Measurement Unit

4th Grade

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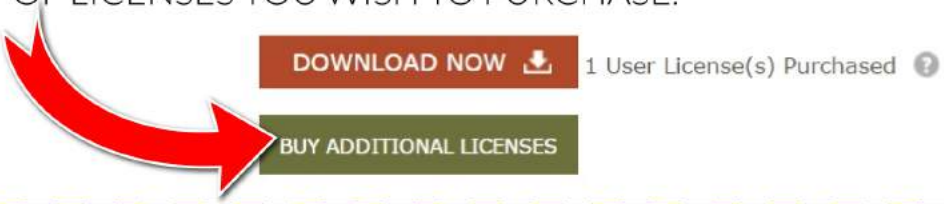

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Table of Contents

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To The Teacher

Thank you for purchasing this resource! Within it you will find a complete unit for teaching the fourth grade standards for measurement including pre-assessment, content vocabulary, daily warm-ups and exit tickets, daily lessons with student activities, and a post assessment.

While this unit is laid out over a fifteen day time span do not feel that you must rigidly stick to the timeline. As a teacher you know what is best for your students, and should follow your gut, as some classes may require more time to reach understanding of a concept.

To save on ink and decrease prep time, every page of this unit is created in black and white. To create a more colorful unit print or copy on color paper.

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Standards

TEKS

4.8A identify relative sizes of measurement units within the customary and metric systems

4.8B convert measurements units within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table

4.8C solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

CCSS

4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg,g; lb, oz.; l,ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-colimn table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36),…*

4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

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ALL About This Unit

This unit is made up of unique elements that can be used independently or together to provide a complete unit of math instruction.

Content Vocabulary

Vocabulary for this measurement unit is included in a few forms.

- Word wall cards make it easy to add your content vocabulary to your word wall
- The word and definition list make a great reference for student math notebooks and teachers alike
    - This list is included completed as well as with blank areas for definitions and examples
- Double-sided word and definition cards are great for review and small group remediation

Pre-Assessment and Student Standard Checklist

To be used as an informal assessment to check students' prior knowledge as well as determine any misconceptions. The data that you gather from this pre-assessment can be recorded on the Student Standards Checklists and used to set student learning goals, form small groups, or partner students based on ability. Checklists fit 11 students per page.

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ALL About This Unit

Daily Warm-Ups

Fifteen days of half-page daily warm-ups are provided along with answer keys. Each day has two standards-based question for students to think through their learning. A student tracking sheet is also included for students to record their own grow and glow areas. To save paper you may choose to project the warm up each day and have students complete their work in math notebooks.

Exit Tickets

Fifteen days worth of exit tickets and answer keys, with one question each, are included two to a page for easy copying. Each of the questions is based on how that standard is tested, providing a test bridge and exposing students to test style language. This serves to build familiarity with standardized testing without overwhelming students.

Exit tickets can be checked as a class, or by the teacher. A checklist of questions is included to track how students are doing on their exit tickets.

Assessment

An end of unit assessment is included to check for student mastery on the measurement standards included. This assessment is meant to be used informally. While students should do their best work, it is best to not place too much importance on the test.

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Daily Lessons

Fifteen daily lessons are included in this unit. Each lesson includes:

- Guiding question(s)
- Objectives
- List of necessary materials
- Overview of the lesson
- Student activity sheets when applicable
- Suggestions for small group activity

Day 1	Pre-assessment and Telling Time
Day 2	Converting Time
Day 3	Elapsed Time
Day 4	Elapsed Time Problem Solving
Day 5	Length
Day 6	Mass and Weight
Day 7	Capacity and Liquid Volume
Day 8	Converting Metric Measurements
Day 9	Converting Customary Length
Day 10	Converting Mass and Weight
Day 11	Converting Capacity and Liquid Volume
Day 12	Converting Money
Day 13	Measurement Problem Solving
Day 14	Measurement Problem Solving
Day 15	Assessment

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Content Vocabulary

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- Word wall cards make it easy to add your content vocabulary to your word wall
- The word and definition list make a great reference for student math notebooks and teachers alike
  - This list is included completed as well as with blank areas for definitions and examples
  - TIP: print/copy definition list at 80% to fit perfectly in math notebooks
- Double-sided word and definition cards are great for review and small group remediation
  - To complete these cards print, fold along the dotted line with the word and definition on the outside, then tape or glue to secure the card.

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analog clock

a clock that displays the time using a minute and hour hand

digital clock

a clock that digitally displays the time using numerals

estimate

an educated guess

length

the measurement of something from end to end

preview

Measurement Vocabulary

analog clock	a clock that displays the time using a minute and hour hand
digital clock	a clock that digitally displays the time using numerals
estimate	an educated guess
Length	the measurement of something from end to end
mass	the amount of matter that makes up an object, no affected by gravity
weight	how heavy an object is which is affected by mass
capacity	the amount something can hold
volume	the amount of space that an object takes up

Preview

analog clock	a clock that displays the time using a minute and hour hand
digital clock	a clock that digitally displays the time using numerals
estimate	an educated guess

preview

Answer Key

1 What time is shown on the clock?

8:43

2 A train leaves the station at 3:35 pm and arrives at its destination at 7:23 pm. How long did it travel?

6 hours 48 minutes

3 What customary unit would you likely use to measure the capacity of a bath tub?

gallons

4 What metric unit would you use to measure the mass of a large dog?

kilograms

5 How many meters are in 5 kilometers?

5,000 meters

6 How many inches are there in 9 feet?

108 inches

7 How many ounces are there in pounds?

64 ounces

8 How many cups are equal to 64 ounces of water?

8 cups

9 Ray has a toy sword that is 360 mm long. How many centimeters long is the sword?

36 centimeters

10 John bought a new car that weighs 2 tons. How many pounds does the car weigh?

4,000 pounds

Preview

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Measurement Pre-assessment Student Standards Checklist

Student	1. Telling Time	2. Elapsed Time	3. Estimating Measurements	4. Estimating Measurements	5. Converting Metric Measurements	6. Converting Customary Measurements	7. Converting Customary Measurements	8. Converting Customary Measurements	9. Problem Solving	10. Problem Solving
w										

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Daily Warm-Ups

Fifteen days of half-page daily warm-ups are provided along with answer keys.

Each day has two standards-based questions for students to think through their learning.

A student tracking sheet is also included for students to record their own grow and glow areas.

To save paper you may choose to project the warm up each day and have students complete their work in math notebooks.

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Measurement
Day 1

Name _____

Estimating Measurements

What customary unit would you use to measure your weight?

Converting Measurements

How many feet are in 16 yards?

Measurement
Day 1

Name _____

Estimating Measurements

What customary unit would you use to measure your weight?

Converting Measurements

How many feet are in 16 yards?

Preview

Daily Warm-Up Answer Key

Measurement Day 1

Name _____

Estimating Measurements

What customary unit would you use to measure your weight?

Pounds

Converting Measurements

How many feet are in 16 yards?

48 feet

Measurement Day 2

Name _____

Estimating Measurements

What metric unit would you use to measure the distance from your house to the grocery store?

Kilometers

Converting Measurements

How many kilometers are there in 3,000 meters?

3 kilometers

Preview

Name _____

Personal Daily Warm-Up Tracking Sheet

	Estimating Measurements	Conversions
Day 1		
Day 2		
Day 3		
Day 4		
Day 5		
Day 6		
Day 7		
Day 8		
Day 9		
Day 10		
Day 11		
Day 12		
Day 13		
Day 14		
Day 15		

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Exit Tickets

Fifteen days worth of exit tickets and answer keys, with one question each, are included two to a page for easy copying.

Each of the questions is based on how that standard is tested, providing a test bridge and exposing students to test style language. This serves to build familiarity with standardized testing without overwhelming students.

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Exit Ticket Day 1

Name _____

The town park has a fountain that dances to music every 45 minutes. If the fountain last danced at 1:17 pm, at what time will it next dance?

a. 2:02 pm
b. 2:00 pm
c. 12:32 pm
d. 1:02 pm

Measurement

Exit Ticket Day 1

Name _____

The town park has a fountain that dances to music every 45 minutes. If the fountain last danced at 1:17 pm, at what time will it next dance?

a. 2:02 pm
b. 2:00 pm
c. 12:32 pm
d. 1:02 pm

Measurement

Preview

Exit Ticket Answer Key

Day 1	A
Day 2	D
Day 3	B
Day 4	C
Day 5	B
Day 6	A
Day 7	D
Day 8	C
Day 9	A
Day 10	B
Day 11	B
Day 12	A
Day 13	C
Day 14	B
Day 15	D

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Exit Ticket Student Checklist

Student	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15

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Daily Lessons

Fifteen daily lessons are included in this unit. Each lesson includes:

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Pre-Assessment & Telling Time

Guiding Question

How can I show my prior knowledge of measurement?

Materials

- Pre-assessment
- Anchor chart paper
- Blank clock (laminate and use for practice with dry erase markers if desired)
- Telling Time Practice

Learning Objective

We will use our prior knowledge of measurement.

We will use an analog clock to tell time.

Lesson

Begin by giving students the pre-assessment as a check for prior understanding.

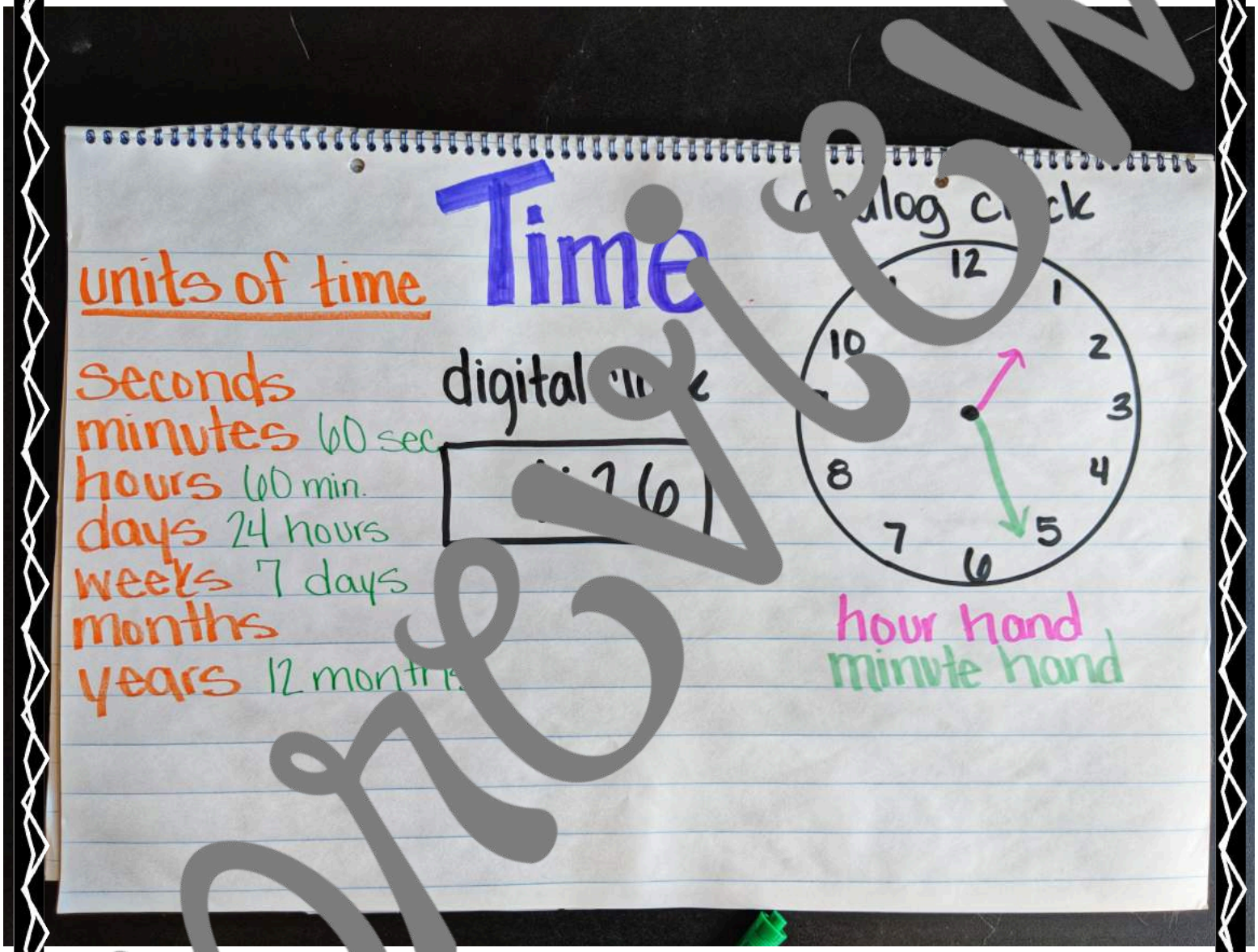
After the pre-assessment come together to talk about time. Using anchor chart paper have students tell you what they know about time and record their responses. Have a class discussion about the units of time, also recording these on the anchor chart. Finally, draw a large analog clock on the anchor chart and discuss with students the parts of the clock including the numerals, the hour hand, the minute hand, and the second hand. For practice telling time, students will complete the Telling Time Practice.

Small Group Ideas

Provide each student with a blank clock or clock manipulative (not included) and practice showing different times throughout the day using the hands. A suggestion would be to use scenarios such as, "Billy eats breakfast every morning at 6:45 am. Use the clock to show me what time Billy eats his breakfast."

Preview

Anchor Chart Example



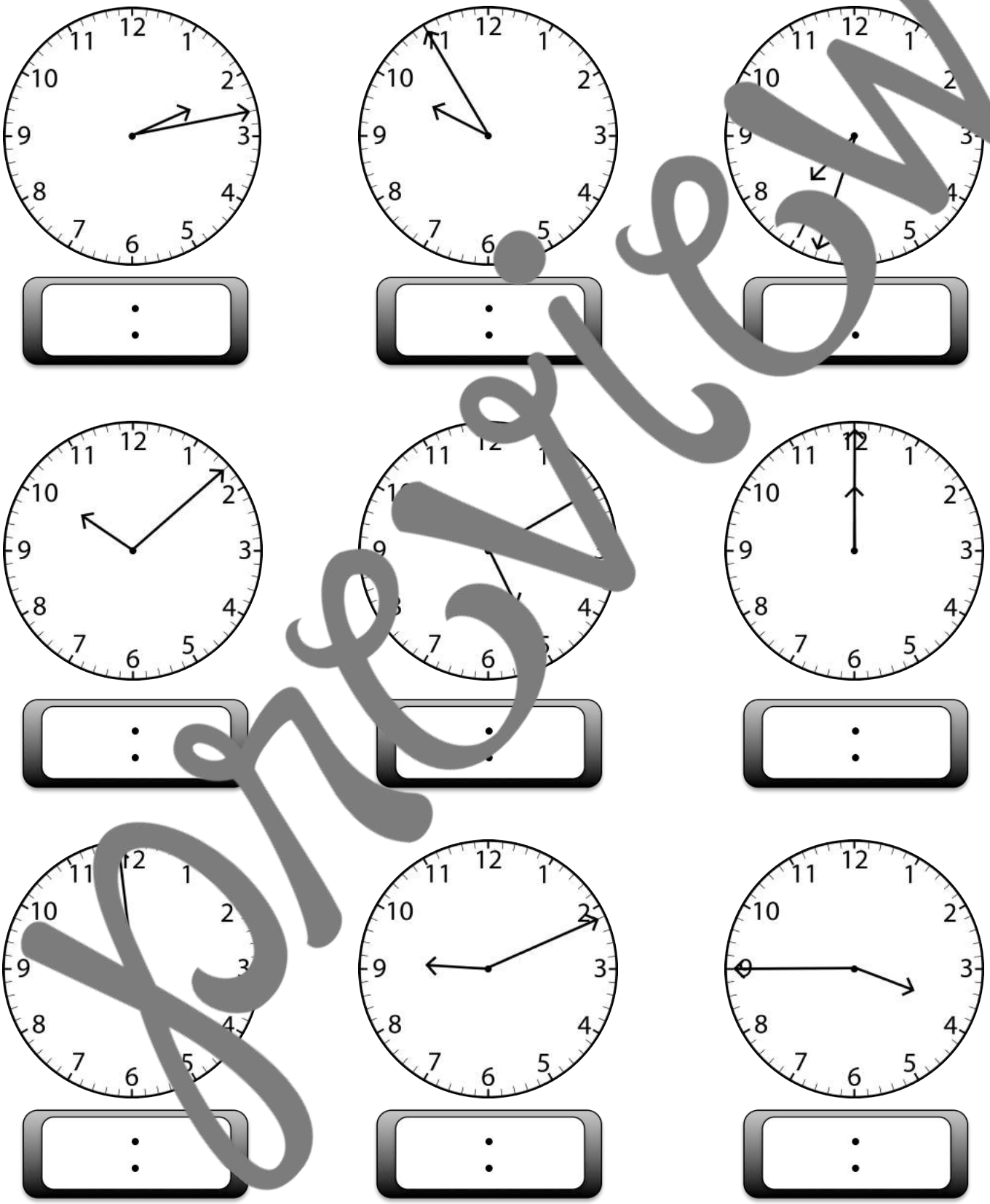
preview

preview

Name _____

Telling Time Practice

Examine each clock below and label the digital clock to show the same time as the analog clock.



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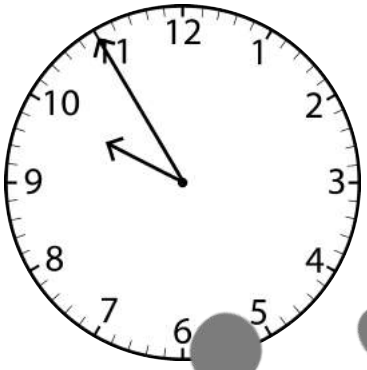
Answer Key

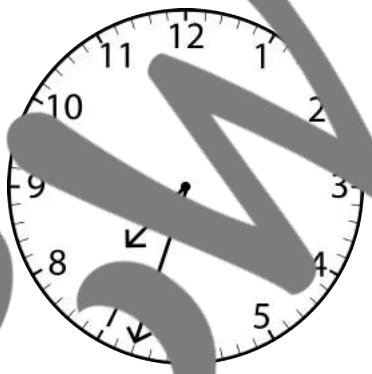
Telling Time Practice

Examine each clock below and label the digital clock to show the same time as the analog clock.

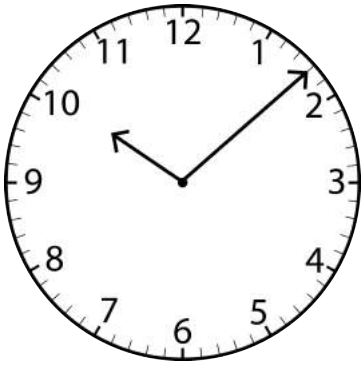
2:13



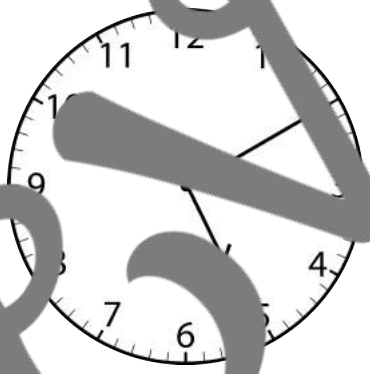
9:54



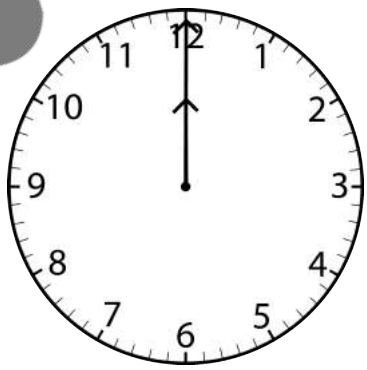
7:33



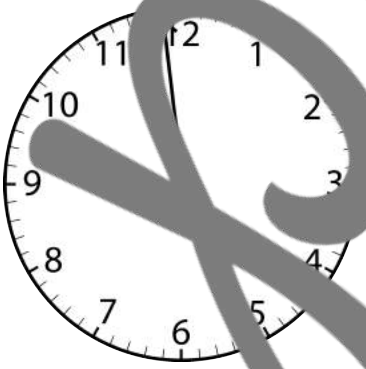
10:08



5:10

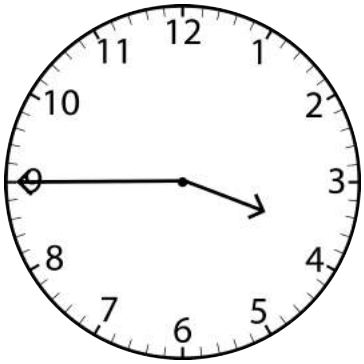


12:00



4:59

9:11



3:45

Preview

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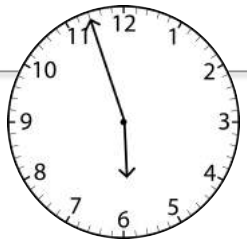
Answer Key

1 What time is shown on the clock?



5:57

2 Andrew goes running for 1 hour and 17 minutes. If he began his run at 6:27 am, what time did he finish?

7:43 am

3 What customary unit would you likely use to measure the length of a city block?

yards

4 What metric unit would you use to measure the capacity of a small water bottle?

milliliters

5 How many grams are there in 17 kilograms?

17,000 grams

6 How many yards are in 72 feet?

24 yards

7 How many fluid ounces are there in 4 cups?

32 fluid ounces

8 How many tons are there in 8,000 pounds?

4 tons

9 A brick wall is made of 16 nine inch long bricks. How many feet long is the wall?

12 feet

10 Rachel ran a 10k race on her birthday. How many meters did she run?

10,000 meters

Preview

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