

Mastering 2nd Grade Math Curriculum Map

These no prep math worksheets, cover the five math curriculum. Each topic contains individual skills and concepts that match the learning expectations of the curriculum. Mastering Math is an excellent framework for reviewing the math curriculum at home for students who need extra practise.

Organized according to these five general curriculum threads:

1. Number Sense and Numeration (about numbers, counting and basic arithmetic operations)
2. Measurement (of distances, time, temperature, area and volume, using standard SI units)
3. Geometry and Spatial Sense (understanding and using shapes, figures, symmetry and translations)
4. Patterning and Algebra (patterns, problem solving and translating between words and equations)
5. Data Management and Probability (collecting, organizing and displaying information and drawing conclusions from it)

There are two versions of worksheets for each topic. We have included a Canadian version for each topic. There are also some google slides to go along with the Canadian worksheets.

Teacher Notes Include:

- At A Glance – List of Skills
- Table of Contents
- Teacher Assessment Rubric
- Meeting Common Core Standards List – US Version

NUMERATION WORKSHEETS

Numeration Worksheet Topics:

1. Represent Numbers
2. Compare Numbers
3. Number Words
4. Locate Numbers
5. The Nearest 10
6. Estimate and Count Coins
7. Compose Numbers
8. 1-digit Addition
9. 2-digit Addition
10. Addition with Regrouping
11. Decompose Numbers
12. Subtraction
13. Subtraction with Regrouping
14. Relations Between Quantities
15. Add and Subtract Money
16. Count Forward by 1's and 2's
17. Skip-Count Forward by 5's, 10's, 25's
18. Count Backwards
19. Multiplication
20. Division
21. Compare Parts
22. The Number and Size of Parts
23. Regroup Parts Into Wholes

Numeration Common Core Standards Met:

- 2.OA.B.2 Add and subtract fluently within 20 (mental match)
- 2.OA.C.3 Determine if groups have an odd or even number of objects. Write an equation to show an even number as a sum of two addends.
- 2. NBT.A.1 Understand that a three-digit number represents ones, tens, hundreds.
- 2. NBT.A.2 Count within 1000; skip-count by 5's 10's and 100's.
- 2. NBT.B.5 Fluently add and subtract within 100.
- 2. MD. C.8 Solve word problems involving dollars, quarters, dimes, nickels and pennies. Use \$ and cents symbols.
- 2. G.A.2 Divide a rectangle into rows and columns of same-size squares and count to find the total.
- 2. G.A.3 Divide circles and rectangles into two, three or four equal parts. Describe the parts as halves, thirds, fourths.

MEASUREMENT WORKSHEETS

- **Metric Measurement Google Slides**
- **Metric Measurement Version Included**

Measurement Worksheet Topics:

1. Represent Measurements
2. Estimate and Measure Length
3. Personal Benchmarks
4. Standard Units of Length
5. Select Units
6. Measuring Around Things
7. Measuring Areas
8. Size and Number of Units – Area
9. Measure Capacity
10. Measure Mass
11. Compare by Capacity and Mass
12. Tell Time
13. Write Time
14. Measuring Tools for Time
15. Effects of Temperature
16. Changing Temperatures
17. Days and Weeks
18. Months and Years

Measurement Common Core Standards Met:

- 2.OA.B.2 Add and subtract fluently within 20 (mental match)
- 2. MB.A.1 Measure length of an object using appropriate tools (rulers, yardsticks, measuring tapes.)
- 2. MD.A.2 Measure the length of an object twice using different units of length; describe relation of size to unit.
- 2. MD.A.3 Estimate lengths using units of inches, feet, centimeters and meters.
- 2. MD.A.4 Measure to determine difference in the lengths of objects; record the results
- 2. MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- 2. MD.D.9 Generate measurement data and show data: e.g. on a line plot

GEOMETRY WORKSHEETS

Geometry Worksheet Topics:

1. Geometric Attributes
2. Identifying Polygons
3. Sort Polygons by Geometric Properties
4. Identify Figures
5. Sort 3D Figures by Geometric Properties
6. Create Models and Skeletons
7. Compose Designs
8. Decompose Shapes
9. Compose Shapes
10. Outline Puzzles
11. Build A Structure
12. Relative Locations and Movement
13. Simple Maps
14. Lines of Symmetry
15. Create Symmetrical Designs
16. Complete Symmetrical Designs

Geometry Common Core Standards Met

- 2. G.A.1 Recognize and draw shapes with specified attributes. Identify triangles, quadrilaterals, pentagons, hexagons and cubes.
- 2. G.A.2 Divide a rectangle into rows and columns of same-size squares and count to find the total.
- 2. G.A.3 Divide circles and rectangles into two, three or four equal parts. Describe the parts as halves, thirds, fourths.

PATTERNING WORKSHEETS

- **Patterning Google Slides**

Patterning Worksheet Topics:

1. Skip-Counting Patterns
2. Growing and Shrinking Patterns
3. Patterns in Real Life
4. Represent Patterns
5. Patterns in Different Media
6. Create Growing and Shrinking Patterns
7. Create Repeating Patterns
8. What Makes a Pattern?
9. Equality With Numbers
10. Equal Number Expressions
11. Missing Numbers: Addition
12. Missing Numbers: Subtraction
13. The Commutative Property of Addition
14. Zero in Adding and Subtracting

Patterning Common Core Standards Met:

- 2.OA.A.1 Use addition and subtraction (sums to 100) to solve word problems (use drawings and equations).
- 2.OA.B.2 Add and subtract fluently within 20 (mental math)
- 2. NBT.A.2 Count within 1000; skip-count by 5's 10's and 100's.
- 2. MD.D.9 Generate measurement data and show data: e.g. on a line plot
- 2. MD.D.10 Draw a picture graph and a bar graph to represent measurement data.

DATA MANAGEMENT WORKSHEETS

- **Data Management Google Slides**

Data Management Worksheet Topics:

1. Sort Objects
2. Gather Data – Survey
3. Concrete Graphs
4. Pictographs
5. Line Plot Graphs
6. Bar Graphs
7. Read Data
8. Pose and Answer Questions
9. Understanding Data
10. Data Values and Frequency of Events
11. Probability Experiments
12. Probability of an Event
13. Probability as a Measure of Likelihood

Data Management Common Core Standards Met

- 2. MD.D.9 Generate measurement data and show data: e.g. on a line plot
- 2. MD.D.10 Draw a picture graph and a bar graph to represent measurement data.

HOW TO USE THIS RESOURCE

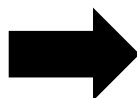
This product is a Google Slides presentation with interactive text boxes that students can fill out digitally! If you don't already have a free Google account, you will need to do that before downloading this digital resource. Each student will also need their own account to work on the slides digitally.

You will...

- **Save a copy** of the file on your own Google Drive so you can edit the copy. When you download the file, the original file is set to "View Only." **You must make a copy to edit & share with your students.** (When you open the file, it will send you to a link where you can select 'make a copy' and then add the file to your google drive.)
- When you're ready for your students to complete the assignment, you will share your downloaded copy with your students. Make sure that when you share the file, **you only allow viewing capability (not editing or commenting).**
- If you want to only share one slide at a time, open your saved copy of the file, select the slide you want to share, right-click on the slide in the view panel on the left side, select copy. Then open a new empty Google Slides presentation and paste the copied slide into the new file. If your students need more than one slide for their writing assignment, direct them to duplicate the slide.

Students will...

- When your students begin working on the assignment, instruct your students to **make a copy of the file.** This is the copy that they will edit. I would recommend having a common filename that each student should use with their name or student ID.
 - When they complete the assignment, they will need to then share their new copy with you so that you will have access to their writing. If you're familiar with Google Classroom, they can simply submit the file there.
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- **Product Link:**
 - Click on the icon to view your purchased product. When you open the file, please **don't "request access"** to this file. You DO need to save a copy of the file to your own google drive so you can edit it and share with your students.



**Editable
Version**

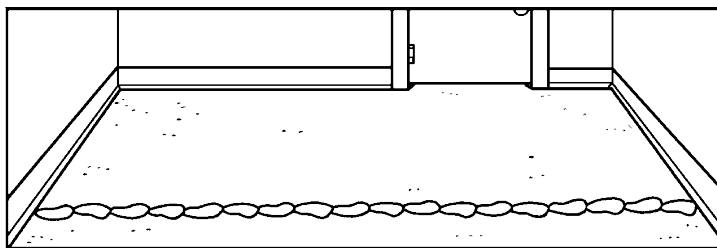


**Digital
Ready**

Represent Measurement

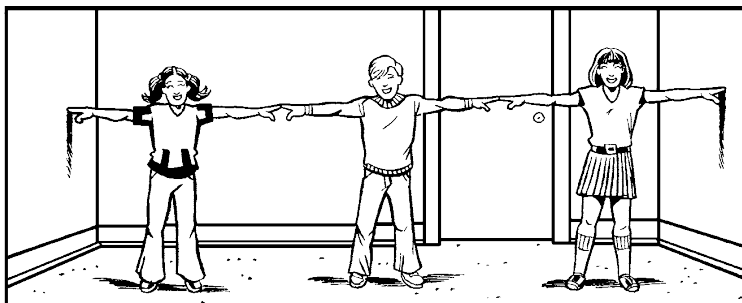
Measurement

Pat has measured the length of the hallway in footprints:



1. How many footprints long is the hall? _____

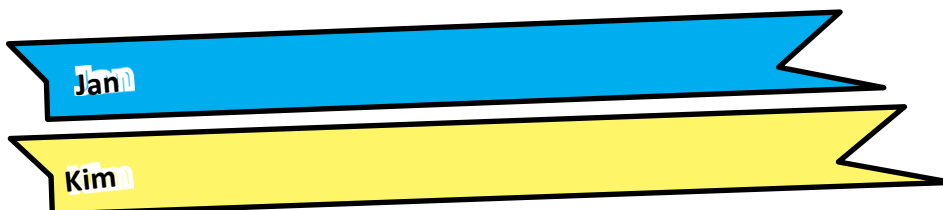
Pat made a footprint-tape of the hallway by stepping on cash register paper and cutting at the right length. Now they can use the tape to compare other measurements and they can take the tape with them to compare with a rug. Alex has used arm-spans to measure the same hallway:



2. How long is the hall in arm-spans? _____

3. How many footprints are in an arm-span? _____

Jan and Kim used ribbon to measure their heights by lying down on it and cutting at the mark. They have laid their ribbons out on the floor to compare.

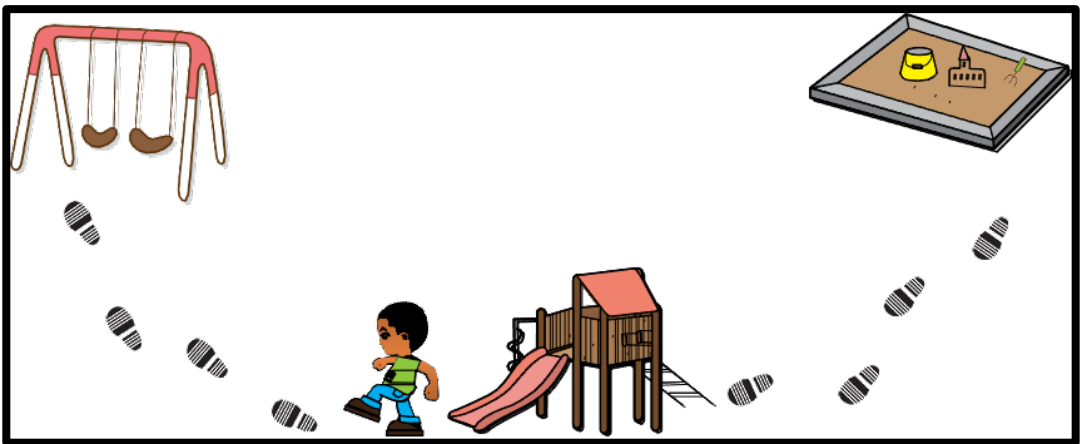


4. Who is taller? Jan or Kim?
5. What other things (like the ribbon or footprint tape) could you use to demonstrate a measurement?

Estimate & Measure Length

Measurement

1. How big do you think your room is? Estimate first, then measure.
 - a) Estimate
 - b) Measure
2. From the door to the opposite wall using steps
3. Across the other way using handprints:
4. Across the other way using your arm span
5. From the door to the opposite wall using your arm span.
6. Across the other way using handprints.
7. How close were your estimates?
8. Measure the floor in the hall in steps.
9. Measure the floor in the hall in hand-widths.
10. Does it make a difference what you use to measure with?
11. Why do you think this is?



12. Jake walked around the playground. How many steps is it from the swing set to the slide?
13. From the slide to the sandbox?
14. Estimate, then trace a section of Jake's steps to use as a ruler to measure the distance from the swings to the sandbox.

Personal Benchmarks

Measurement

Because we don't always have a ruler available, it's useful to have a handy 'benchmark' – something you know that is approximately the measurement you need or a good idea of how big certain units of measurement are.

Find a ruler with centimetres on it and compare the size of one centimetre to several different parts of you. Often the width or length of a certain finger joint is close to a centimetre, and fingers are definitely “handy!”

Write your personal benchmark for a centimetre length here:

Sometimes we need to measure bigger things, so it's good to have a personal benchmark for a metre as well. This might be related to the length of your arms or legs, or the size of a step.

Write down yours here (If you did this last year, do it again. You may have grown!)

Standard Units of Length

Measurement

Sometimes we need to know exactly how big something is in standard units.

1. For each of the following, first estimate a length in centimetres, then use your personal benchmark to check. Last, use a ruler to measure.

	estimate	benchmark	ruler
the length of a book			
the width of a book			
the length of a new pencil			
the width of your shoes			
the length of your shoes			

2. For each of the following, first estimate a length in metres, then use your personal benchmark to check. Last, use a metre stick to measure:

	estimate	benchmark	ruler
the length of your desk			
the height of your desk			
the length of your classroom			
the width of your classroom			
the height of the door			

3. What things might you need to have an exact measurement for and why?

Select Units

Measurement

When we measure a distance, we need to choose an appropriate unit. It would be silly to measure the distance to the next city by using thumb-print lengths, but they would be just right to check the size of a book. For each of the following examples, choose a standard and personal unit to measure it with, then write down why you chose that unit.

Item	Unit of Measure to Use
Distance for a foot race Why?	
Width of the sidewalk Why?	
Height of your desk Why?	
Width of a field for a game of catch Why?	
Length of a pencil Why?	
Length of a Pencil Why?	
Your Height Why?	
Length of nails for building a birdhouse Why?	

Measuring Around Things

Measurement

Sometimes we need to measure around something – like your waist to see how long a belt should be or a card to see how much ribbon you need to go around the outside edge to make it fancy.

Use a measuring tape if you have one. If not, use a string and then measure the string length with a ruler or metre stick. Measure snugly but be careful not to stretch the string or tape. Mark exactly where the end comes to, with no overlap, for an accurate measurement.

Use a string to measure:

- a) around your waist for a belt
- b) around your head for a hat
- c) around the outside of a book
- d) around the outside edge of your desk
- e) around the outside edge of a table
- f) around the window for the trim



Sometimes we need to measure around bigger things. Use a metre stick and a ball of yarn or string to help you measure around the outside of your classroom. Start in one corner and go all the way around. You may have to add lengths together if your string isn't long enough.

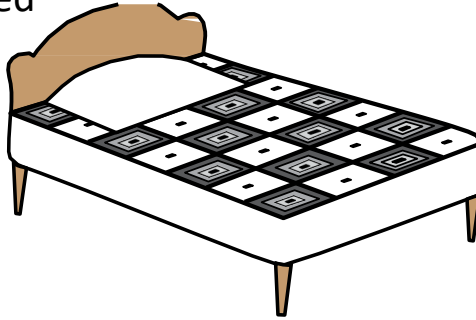
Write the measurement here

Practise: Measure around different things. What things can you think of that need measurements around the outsides?

Measuring Area

Measurement

Alex's bed has an afghan on it. Use the squares of the afghan to measure the area of the bed



Use the afghan squares to measure the area of Alex's pillow.

Find an index card. Guess how many cards that size you would need to cover each area, then measure to check. Don't leave any spaces between cards or overlap them when you measure. Why does this matter?

	estimate	measurement
a book		
your desk		
a table		

Turn the card sideways so if it was longer than wide the first time, this time it should be wider than it is long and measure again.

a book	
your desk	
a table	

Did you get the same measurements or were they different?

Why do you think this is?

Find two other things (not bigger than a table) to find the areas of:

Size & Number of Units: Area

Measurement

Do you think the area measurements you get for things would change if you used different-sized units? Try it and see! Measure these with an index card.

a table _____ your desk _____ seat of your chair _____

Now use a sheet of plain paper as a unit instead and measure them again.

table _____ your desk _____ seat of your chair _____

Remember! You need to write down the type of unit you are using to measure with as well as how many you get! Why?

3. Which is bigger, the card or the sheet of paper?
4. What is the area of the sheet of paper if you measure it in cards?
5. Which did you need more of to measure the area of the table?
6. Does the same pattern hold true for measuring your desk and chair?

What general rule do you think you could make about measuring areas with different-sized units? Will you need more or less smaller units to cover the same area as a larger unit? Write your rule here:

Measure Capacity

Measurement

1. Capacity is how much something can hold. Circle the thing in each group that can hold the most:

a)



b)



2. How many glasses fit in each container?

a)



b)



c)



_____ glasses

_____ glasses

_____ glasses

3. Which container holds the most?
4. How many vases full of water will fit in the pitcher?
5. The kitchen sink holds 3 sand pails. How many glasses of water will it hold?
6. A bucket holds a bit more than 2 pitchers. Is that about the same as the sink?

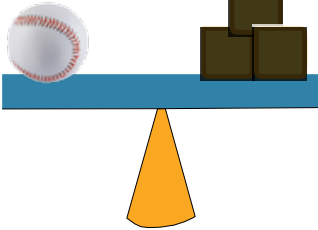


Measure Mass

Measurement

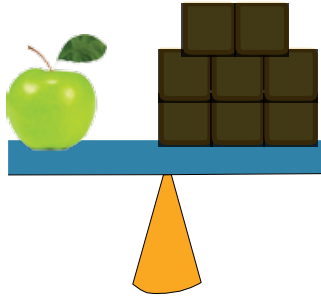
1. How many blocks of mass are in:

a)



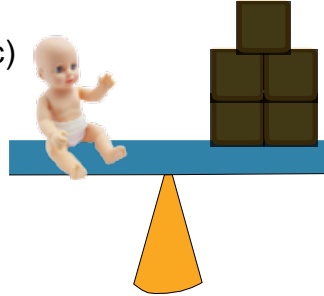
_____ blocks

b)



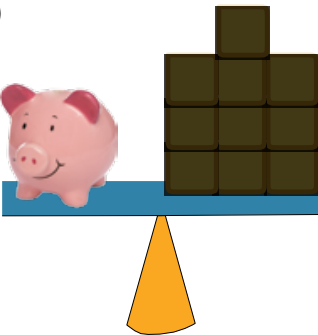
_____ blocks

c)



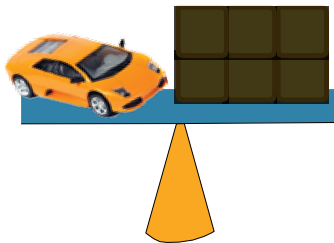
_____ blocks

d)



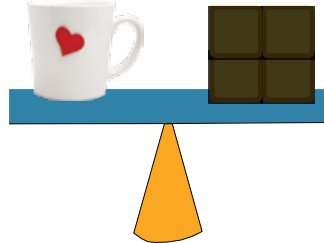
_____ blocks

e)



_____ blocks

f)



_____ blocks

2. Circle the object with greater mass in each pair.

a)



b)



c)



3. a) How many balls would it take to be as heavy as the toy car? _____

b) The piggybank is as heavy as _____ dolls.

c) The piggybank is as heavy as the toy car and the _____ put together.

d) The doll and ball together are as heavy as the _____.

Compare by Capacity & Mass

Measurement

1. Put the following objects in order from most to least capacity by writing 1 for biggest and 3 for smallest underneath:

a)







b)







2. Put the following groups of objects in order from lightest to heaviest by writing 1 for lightest and 3 for heaviest underneath.

a)







b)







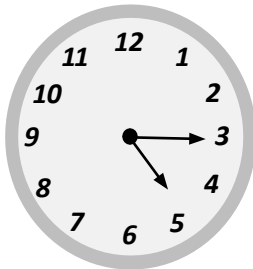
Practise:

Think about other things you can compare. Practise comparing and ranking the mass and capacity of things in your environment!

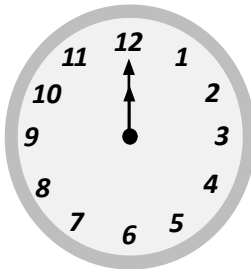
Tell Time

Measurement

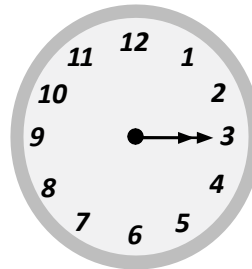
Write the time shown on each clock on the line below it. Use standard time notation. The first one is done for you:



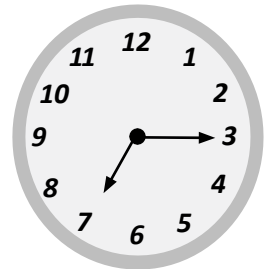
a) 5:15



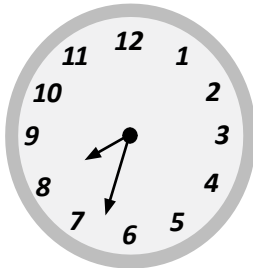
b) _____



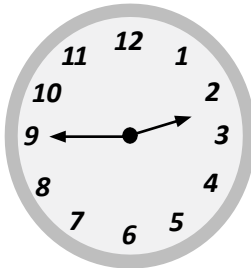
c) _____



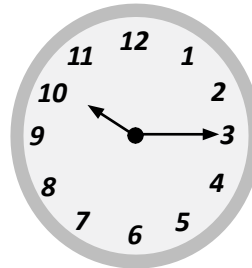
d) _____



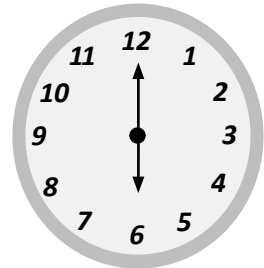
e) _____



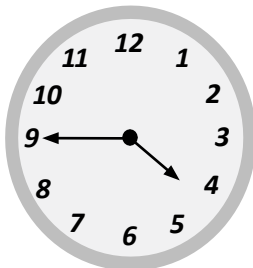
f) _____



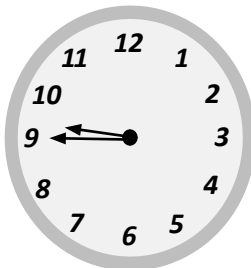
g) _____



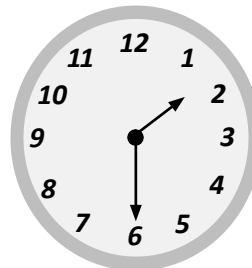
h) _____



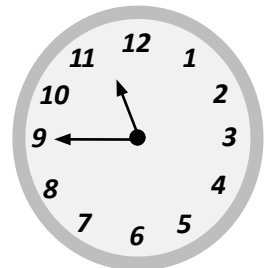
i) _____



j) _____

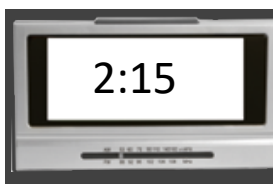


k) _____

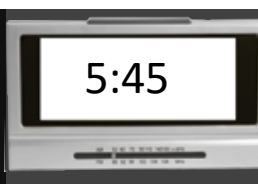


l) _____

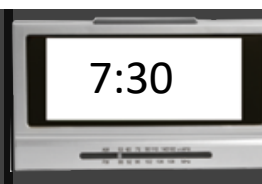
Use words to write these times:



m) _____



n) _____



o) _____

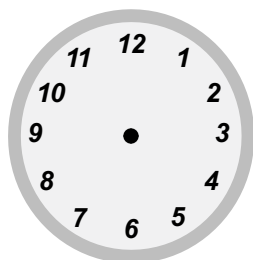


p) _____

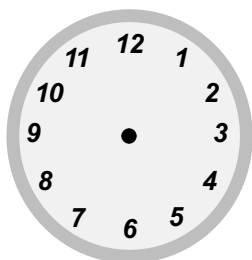
Write Time

Measurement

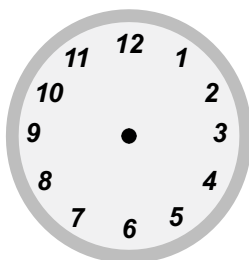
On these clocks, draw hands to show the indicated times.



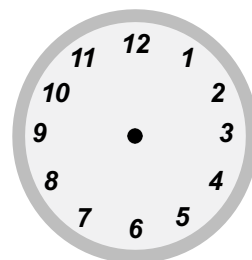
a) 10:15



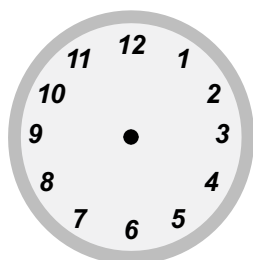
b) 1:15



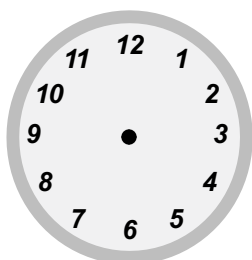
c) 3:15



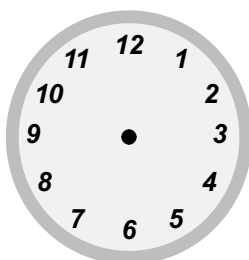
d) 8:00



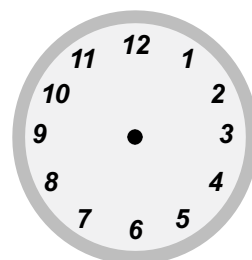
e) quarter past eleven



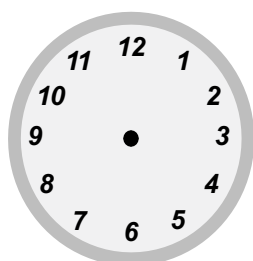
f) quarter to seven



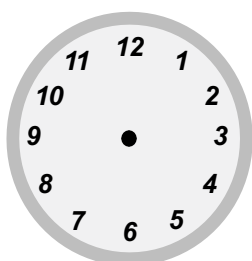
g) half past nine



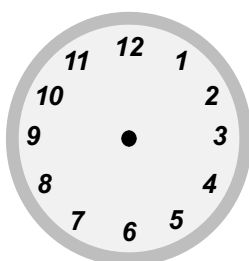
h) four o'clock



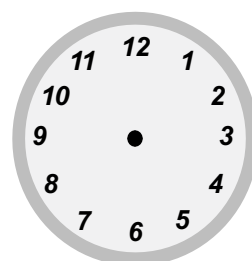
i) 2:45



j) 6:30



k) 5:45



l) 12:45

Write in the numbers on the clock faces to show the times:



m) quarter past one



n) three o'clock



o) half past ten



p) quarter to eight

Measuring Tools for Time

Measurement

Clocks aren't the only things that tell us about how much time has passed. An hourglass is filled with sand that falls from the top part to the bottom usually taking an hour to empty the whole thing. An egg timer is just the same but much smaller.



It only takes a few minutes to empty! A water clock works in about the same way. It uses water and a special bowl with a small hole in it to measure how much time has passed.

We can make a timer from an empty bottle and some water. Check with your grown-up to find an empty bottle you can use, and work over a bucket or sink. Fill the bottle with water, then time how long it takes to empty if you hold it upside down. Check this a couple of times to be sure! Sketch the bottle you're using here, and write down how long it takes to empty.

Record the time it takes the bottle to empty: _____

You could also use sand to build a timer. You will need a similar type of bottle and a bucket to dump the sand into. You can also create a timer by putting an amount of sand in one large empty bottle. Tape the mouth of another same-sized empty bottle to the top and use the two bottles like a giant egg-timer.

How much sand did you use? _____

Time to empty: _____

Effects of Temperature

Measurement

1. What's the weather outside like right now? Does that happen a lot at this time of year?
2. What's the temperature like? Is it hot out? Cold? Somewhere in the middle?
3. Was it warmer or colder this morning? Was it warmer or colder yesterday?
4. Did you have to put on a sweater today, or light clothes? How was the temperature yesterday?
5. Circle the outfit you should wear if it's freezing cold outside:

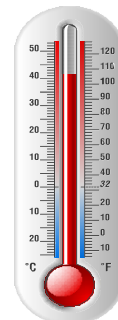
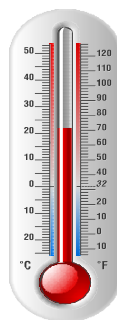


6. Put a line under the outfit you should wear when it's warm out.
7. What kinds of outdoor activities do you do when it's hot outside?
6. What kinds of outdoor activities do you do when it's cool outside?

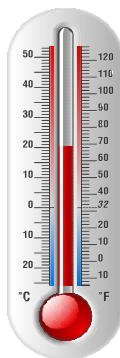
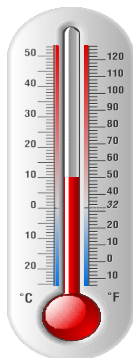
Changing Temperature

Measurement

1. Here are two standard thermometers. Which one tells a higher temperature?

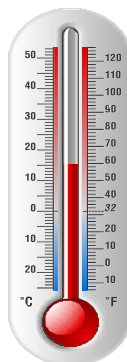


2. This morning the thermometer at Jan and Kim's looked like the one on the left.
This afternoon it looked like the one on the right.

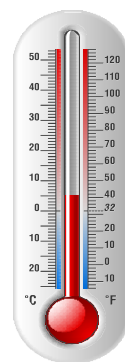


Has the temperature gone up or down? _____

3. Last week Pat and Alex took a picture of the highest temperature their thermometer reached. This week they took it again. Is the temperature this week higher or lower than it was last week?



last week



this week

Days & Weeks

Measurement

1. How many days are there in a week?
2. Name the days in order:
3. Is it more or less than a week between Tuesday and Sunday?
4. Is it more or less than a week between Thursday and Wednesday?
5. What day is it today?
6. Kim's party is in 10 days from today. What day will that be?
7. Is Kim's party more or less than a week away?
8. How many days are there to the end of the week from today?
9. What's today's date?
10. What will the date be a week from now?
11. Suppose you get two weeks vacation starting next Monday. How many days off will you have?
12. If you go to the cottage on Wednesday and come back the next Tuesday, will you have been gone for a week, or longer or less?
13. What activities do you do during the week, and on what days do you do them?

Practise: Count days and dates (day numbers) on your calendar!

Months & Years

Measurement

There are 12 months in a year.

They are **January, February, March, April, May, June, July, August, September, October, November, December.**



1. What month comes after December?
2. If Alex is 17 months older than Jan, are they more or less \than a year apart in age?
3. Kim is 5 months younger than Pat. Are they more or less than a year apart?
4. In two months, Kim's cousin will be 1 year old. How old is the baby now?
5. How many months are in 3 years?
6. How many years does 24 months make?
7. How many seasons are there in a year?
8. What are they?
9. How many months are there in each season?
10. What month is it now?
11. Jan's birthday is next January. How many months away is that?
12. Is your next birthday this year or next year?
13. How many months is it until your birthday?

Estimate and Measure Length:

- Answers may vary.
- Answers may vary.
- 4, 4, approximately 8

Personal Benchmarks: Answers may vary. Have some fun. Find a benchmark of your own.

Standard Units of Length:

- Answers may vary; ensure correctness.
- Answers may vary; ensure correctness.
- Answers may vary; discuss this with your student.

Select Units: Answers may vary; ensure the “why” is filled in, as justification of choice is critical.

Measuring Around Things:

Answers may vary; ensure accuracy.

Measuring Areas:

- 28 squares, 6 squares
- Answers may vary; size should remain (approximately) equal regardless of orientation of card
- Answers may vary.

Size and Number of Units – Area:

Answers may vary; paper is generally larger than an index card, thus more cards will be required; more of the smaller units are required for the same area.

Measure Capacity:

- a) bucket should be circled
- a) 4
- the pitcher
- 2
- 18
- it's pretty close, yes

Measure Mass:

- a) 3
- a) mug
- a) 2
- b) 8
- b) apple
- b) 2
- c) 5
- c) piggybank
- c) cup
- d) 10
- e) 6
- f) 4

Compare by Capacity and Mass:

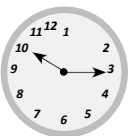
- a) 2, 1, 3
- a) 2, 3, 1
- b) 1, 3, 2

Tell Time:

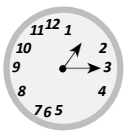
- 5:15
- 12:00
- 3:15
- 7:15
- 8:30
- 2:45
- 10:15
- 6:00

- 4:45
- 9:45
- 1:30
- 11:45
- two fifteen
- five forty-five
- seven thirty
- ten o'clock

Write Time:



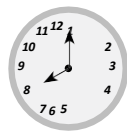
a) 10:15



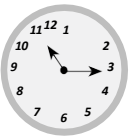
b) 1:15



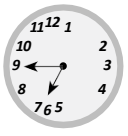
c) 3:15



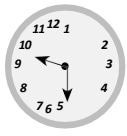
d) 8:00



e) quarter past eleven



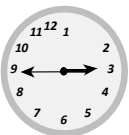
f) quarter to seven



g) half past nine



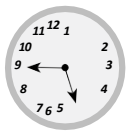
h) four o'clock



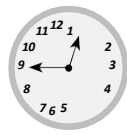
i) 2:45



j) 6:30



k) 5:45



l) 12:45

2. Write in the numbers on the clock faces to show the times:



m) quarter past one



n) three o'clock



o) half past ten



p) quarter to eight

Measuring Tools for Time: (page 42)

Answers may vary.

Effects of Temperature: (page 43)

Answers may vary.



Changing Temperatures: (page 44)

1. thermometer on the right (with higher bar)

2. has gone up

3. is lower

Days and Weeks: (page 45)

1. 7; Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday (may start at Sunday)

2. less

3. less

4. Answers may vary.

5. Answers may vary; ensure correctness

6. more

7. Answers may vary.

8. Answers may vary.

9. Answers may vary.

10. 14 days

11. less than a week

12. Answers may vary.

Months and Years: (page 46)

1. January

2. more

3. less

4. 10 months

5. 36 months

6. 2 years

7. 4; spring, summer, autumn or fall, winter (order may vary)

8. 3

12. Answers may vary.