Math	Engaging center to follow up on the whole group/partner practice	

Day 1 Activities

Here's a look at day 1's whole group, partner practice, MATH group activities, and exit slip.

2nd Grade Math: 2.MD.9 Lesson #1

I can create a line plot, made up of measurement data.

Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurement data by making a line plot, where the horizontal axis is marked off in standard units.

Line Plots

There are many ways to show data in a graph. One way to graph your measurements is a line plot.

Things being measured

Shrubs in the Park

Mitch created a line plot based off the measurements he just took in his room.

1) Explain what Mitch was measuring and how he likely measured the items.

2) Explain how Mitch set up his line plot.

Line Plots

There are many ways to show data in a graph. One way to graph your measurements is a line plot.

Things being measured

Shrubs in the Park

Heights of Cousins

Length in Inches

What is being measured in this graph?

How are those items being measured?

Heights of Cousins

Length in Feet

How many cousins are 5 feet and 6 feet tall?

Width of Picture Book

Length in Inches

How many picture books are 4 inches wide or less?

Heights of Bean Plants

Length in Centimeters

How many bean plants opened more than 5 centimeters?

Height of Buildings

Length in Feet

How many buildings are 60 feet tall?

Name: _____

Mitch created a line plot based off the measurements he just took in his room.

a) Explain what Mitch was measuring and how he likely measured the items.

b) Explain how Mitch set up his line plot.

Name: _____

Mitch created a line plot based off the measurements he just took in his room.

a) Explain what Mitch was measuring and how he likely measured the items.

b) Explain how Mitch set up his line plot.

Name: _____

Answer the questions about the measurement line plots.

Line Plots

Pencils in My School Box

Length in inches

How many pencils are more than 5 inches?

Which two lengths of pencils are the same?

How many pencils are there in all?

Sandbox Sizes

Length in feet

How many sandboxes are 30 feet or less?

Name: _____

Answer the questions about the measurement line plots.

Line Plots

Shamrocks I Found

Length in Centimeters

How many shamrocks were less than 1 centimeter?

How many shamrocks did she find in all?

How many shamrocks are 5 cm, 6 cm, or 7 cm?

Trees in My Yard

Height in feet

How many trees are 30 ft tall?

2.MD.9

I can create graphs using measurement data.

You can make graphs using measurements you have taken.

Line plots are graphs that use a number line and X's.

The number line at the bottom represents the measurements you've collected. Every time that a measurement occurs, an X is put on top of that number.

Practice: Make graphs on the graph.

Graphing Measurements

Flowers in the garden

Height in centimeters

How many flowers are 20 cm, or more?

How many flowers are 20 cm, 30 cm, or more?

How many flowers were measured in all?

Flowers in the garden

Height in inches

How many flowers are in the garden altogether?

Siblings heights

Height in inches

How many siblings are there altogether?

Rolls of Play-Doh

Length in centimeters

How many rolls of Play-Doh were 5 cm or less?

Houses on my street

Length in feet

How many houses on my street are 30 ft, 20 ft, or 15 ft in length?

Books on the shelf

Height in centimeters

How many more books are 33 cm, than books that are 31 cm.

Buildings in the city

Height in feet

How many buildings in the city are 20 ft. tall?

Trees of the park

Height in feet

How many more trees of the park are 30 ft tall than 15 ft. tall?

Pencils

Length in inches

How many pencils are 4 inches or less?

Total distance ball was kicked

Length in yards

How many people kicked the ball 5 yards or more?

2.MD.9 Exit Slip #1

Answer the questions about the line plot.

Neighborhood Tree Trunks

Height in feet

How many tree trunks were measured 1 ft?

How many tree trunks are 20 feet tall?

How many tree trunks are 30 feet tall?

2.MD.9 Exit Slip #1

Answer the questions about the line plot.

Neighborhood Tree Trunks

Height in feet

How many tree trunks were measured 1 ft?

How many tree trunks are 20 feet tall?

How many tree trunks are 30 feet tall?

2.MD.9 Exit Slip #1

Answer the questions about the line plot.

Neighborhood Tree Trunks

Height in feet

How many tree trunks were measured 1 ft?

How many tree trunks are 20 feet tall?

How many tree trunks are 30 feet tall?

Day 2 Activities

Here's a look at day 2's whole group, partner practice, MATH group activities, and exit slip.

2nd Grade Math: 2.MD.1 Lesson 2

I can create a line plot made up of measurement data.

Use the measurement data to create a line plot. The number line should be labeled with the units of measurement.

Use the measurement data to create a line plot. The number line should be labeled with the units of measurement.

Making a Line Plot

To make a line plot, you'll need to make:

- A number line to include the range numbers.
- An X over each number each time occurs in the data.

Example: Sides of the Park

Side 1	2 ft.	Side 7	4
Side 2	4 ft.	Side 8	5
Side 3	6 ft.	Side 9	3
Side 4	4 ft.	Side 10	6
Side 5	6 ft.	Side 11	5
Side 6	6 ft.	Side 12	5

Kyle	47 inches	Janet	58 in
Marion	42 inches	Marion	58 in
Mitch	52 inches	June	58 in
Lori	50 inches	Britt	58 in
Kari	48 inches	Gage	52 in
Smith	47 inches	Leann	58 in

Measurement Data #1

Object 1	12 ft.	Object 7	10 ft.
Object 2	10 ft.	Object 8	12 ft.
Object 3	8 ft.	Object 9	10 ft.
Object 4	10 ft.	Object 10	10 ft.
Object 5	10 ft.	Object 11	10 ft.
Object 6	13 ft.	Object 12	17 ft.

Measurement Data #2

Object 1	6 cm.	Object 7	4 cm.
Object 2	7 cm.	Object 8	3 cm.
Object 3	8 cm.	Object 9	8 cm.
Object 4	8 cm.	Object 10	8 cm.

2.MD.9

Name: _____

Kenz cut 15 different pieces of yarn from her rainbow yarn ball. Use Kenz's data chart to create a line plot.

Explain how you created this line plot for Kenz's objects.

a. _____

b. _____

Kenz cut 15 different pieces of yarn from her rainbow yarn ball. Use Kenz's data chart to create a line plot.

Explain how you created this line plot for Kenz's objects.

Length of Yarn	Number of Pieces
1 in.	1
2 in.	2
3 in.	3
4 in.	4
5 in.	5
6 in.	6
7 in.	7
8 in.	8
9 in.	9
10 in.	10
11 in.	11
12 in.	12
13 in.	13
14 in.	14
15 in.	15

Measurement Line Plots

Period	Length in Centimeters
Period #1	10 cm.
Period #2	10 cm.
Period #3	10 cm.
Period #4	10 cm.
Period #5	10 cm.
Period #6	10 cm.
Period #7	10 cm.

Measurement Line Plots

Building	Height in Feet
Building #1	20 ft.
Building #2	30 ft.
Building #3	30 ft.
Building #4	30 ft.
Building #5	30 ft.
Building #6	30 ft.
Building #7	30 ft.
Building #8	30 ft.
Building #9	30 ft.
Building #10	30 ft.
Building #11	30 ft.
Building #12	30 ft.
Building #13	30 ft.
Building #14	30 ft.
Building #15	30 ft.

Crayon Lengths

Red	5 in.	Blue	4
Orange	2 in.	Purple	1
Yellow	5 in.	Pink	1
Green	2 in.	White	3

2.MD.9 Exit Slip #1

Snowman 1	2 ft.	Snowman 7	3 ft.
Snowman 2	6 ft.	Snowman 8	7 ft.
Snowman 3	3 ft.	Snowman 9	5 ft.
Snowman 4	6 ft.	Snowman 10	2 ft.
Snowman 5	3 ft.	Snowman 11	6 ft.
Snowman 6	4 ft.	Snowman 12	4 ft.

2.MD.9 Exit Slip #2

Crayon 1	2 in.	Crayon 7	3 in.
Crayon 2	3 in.	Crayon 8	2 in.
Crayon 3	2 in.	Crayon 9	4 in.
Crayon 4	5 in.	Crayon 10	2 in.
Crayon 5	3 in.	Crayon 11	4 in.
Crayon 6	1 in.	Crayon 12	2 in.

Day 2 Home on Task

Distance 1	30 yd.	Distance 7	50 yd.
Distance 2	35 yd.	Distance 8	50 yd.
Distance 3	30 yd.	Distance 9	50 yd.
Distance 4	50 yd.	Distance 10	50 yd.
Distance 5	60 yd.	Distance 11	40 yd.
Distance 6	55 yd.	Distance 12	40 yd.

Day 2 Home on Task

Case 1	8 in.	Case 7	8 in.
Case 2	5 in.	Case 8	9 in.
Case 3	5 in.	Case 9	8 in.
Case 4	10 in.	Case 10	9 in.
Case 5	9 in.	Case 11	12 in.
Case 6	10 in.	Case 12	10 in.

Day 2 Home on Task

Object 1	30 in.	Object 7	20 in.
Object 2	20 in.	Object 8	20 in.
Object 3	20 in.	Object 9	20 in.
Object 4	10 in.	Object 10	20 in.
Object 5	10 in.	Object 11	20 in.
Object 6	20 in.	Object 12	20 in.

Day 2 Home on Task

String #1	6 cm.
String #2	6 cm.
String #3	6 cm.
String #4	6 cm.
String #5	6 cm.

Day 2 Home on Task

String #1	6 cm.
String #2	6 cm.
String #3	6 cm.
String #4	6 cm.
String #5	6 cm.

Day 2 Home on Task

String #1	6 cm.
String #2	6 cm.
String #3	6 cm.
String #4	6 cm.
String #5	6 cm.

Day 2 Home on Task

String #1	6 cm.
String #2	6 cm.
String #3	6 cm.
String #4	6 cm.
String #5	6 cm.

Day 3 Activities

Here's a look at day 3's whole group, partner practice, MATH group activities, and exit slip.

2nd Grade Math: 2.MD.9 Lesson #3

Making a Line Plot

To make a line plot, you'll need to make...

1. A number line to include the range of numbers.
2. An X over each number each time it occurs in the data.

Slide 1	2 ft.	Slide 7	4 ft.
Slide 2	4 ft.	Slide 8	5 ft.
Slide 3	6 ft.	Slide 9	3 ft.
Slide 4	4 ft.	Slide 10	6 ft.
Slide 5	4 ft.	Slide 11	5 ft.
Slide 6	6 ft.		

ESTIMATIONS

Estimate the object's length. Then, find it in your classroom and measure it.

ACTUAL MEASUREMENTS

pencil	white-out	glue	
crayon	m	glue bottle	tissue
paper	f	ruler	stap
Post-it	not	tape dispenser	crayon box

2.MD.9 Exit Slip #3

Measure each rectangle using centimeters. Then plot the points.

2.MD.9 Exit Slip #3

Measure each rectangle using centimeters. Then plot the points.

2.MD.9 Exit Slip #3

Measure each rectangle using centimeters. Then plot the points.

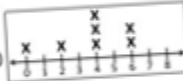
Assessments

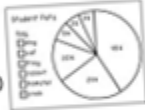
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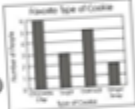
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2.MD.9 Pre-Assessment

Circle the line plot.

a) 

b) 

c) 

Where do you label the objects being measured on a line plot?

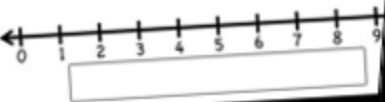
- along the top
- along the side
- along the bottom
- on the number line

Where do you label the units of measurement?

- along the top
- along the side
- along the bottom
- on the number line

Label and complete the line plot.


Lengths of Ropes	Feet
Rope #1	4
Rope #2	5
Rope #3	3
Rope #4	2
Rope #5	2
Rope #6	4
Rope #7	4
Rope #8	4
Rope #9	6



Name: _____ Date: _____

2.MD.9 Assessment

Measure each rectangle in centimeters, record the data, and create a line plot.



Measurements

