

# 3 Math Unit 06: Represent and Interpret Data

Content Area: **Mathematics**  
Course(s):  
Time Period: **January**  
Length: **2 weeks**  
Status: **Published**

## Unit Overview

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In Grade 3, the most important development in data representation for categorical data is that students now draw picture graphs in which each picture represents more than one object, and they draw bar graphs in which the height of a given bar in tick marks must be multiplied by the scale factor in order to yield the number of objects in the given category. These developments connect with the emphasis on multiplication in this grade. At the end of Grade 3, students can draw a scaled picture graph or a scaled bar graph to represent a data set with several categories (six or fewer categories)...

Students can gather categorical data in authentic contexts, including contexts arising in their study of science, history, health, and so on. Of course, students do not have to generate the data every time they work on making bar graphs and picture graphs. That would be too time-consuming. After some experiences in generating the data, most work in producing bar graphs and picture graphs can be done by providing students with data sets.

The Standards in Grades 1–3 do not require students to gather categorical data.

Use of two-step problems involving easy or middle difficulty adding and subtracting within 1,000 or one such adding or subtracting with one step of multiplication or division can help to maintain fluency with addition and subtraction while giving the needed time to the major Grade 3 multiplication and division standards.

How can data be represented, interpreted, and analyzed?

Students will be able to...Read and create bar and picture graphs

## Standards

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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.

## Materials

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- [EnVision Math](#)
- 7.1 Read Picture Graphs and Bar Graphs
- 7.2 Make Picture Graphs

- 7.3 Make Bar Graphs
- 7.4 Solve Word Problems Using Information in Graphs
- 7.5 Precision

- [ST Math](#)
- [Happy Numbers](#)
- [3 Act Lessons](#)
- [Building Fact Fluency Kit](#)
- [Brainiaccamp Manipulatives](#)
- [Nearpod Lessons](#)
- [Brainpop Resources](#)
- [Math Diagnosis and Intervention System](#)
- [Online Resources](#)

## Technology

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- 8.1.5.A.1,2,4 (solve problems, word processing, databases, spreadsheets)
- 8.1.5.F.1 (digital tools to support scientific finding)
- 8.2.5.C.1,2,3 (solve problems, troubleshoot repair tools)

## Assessment

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### Formative Assessment

- Teacher Observation
- Daily Quick Check
- Quizzes
- Exit Tickets

### Summative Assessment

- Topic Tests
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects

## **Accommodations & Modifications**

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### **Special Education**

- Follow IEP Plan which may contain some of the following examples...
- In class/pull out support with special ed teacher
- Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Limit number of questions
- Scribe
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

### **504**

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

### **ELL**

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives

- Math Diagnosis & Intervention System

### **At-risk of Failure**

- Additional time during intervention time
- Questions read aloud
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
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### **Gifted & Talented**

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities
- Today's Challenge

## **Interdisciplinary Connections**

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Topic 1 Math and Science Project - Using different presentations tools, students will collect different types of paper. Talk about the uses of paper. Tell how strong each type of paper is. Tell how the paper feels. Tell if the paper can soak up water.

### **ELA:**

NJSLSA.R10. Read and comprehend complex literary and informational texts independently and proficiently with scaffolding as needed.

### **Science:**

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

## **21st Century Life Literacies & Key Skills**

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### **Critical Thinking and Problem Solving:**

Problem-solving activities starting with the lesson “Solve and Share” and ending with higher order thinking questions that utilize the mathematical practices

### **Communication and Collaboration:**

Throughout the lesson, students are provided with opportunities to discuss their ideas as they investigate mathematical concepts.

### **Creativity:**

Students have opportunities to express their creativity by solving problems their own way, participating in performance tasks, and group projects.

### **Technology:**

Use of iPads, instructional apps, lab materials embedded in lessons. Programs such as BrainPop, Math Reflex, Google Slides are used to support instruction.

## **Career Ready Practices**

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- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.