

# Unit 5: Measurement and Data

Content Area: **Template**  
Course(s):  
Time Period: **Full Year**  
Length: **Full Year**  
Status: **Published**

## UNIT RATIONALE

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Unit 5 focuses on measurement and data. Students will learn to measure liquid volume and mass to conceptualize the units. In 2nd grade, students learned to measure and estimate length using inches, feet, centimeters, and meters while solving word problems. In 3rd grade, students will build on this knowledge and add in liquid volume and mass as units of measurement and learn to solve word problems. In addition, students will learn to represent and interpret data by drawing picture graphs, bar graphs, and line plots. Students will be building off of foundational skills taught in 2nd grade and learn to solve one- and two- step comparison problems.

## ESSENTIAL QUESTIONS

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Module 17

- How can you measure liquid volume?
- How can you measure mass?

Module 18

- How can you use different types of graphs to show data?
- How can you use the graph to solve comparison problems?

## STANDARDS

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### NEW JERSEY STUDENT LEARNING STANDARDS: CONTENT AREA

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MATH.3.M	Measurement
MATH.3.M.A	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects
MATH.3.M.A.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
MATH.3.M.B	Geometric measurement: understand concepts of area and relate area to multiplication and to addition

MATH.3.M.B.3

Recognize area as an attribute of plane figures and understand concepts of area measurement.

MATH.3.M.B.4

Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).

## **NEW JERSEY STUDENT LEARNING STANDARDS: CAREER READINESS, LIFE LITERACIES AND KEY SKILLS**

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TECH.9.4.5.CT.1

Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).

TECH.9.4.5.IML.3

Represent the same data in multiple visual formats in order to tell a story about the data.

## **NEW JERSEY STUDENT LEARNING STANDARDS: COMPUTER SCIENCE AND DESIGN THINKING**

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CS.3-5.8.1.5.DA.1

Collect, organize, and display data in order to highlight relationships or support a claim.

## **PRE-ASSESSMENTS**

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Module 17 - Liquid Volume and Mass, Are You Ready?, pg. 438

Module 18 - Represent and Interpret Data, Are You Ready?, pg. 456

## **INSTRUCTIONAL PLAN**

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## **MODULE 17**

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### **LESSON 17.1**

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Lesson 17.1 - Estimate and Measure Liquid Volume

**Student Learning Intentions (SLI) WALT:  
(We are learning to...)**

We are learning to use reasoning and benchmarks to estimate, and use tools to measure liquid volume in liters.

<b>Student Learning Strategies</b>	Students will use containers, 1-liter measuring cups, and water to estimate and measure liquid volume.
<b>Success Criteria</b>	I can use metric units to estimate and measure liquid volume.
<b>Formative Assessment (drives instructional decisions)</b>	<b>Turn and Talk</b> pages 439, 440 <b>Check for Understanding</b> page 441 <b>Own Your Own</b> page 442
<b>Activities and Resources</b>	Warm Up & Spark Your Learning page 439 Mini Lesson: Build Understanding page 440-441 Guided Practice: Check Understanding page 441 Independent Practice: Own Your Own page 442  Differentiated Practice page 439c  Small Group Options On Track page 439c Almost There page 439c Ready for More page 439c  Math Center Options On Track - More Practice/Homework 17.1 - Fluency Builder Division with 3 & 4 - Interactive Glossary - Game: How Heavy? How Much?  Almost There - Reteach 17.1 - Interactive Reteach 17.1 - RtI Tier 2 Skills 24: Estimate with Benchmarks

## Ready for More

- Challenge 17.1
- Interactive Challenge 17.1

## Resources

*IntoMath* Teacher Edition Module 17/18

## Suggested Modifications

### **English Language Learners Native language support:**

Native language support: The teacher provides auditory or written content to students in their native language.

Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students

### **Special Education Students:**

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

### **Students with 504 Plans:**

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### **Gifted & Talented Strategies**

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

### **Students at Risk of School Failure**

Directions or Instructions: Make sure directions and/or instructions are given in limited numbers. Give directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

Increase One to One Time: When other students are working, always touch base with your students at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way to intervene as the need presents itself.

Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student

come to you for completion sign-offs.

**Hands On:** As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

**Tests/Assessments:** Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

**Seating:** Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.MD

Measurement and Data

MA.3.MD.A

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

MA.3.MD.A.2

Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

## LESSON 17.2

### Lesson 17.2 - Estimate and Measure Mass

**Student Learning Intentions (SLI) WALT:**  
**(We are learning to...)**

We are learning to use reasoning to estimate, and use tools to measure mass in grams and kilograms.

**Student Learning Strategies**

Students will use a pan balance and various classroom objects, like a paper clip and book, to estimate and measure the mass of objects.

**Success Criteria**

I can use metric units to estimate and measure the mass of objects.

**Formative Assessment (drives instructional decisions)**

**Turn and Talk** pages 443, 444  
**Check for Understanding** page 445  
**Own Your Own** page 446

**Activities and Resources**

Warm Up & Spark Your Learning page 443  
Mini Lesson: Build Understanding page 444-445  
Guided Practice: Check Understanding page 445  
Independent Practice: Own Your Own page 446

Differentiated Practice  
page 443c

Small Group Options  
On Track page 443c  
Almost There page 443c  
Ready for More page 443c

Math Center Options  
On Track  
- More Practice/Homework 17.2  
- Interactive Glossary

Almost There  
- Reteach 17.2  
- Interactive Reteach 17.2

Ready for More  
- Challenge 17.2  
- Interactive Challenge 17.2

Resources  
*IntoMath* Teacher Edition Module 17/18

**Suggested Modifications**

**English Language Learners Native language support:**  
Native language support: The teacher provides auditory or

written content to students in their native language.

**Adjusted Speech:** The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

**Visuals:** The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

**Front-Loading Vocabulary:** The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students

### **Special Education Students:**

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**Checking for Understanding:** It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

**Extra time:** The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

**Oral Reading:** The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student.

**Timers:** The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have

trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

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### **Gifted & Talented Strategies**

**Extensions/Enrichments:** Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

**Modify/Change Activities:** Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

### **Students at Risk of School Failure**

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directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

**Peer Support:** Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

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**Contracts:** It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

**Hands On:** As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

**Tests/Assessments:** Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and

the final part the next day.

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MA.3.MD

Measurement and Data

MA.3.MD.A

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

MA.3.MD.A.2

Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

## LESSON 17.3

Lesson 17.3 - Solve Problems About Liquid Volume and Mass

**Student Learning Intentions (SLI) WALT:**  
**(We are learning to...)**

We are learning to use representations and the four operations to solve one-step word problems involving liquid volume and mass.

**Student Learning Strategies**

Students will use a pan balance with gram and kilogram masses to solve word problems with liquid volume and mass units.

**Success Criteria**

I can solve word problems that involve liquid volume and mass.

**Formative Assessment (drives instructional decisions)**

**Turn and Talk** pages 447, 448, 449  
**Check for Understanding** page 450  
**Own Your Own** page 451

**Activities and Resources**

Warm Up & Spark Your Learning page 447  
Mini Lesson: Build Understanding page 448-449  
Guided Practice: Check Understanding page 450  
Independent Practice: Own Your Own page 450-451

Differentiated Practice

page 447c

Small Group Options

On Track page 447c

Almost There page 447c

Ready for More page 447c

Math Center Options

On Track

- Additional Practice 17.3

- More Practice/Homework 17.3

- My Learning Summary

-Game: Heavy Metal

- Reader: *How Heavy? How Much?*

- Standards Practice: Solve Problems Involving Masses or Volumes

Almost There

- Reteach 17.3

- Interactive Reteach 17.3

Ready for More

- Challenge 17.3

- Interactive Challenge 17.3

Resources

*IntoMath* Teacher Edition Module 17/18

## Suggested Modifications

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Native language support: The teacher provides auditory or written content to students in their native language.

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**Extra time:** The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

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## MODULE 18

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### LESSON 18.5

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Lesson 18.5 - Use Line Plots to Display Measurement Data

<b>Student Learning Intentions (SLI) WALT: (We are learning to...)</b>	We are learning to read and interpret line plots involving data with fractional units of length.
<b>Student Learning Strategies</b>	Students will use rulers to draw a line plot with measurement data.
<b>Success Criteria</b>	I can use a line plot to display measurement data.
<b>Formative Assessment (drives instructional decisions)</b>	<b>Turn and Talk</b> pages 473, 474 <b>Check for Understanding</b> page 475 <b>Own Your Own</b> page 476
<b>Activities and Resources</b>	Warm Up & Spark Your Learning page 473 Mini Lesson: Build Understanding page 474-475 Guided Practice: Check Understanding page 475 Independent Practice: Own Your Own page 476  Differentiated Practice page 473c

### Small Group Options

On Track page 473c

Almost There page 473c

Ready for More page 473c

### Math Center Options

On Track

- More Practice/Homework 18.5

- Interactive Glossary

### Almost There

- Reteach 18.5

- Interactive Reteach 18.5

- RTI Tier 2 Skill 22: Locate Numbers on a Number Line

### Ready for More

- Challenge 18.5

- Interactive Challenge 18.5

### Resources

*IntoMath* Teacher Edition Module 17/18

## Suggested Modifications

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Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.MD.B

Represent and interpret data.

MA.3.MD.B.4

Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is

marked off in appropriate units— whole numbers, halves, or quarters.

## LESSON 18.4

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### Lesson 18.4 - Make Bar Graphs

<b>Student Learning Intentions (SLI) WALT: (We are learning to...)</b>	We are learning to represent data in scaled bar graphs and use the information to solve one-step comparison problems.
<b>Student Learning Strategies</b>	Students will use connecting cubes, base-ten blocks, and square tiles to draw a bar graph.
<b>Success Criteria</b>	I can draw a scaled bar graph to solve <i>how many more</i> and <i>how many less</i> problems.
<b>Formative Assessment (drives instructional decisions)</b>	<b>Turn and Talk</b> pages 469, 479 <b>Check for Understanding</b> page 471 <b>Own Your Own</b> page 472
<b>Activities and Resources</b>	Warm Up & Spark Your Learning page 447 Mini Lesson: Build Understanding page 448-449 Guided Practice: Check Understanding page 450 Independent Practice: Own Your Own page 450-451  Differentiated Practice page 469c  Small Group Options On Track page 469c Almost There page 469c Ready for More page 469c  Math Center Options On Track - More Practice/Homework 18.4 - My Learning Summary

- Standards Practice: Draw and Use a Scaled Picture Graph and a Scaled Bar Graph

#### Almost There

- Reteach 18.4
- Interactive Reteach 18.4
- RTI Tier 2 Skill 26: Bar Graphs

#### Ready for More

- Challenge 18.4
- Interactive Challenge 18.4

#### Resources

*IntoMath* Teacher Edition Module 17/18

## Suggested Modifications

### **English Language Learners Native language support:**

Native language support: The teacher provides auditory or written content to students in their native language.

Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students

### **Special Education Students:**

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it

into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

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Timers: The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

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#### **Gifted & Talented Strategies**

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

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Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record

comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.MD.B

Represent and interpret data.

MA.3.MD.B.3

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs.

## LESSON 18.3

### Lesson 18.3 - Use Bar Graphs

<b>Student Learning Intentions (SLI) WALT: (We are learning to...)</b>	We are learning to use information in a bar graph to solve one-step comparison problems.
<b>Student Learning Strategies</b>	Students will draw using a bar graph to solve <i>how many more</i> and <i>how many less</i> problems.
<b>Success Criteria</b>	I can use data in a scaled bar graph to solve <i>how many more</i> and <i>how many less</i> problems.
<b>Formative Assessment (drives instructional decisions)</b>	<b>Turn and Talk</b> pages 465, 466 <b>Check for Understanding</b> page 467 <b>Own Your Own</b> page 448
<b>Activities and Resources</b>	Warm Up & Spark Your Learning page 465 Mini Lesson: Build Understanding page 466-467 Guided Practice: Check Understanding page 467 Independent Practice: Own Your Own page 468

## Differentiated Practice

page 465 c

## Small Group Options

On Track page465c

Almost There page 465c

Ready for More page 465c

## Math Center Options

On Track

- More Practice/Homework 17.3

- Interactive Glossary

Almost There

- Reteach 18.3

- Interactive Reteach 18.3

Ready for More

- Challenge 18.3

- Interactive Challenge 18.3

## Resources

*IntoMath* Teacher Edition Module 17/18

## Suggested Modifications

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**Tests/Assessments:** Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning another portion after lunch and the final part the next day.

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MA.3.MD.B

Represent and interpret data.

MA.3.MD.B.3

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.

## LESSON 18.2

.Lesson 18.2 - Make Picture Graphs

**Student Learning Intentions (SLI) WALT: (We are learning to...)**

We are learning to represent data in picture graphs and use the information to solve one-step comparison problems.

**Student Learning Strategies**

Students will use two-color counters to draw a scaled picture graph to solve *how many more* and *how many less* problems.

<b>Success Criteria</b>	I can draw a scaled picture graph to solve <i>how many more</i> and <i>how many less</i> problems.
<b>Formative Assessment (drives instructional decisions)</b>	<p><b>Turn and Talk</b> pages 461, 462</p> <p><b>Check for Understanding</b> page 463</p> <p><b>Own Your Own</b> page 464</p>
<b>Activities and Resources</b>	<p>Warm Up &amp; Spark Your Learning page 461</p> <p>Mini Lesson: Build Understanding page 462-463</p> <p>Guided Practice: Check Understanding page 463</p> <p>Independent Practice: Own Your Own page 464</p> <p>Differentiated Practice page 461c</p> <p>Small Group Options On Track page 461c Almost There page 461c Ready for More page 461c</p> <p>Math Center Options On Track - More Practice/Homework 18.1</p> <p>Almost There - Reteach 18.2 - Interactive Reteach 18.2 - RTI Tier 2 Skill 3: Count Equal Groups</p> <p>Ready for More - Challenge 18.2 - Interactive Challenge 18.2</p> <p>Resources <i>IntoMath</i> Teacher Edition Module 17/18</p>

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### **Gifted & Talented Strategies**

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**Tests/Assessments:** Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

**Seating:** Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.MD.B

Represent and interpret data.

MA.3.MD.B.3

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.

## LESSON 18.1

Lesson 18.1 - Use Picture Graphs

### Student Learning Intentions (SLI)

We are learning to use information in a picture graph to solve one-step comparison problems.

<b>WALT: (We are learning to...)</b>	
<b>Student Learning Strategies</b>	Students will draw pictures to solve <i>how many more</i> and <i>how many less</i> problems.
<b>Success Criteria</b>	I can use data in a picture graph to solve <i>how many more</i> and <i>how many less</i> problems.
<b>Formative Assessment (drives instructional decisions)</b>	<p><b>Turn and Talk</b> pages 457, 458, 459</p> <p><b>Check for Understanding</b> page 459</p> <p><b>Own Your Own</b> page 460</p>
<b>Activities and Resources</b>	<p>Warm Up &amp; Spark Your Learning page 457</p> <p>Mini Lesson: Build Understanding page 458-459</p> <p>Guided Practice: Check Understanding page 459</p> <p>Independent Practice: Own Your Own page 460</p> <p>Differentiated Practice page 457a</p> <p>Small Group Options</p> <p>On Track page 457a</p> <p>Almost There page 457a</p> <p>Ready for More page 457a</p> <p>Math Center Options</p> <p>On Track</p> <ul style="list-style-type: none"> <li>- More Practice/Homework 18.1</li> <li>- Fluency Builder: Division with 0 and 1</li> <li>- Interactive Glossary</li> </ul> <p>Almost There</p> <ul style="list-style-type: none"> <li>- Reteach 18.1</li> <li>- Interactive Reteach 18.1</li> </ul>

- RTI Tier 2 Skill 27: Picture Graphs

Ready for More

- Challenge 18.1

- Interactive Challenge 18.1

Resources

*IntoMath* Teacher Edition Module 17/18

## Suggested Modifications

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Represent and interpret data.

MA.3.MD.B.3

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## LESSON 18.6

### Lesson 18.6 - Make Line Plots to Display Measurement Data

<b>Student Learning Intentions (SLI) WALT: (We are learning to...)</b>	We are learning to plot fractional data of standard units of length on a line plot.
<b>Student Learning Strategies</b>	Students will use rulers to measure the length of objects and record the data on a line plot.
<b>Success Criteria</b>	I can measure lengths to the nearest quarter inch and make a line plot to display the data.
<b>Formative Assessment (drives instructional decisions)</b>	<b>Turn and Talk</b> pages 477, 478 <b>Check for Understanding</b> page 479 <b>Own Your Own</b> page 480
<b>Activities and Resources</b>	Warm Up & Spark Your Learning page 477 Mini Lesson: Build Understanding page 478-479 Guided Practice: Check Understanding page 479 Independent Practice: Own Your Own page 480  Differentiated Practice page 477c  Small Group Options On Track page 477c Almost There page 477c Ready for More page 477c

## Math Center Options

### On Track

- More Practice/Homework 18.6
- Standards Practice: Record on a Line Plot Lengths Measured in Halves or Fourths of an Inch

### Almost There

- Reteach 18.6
- Interactive Reteach 18.6
- RTI Tier 3 Skill 16: Measure to the Nearest Inch

### Ready for More

- Challenge 18.6
- Interactive Challenge 18.6

### Resources

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Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a

different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

**Increase One to One Time:** When other students are working, always touch base with your students at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way to intervene as the need presents itself.

**Contracts:** It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

**Hands On:** As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

**Tests/Assessments:** Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

**Seating:** Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.MD.B

Represent and interpret data.

MA.3.MD.B.4

Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

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## LESSON 18.7

### Lesson 18.7 - Solve One and Two Step Problems Using Data

<b>Student Learning Intentions (SLI) WALT: (We are learning to...)</b>	We are learning to represent data in picture graphs, bar graphs, and line plots and use the information to solve one-and two- step comparison problems.
<b>Student Learning Strategies</b>	Students will use graph paper to draw picture graphs, bar graphs, and line plots to solve word problems.
<b>Success Criteria</b>	I can use data in picture graphs, bar graphs, and line plots to solve one- and two-step <i>how many more</i> and <i>how many less</i> problems.
<b>Formative Assessment (drives instructional decisions)</b>	<b>Turn and Talk</b> pages 481, 482 <b>Check for Understanding</b> page 483 <b>Own Your Own</b> page 484
<b>Activities and Resources</b>	Warm Up & Spark Your Learning page 447 Mini Lesson: Build Understanding page 448-449 Guided Practice: Check Understanding page 450 Independent Practice: Own Your Own page 450-451  Differentiated Practice page 481c  Small Group Options On Track page 481 Almost There page 481c Ready for More page 481c  Math Center Options On Track - Additional Practice 18.7 - More Practice/Homework 18.7 - Fluency Starter: Subtraction - My Learning Summary - Standards Practice: Solve Two Step Word Problems Using the Four Operations

### Almost There

- Reteach 18.7
- Interactive Reteach 18.7

### Ready for More

- Challenge 18.7
- Interactive Challenge 18.7

### Resources

*IntoMath* Teacher Edition Module 17/18

## Suggested Modifications

### **English Language Learners Native language support:**

Native language support: The teacher provides auditory or written content to students in their native language.

Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students

### **Special Education Students:**

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

### **Students with 504 Plans:**

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### **Gifted & Talented Strategies**

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

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MA.3.MD.B	Represent and interpret data.
MA.3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs.
MA.3.MD.B.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

## **REFLECTIONS**

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## **INTERDISCIPLINARY CONNECTIONS: NEW JERSEY STUDENT LEARNING STANDARDS FOR ELA, SOCIAL STUDIES, SCIENCE AND/OR MATHEMATICS**

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LA.RF.3.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words.
LA.RF.3.3.D	Read grade-appropriate irregularly spelled words.
LA.RF.3.4.A	Read grade-level text with purpose and understanding.