

2.MD.10

Picture Graphs
-a type of graph that use images to represent data

title- what the graph is about

Student Eye Colors

categories

Color

Blue: 6 students (6 eyes)
Green: 4 students (4 eyes)
Brown: 8 students (8 eyes)
Hazel: 2 students (2 eyes)

key: 2 eyes = 2 students

Favorite Type of Cookie

Type of Cookie	Number of People
Chocolate Chip	
Sugar	
Oatmeal	
Ginger Snap	

Number of People (0-6)

Type of Cookie (Chocolate Chip, Sugar, Oatmeal, Ginger Snap)

Animals on Hackberry Farm

Type of Animal	Number of Animals
Cows	
Pigs	
Chickens	
Goats	

Number of Animals (0-16)

Type of Animal (Cows, Pigs, Chickens, Goats)

School Lunch Choices

School Lunch Types	Number of People Bought
Pizza	
Can Dog	
Burger	
Smoothies	

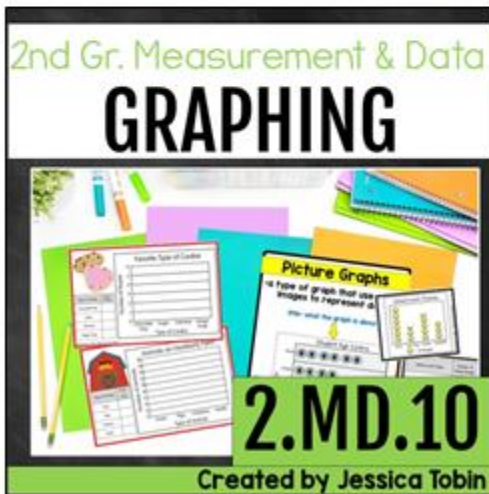
10 people = 10 icons

2 students = 2 icons

2.MD.10

This math unit provides lesson plans and math group resources to use while teaching the standard **2.MD.10**, which states that students will be able to...

“Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.”



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.10 Lesson #1	2.MD.10 lesson 1 I can create and read picture graphs and bar graphs.
Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	
Activities	Materials
Whole Group Today's focus will be on simply reading bar graphs and picture graphs. Teacher will either create anchor chart introducing the two types of graphs and how to read them, or teacher will show graphing poster provided. Then, teacher will ask questions for each of the graphs on the anchor chart, such as what the categories are, how many students voted for specific categories, etc.	
Partner Practice While displaying two graphs, students will participate in a Mix-Pair-Share activity. Students will mix up around the room, pair up with a new partner, and share their answer to the task card question. Repeat for all questions.	
Math Groups M- Students will write about graphs. 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- (Today's lesson is not differentiated.) Instead, students and teacher will work at small group to set up their interactive notebook input and first output page. H- Students will draw a graph card, study the graph, and answer the two questions on the recording sheet for each question.	
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.


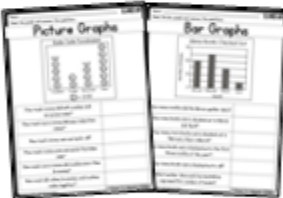

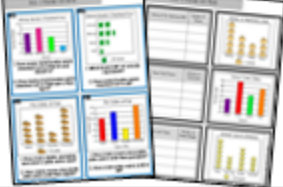
Partner practice: This will be a hands-on partner activity following the whole-group.

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.10 Lesson 1

Learn to create and read picture graphs and bar graphs.

Draw a picture graph and a bar graph (both graphs will be used to represent data with up to four categories). Show graphs put together, taken apart, and compare problems using information presented in a bar graph.

Picture Graphs

-a type of graph that uses small images to represent data

title- what the graph is about

Bar Graphs

-a type of graph that uses bars to represent numbers

title- what the graph is about

Favorite Pets

Favorite Type of Cookie

What does the bar graph show us?

What does the picture graph show us?

What are the four categories on the picture graph?

What are the four categories on the bar graph?

How many students have a dog?

How many students like chocolate chip and sugar cookies?

What can we learn from the key on the picture graph?

What is the title of the bar graph?

How many more

2.MD.10

The aquarium took inventory of some of the animals they had.

a. Write 4 sentences explaining how many of each animal they have.

b. Explain the process of how the aquarium set up their bar graph.

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2.MD.10

Picture Graphs

Robin Sale Fundraiser

How much money did both erasers and notebooks make?

How much more money did pens make than erasers?

2.MD.10

Bar Graphs

Library Books Checked Out

How many months did the library gather data?

How many books were checked out in March and April?

How many more books were checked out in...

2.MD.10

I can create graphs that represent data and answer questions about the graphs.

A bar graph uses rectangular bars to show the number of times.

A picture graph uses images to represent a number of times.

2.MD.10

Picture Graphs

Miles Biked

How many miles were biked in March?

How many miles were biked in April?

How many more miles were biked in March and April?

Day 1 Math - On line

Animals at Seaside Aquarium

1. How many more seahorses are there than jellyfish?

2. How many starfish, octopus, and jellyfish are at Seaside?

Day 1 Math - On line

Favorite Pets

1. What does half of a face represent?

2. How many people dogs or cats?

Day 1 Math - On line

Miles Biked Each Month

1. How many miles were biked in April?

2. How many more miles were biked in June than in April?

Day 1 Math - On line

Snow Cone Sales

1. How many people bought lemon and cherry snow cones?

2. How many snow cones were sold in all?

Day 1 Math - On line

Library Books Checked Out

1. How many total books were checked out in March and January?

2. How many more books were checked out in February than April?

2.MD.10 Exit Slip #1

Answer the questions about the graph.

How many items are on the graph?

How many items were sold in all?

What type of graph is this?

How many items were sold in each month?

Day 1 Math - On line

Robin Sale Fundraiser

1. How much money did 2nd and 3rd grade raise together?

2. How much more did 4th grade raise than 5th grade?

Day 1 Math - On line

Shopping Drive

1. How many shirts and pants were collected at the clothing drive?

2. How many more shirts were collected than shoes?

Day 1 Math - On line

School Lunch Choices

1. How many people chose spaghetti and pizza?

2. How many more people ordered pizza than corn dogs?

Day 1 Math - On line

Library Books Checked Out

1. How many total books were checked out in March and January?

2. How many more books were checked out in February than April?

Day 1 Math - On line

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2.MD.10 Exit Slip #1

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How many items were sold in each month?

Day 1 Math - On line

Animals at Seaside Aquarium

1. What does half of a car represent?

2. How many more miles did your drive than Lee's?

Day 1 Math - On line

Animals at Seaside Aquarium

1. How many cows and sea horses live at Seaside?

2. How many more did there than goat?

Day 1 Math - On line

Taffle Ticket Sales

1. How many more tickets did third grade sell than fourth?

2. How many tickets were sold in all?

Day 1 Math - On line

Pie Slices of Pie

1. How many apple, pumpkin, and cherry pies were sold?

2. How many more chocolate pies were sold than apple?

Day 1 Math - On line

Pie Slices of Pie

1. How many more chocolate pies were sold than pumpkin?

2. How many pies were sold in all?

2.MD.10 Exit Slip #1

Answer the questions about the graph.

How many items are on the graph?

How many items were sold in all?

What type of graph is this?

How many items were sold in each month?

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.10 Lesson #2
I can create and read picture graphs and bar graphs.

Bar Graphs
- a type of graph that uses bars to represent number
title- what the graph is about

Fruits of the Farmer's Market

Fruit	Number of Fruits Sold
Apples	10
Strawberries	5
Bananas	8
Pears	3
Oranges	7

School Lunch Choices

Type of Lunch	Number of Students
Pizza	40
Hot Dog	30
Burger	20
Salad	10

T-Shirt Orders

Color	Number of Orders
Red	100
Blue	80
Green	60
Yellow	40
Purple	20

Favorite type of...

Day 2 Student Task "A"

Types of Weather	Days Occurred
Snow	8
Rain	2
Sleet	5
Hail	5

Day 2 Student Task "B"

Eye Colors	Number of Counts
Brown	2
Blue	6
Green	7

Day 2 Student Task "C"

Types of Books in Classroom Library	Number of Books
Chapter Books	
Nonfiction Books	
Picture Book with Animals	
Picture Book with People	

Day 2 Student Task "D"

Patterns	Number of Books
Hexagon	
Square	
Triangle	

Day 2 Student Task "E"

Types of Pets	Number of Students with Pet
Cats	20
Dogs	35
Fish	15
Bird	10

Day 2 Student Task "F"

Vegetables Planted	Number of Vegetables
Carrots	12
Potatoes	18
Onion	17
Green Beans	16

Day 2 Student Task "G"

Pies of the Bake Sale	Number of Pies Sold
Pumpkin	45
Apple	55
Peach	50
Chocolate	30

Day 2 Student Task "H"

Shirts of the Store	Number of Shirts Sold
T-Shirts	
Long Sleeve Shirts	
Sweatshirts	
Tank Tops	

2.MD.10 Exit Slip #2

2.MD.10 Exit Slip #2

2.MD.10 Exit Slip #2

2.MD.10 Exit Slip #2

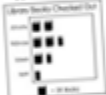
Assessments

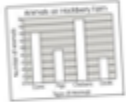
Each unit comes with a pre-assessment to give to students before you teach the standard. This will come before any introduction to the standard. There is also an assessment to give after your unit is complete.

Name: _____ Date: _____

2.MD.10 Pre-Assessment

Identify the type of graph shown.

 _____

 _____

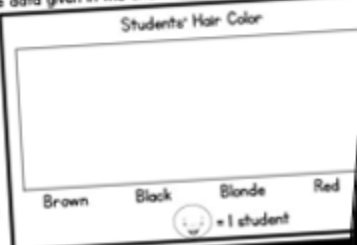
Answer the questions about the graph.

How many books were checked out in February?

How many more books were checked out in January than in April?

Complete the graph using the data given in the chart.

Hair Colors	Number of Students
Brown	5
Black	7
Blonde	6
Red	3



Brown Black Blonde Red
= 1 student

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Name: _____ Date: _____

2.MD.10 Assessment

Use the data chart to make a bar graph. Then answer the questions.

Favorite Colors	Number of Students
Red	5
Yellow	8
Blue	20
Green	10

How many votes did both yellow and blue get? _____

How many more students prefer yellow than red? _____

How many students were surveyed in all? _____

Use the data chart to make a picture graph. Then answer the questions.

Cookies of the Store	Number of Packs
Chocolate Chip	50
Oreo	40
Animal Cookies	70
Oatmeal Raisin	40

How many more animal cookies are at the store than oatmeal raisin? _____

How many packs of cookies are there in all? _____

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