



## Element 2 - Unity in the Home, Street and Community

The three main lesson plans on the pages that follow cover 7 integrated activities that span a variety of age levels and content areas

<b>Topic: Working Together</b>	<b>Unity at Home</b>
<p><b>Grade Levels:</b> Adjustable</p> <p><b>Time Needed:</b> 1/2 hour or more each day</p> <p><b>Key Points</b></p> <ul style="list-style-type: none"><li>• Family life is easier when people work together.</li><li>• We can bring others joy as we unite around a common cause.</li><li>• We can celebrate our work with small daily actions at work and play.</li><li>• Playing can be fun when we try to improve together rather than compete against one another.</li><li>• Unity matters.</li></ul>	<p><b>Caregiver:</b></p> <ul style="list-style-type: none"><li>• Remind learners to work together each day for a half hour or more at a task that helps the family</li><li>• Remind learners to sketch and date what they have accomplished.</li><li>• Sign the sketches</li><li>• Celebrate with a game of Hopscotch Unity</li></ul>



# Unity at Home

A family feels unity when everyone is kind to one another and works well together. Each time you complete an action of unity with others at home, sketch it in a box below. Write the date at the bottom of the box. Have an adult sign the page.


Adult Signature: \_\_\_\_\_

# Hopscotch Unity

This game builds unity in the family or in small teams of classmates.

1. Draw a grid on the ground with a stick or with chalk, based on the pattern below. Make each square large enough for a foot to step inside. Write in the numbers.
2. Hopping first on two feet, then on one foot, the first person tries to hop from 1 to 9 without stepping on a line. If they succeed, the whole team gets 9 points. The next person takes a turn.
3. When every teammate has scored 9 each, the team starts again and hops faster, to see if they can beat their own time record.

9	
7	8
6	
4	5
3	
1	2



<p><b>Topic: Unity in the Neighborhood</b></p>	<p><b>Math Maps and Chalk Drawings</b></p>
<p><b>Grade Levels:</b> Adjustable for Grades 2-7</p> <p>Time: 2 hours: (1 hour for puppet making and props; ½ hour for song rehearsal and ½ hour for dress rehearsal)</p> <p><b>Key Points</b></p> <ul style="list-style-type: none"> <li>• We can use tools such as mathematics and map making to help us build unity and solve community problems</li> <li>• Maps help us estimate distances between points on a map or objects over an area</li> <li>• When looking at a map or graph, “area equals length times width”</li> <li>• We can visualize multiplication tables by counting objects on a surface area or map</li> <li>• We can choose the math processes we know, such as multiplication, to determine how to approach challenges such as collecting needed items for families or clinics</li> <li>• Unity matters.</li> </ul>	<p><b>Teacher or Caregiver:</b></p> <p>Reads through map and mathematics challenge lesson plan and adapt for your grade level and learners.</p> <ul style="list-style-type: none"> <li>• Learners make working map grids, using paper and pencil, chalk on concrete, or marks in firm sand or soil.</li> <li>• Conduct the Map and Mathematics Challenge activities.</li> <li>• Engage family or small classroom groups in the Map Math Game.</li> <li>• Read through Finding Unity in the Community to create final drafts of maps, available art medium--chalk, paint, sand, pencils, or colors. (Recommendation: Front yard maps or sidewalk art can become a Share It step, to benefit passersby trying to find their way!)</li> </ul>

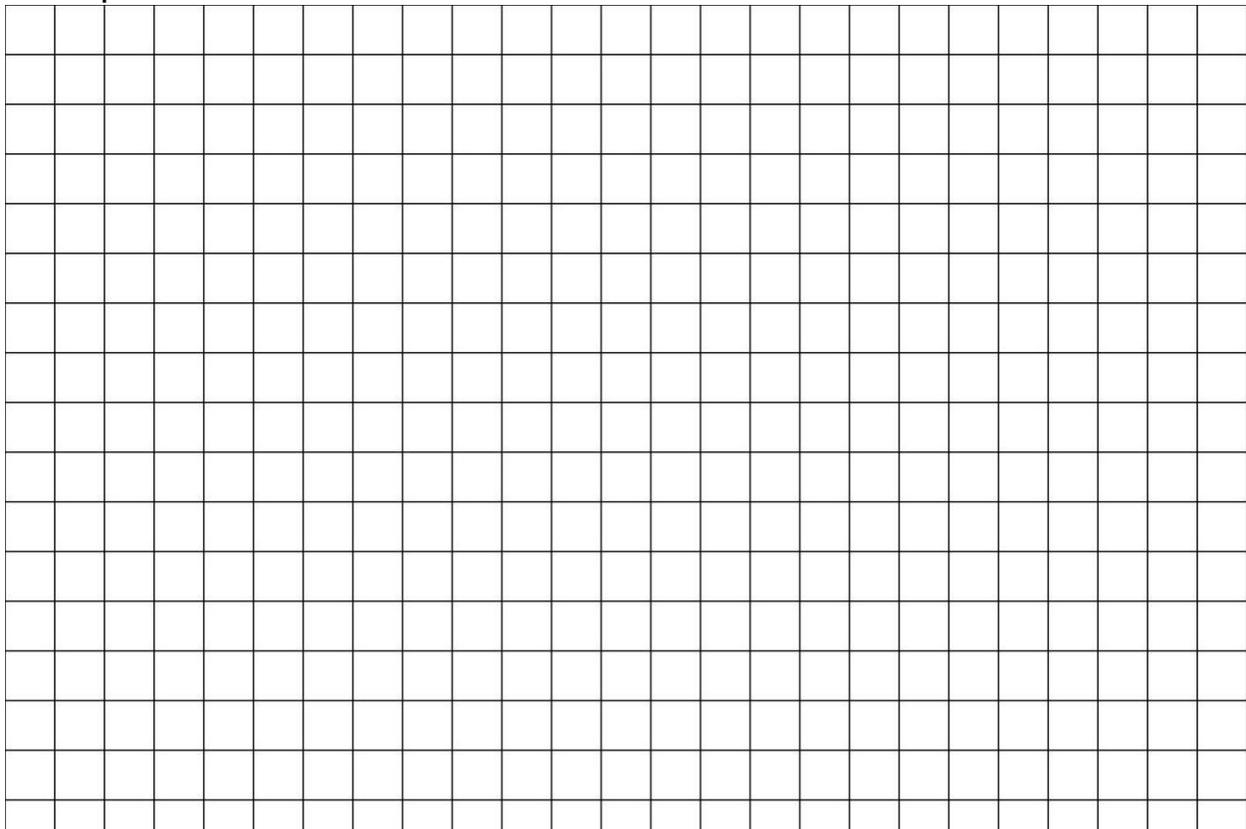
# Map and Mathematics Challenges

## Make a Map

Draw the outline of your neighborhood or community on the grid sheet below. This first map will be a rough draft only, so just sketch the lines. Each square equals about 1/8 kilometers (a quarter of a soccer or football field).

Now add details:

1. First draw the place where you stay.
2. In another area, draw a clinic, doctor or hospital.
3. Next, draw the place where people find food (a marketplace, store or garden).
4. Where do the elders stay? Draw that place and other important places.



Count the number of squares going across the top of the map. Write the number at the end of the row. Next, count the squares going down the map. Write that number at the bottom.

## Measuring Area

Multiply the length times the width to find the area of your map.

(Area = width times length) What was the total area?

Check the multiplication table to see if you were right.

You have just saved lots of time! Otherwise, to find the area, you would need to count every square.

A way to check your multiplication for correctness is to move groups of pebbles into piles and then add them together. This will help you see how multiplication works.

Now you are ready to teach your family or friends a game using your map and a pebble for each player.

## Map Math Game

Challenge the players to unite to gather items on the map to help the family. To begin, name a gamekeeper, Person A and Person D.

1. Person A always moves across and person D always moves down.
2. They each think of a number and whisper it to the gamekeeper, who calls out the equation, such as  $A = 3 \times D = 4$ .
3. Starting at the edge of the map, players A and D count out the number of squares across and down, collecting items as they go. Each one calls out items they pretend to collect for the family along the way, based on what buildings they pass (bandages from the clinic, carrots from the garden, pencils from the store, etc.)
4. One of them multiplies the area--or counts out squares--and calls out how many squares they covered (12). This person becomes the next gamekeeper.
5. To feature more options for collecting items, players will want to use larger numbers in the equations. You may also draw additional items on the map.
6. When the players have traveled across a total of 100 squares together, start a new game.

# Multiplication

X	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

# Map Unity Challenges

## Challenge 1:

Movement is limited where you live. However, you have just learned that the hospital is helping so many sick people, they are running out of protective masks. As an essential service your family group has received permission to make masks and send them to the hospital through a messenger.

How many people are in your group? How many will masks will each family member make if you want to send 10 masks? 12 masks? 30 masks?

Group number  $\times$  10 = ?

Group number  $\times$  12 = ?

Group number  $\times$  30 = ?

Look at your map. How many squares lie between your home and the clinic or hospital? Draw the safest route to get there. Count the squares. If your family members or friends made 30 masks in batches of 5, how many trips would a messenger make to deliver the masks? ( $5 \times ? = 30$ .)

How many squares would the messenger travel across?

Bonus question: How many kilometers would the messenger cover if each square equals  $\frac{1}{8}$  of a kilometer? ( $8 \times$  number of squares = kilometers)

## Challenge 2:

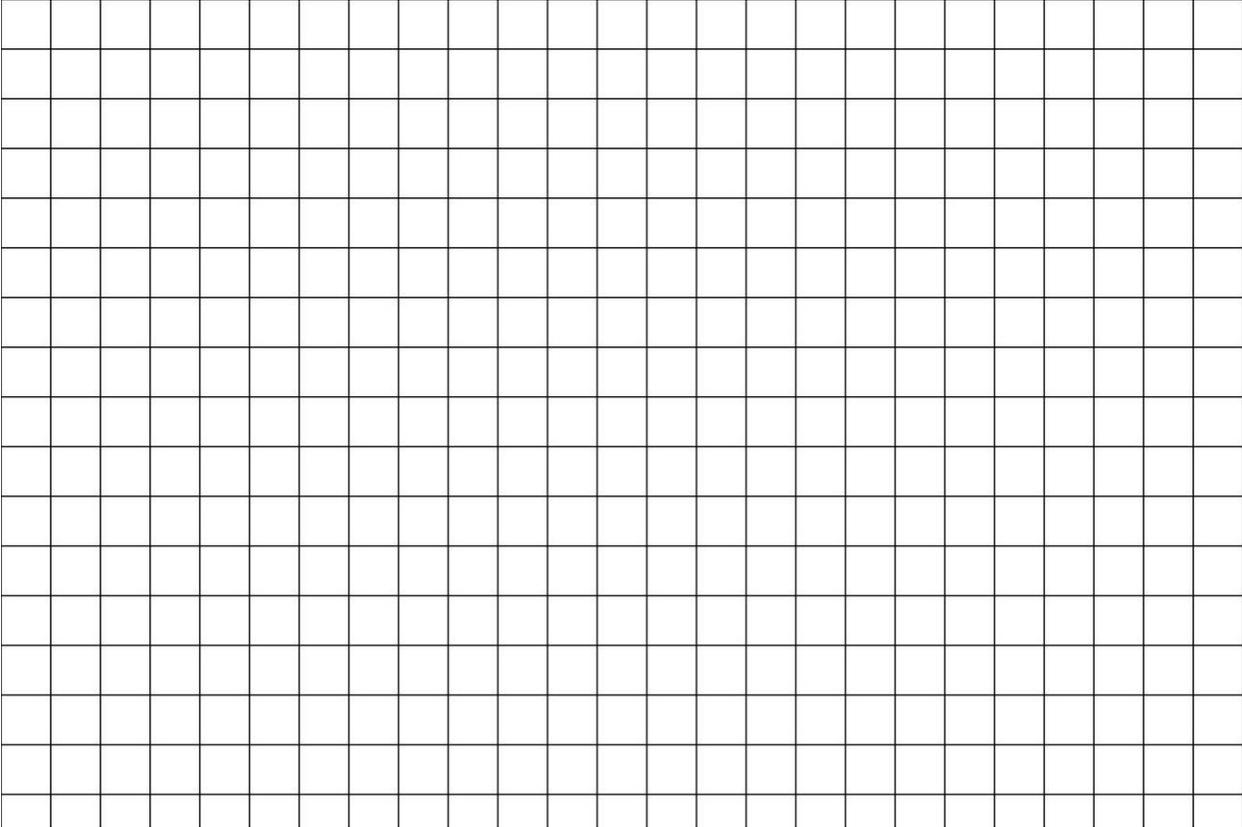
The elders in your community have no food. Discuss with your family the best way to serve them. Will you share your food? Will you pick food from the garden, or get groceries for them in the marketplace? If you have very little, will you ask neighbors to help?

Draw the route needed to get the food and to leave it on the doorstep of those in need. Count the squares. How many squares will it take to get there and back? How many kilometers (squares  $\times$  8). Remember to check the multiplication charts if you are uncertain.

## Challenge 3:

With your family, discuss a problem that you will solve together in unity to help loved ones or those your community. Draw lines on the map to see how you will solve this challenge. Move pebbles into squares on the map, if needed, to try different multiplication challenges on your own.

# Grid Sheet for Map



# Multiplication

X	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

## Finding the “Unity” in Community

Look at the word Community. “Co” means together. “Come” means to move forward. What do you have left when you take away those words? After completing all the math challenges, create a new final draft of your map. On this map:

1. Draw the shape of your community. Leave space at the bottom.
2. Outline important buildings, hills, and water features, with detail lines
3. With pencil or crayon on its side, lay in basic color. If you are making an outdoor map, use sidewalk chalk or lay a stick on its side in sand to create shading.
4. Add light and dark shading to show trees, clusters of buildings and open spaces.
5. Label each place on the map.
6. With your family, talk about how people in the community best show unity. What do they do and say? What buildings should you add?
7. Draw in people involved in those activities. Add words, if needed, to explain their actions.
8. Discuss with your family how your family shows the same kind of unity. List those as a family code of ethics under the map. Each day, ask the adults in your family how well you have practiced these principles, such as:
  - We work together.
  - We share what we have.
  - We show love.

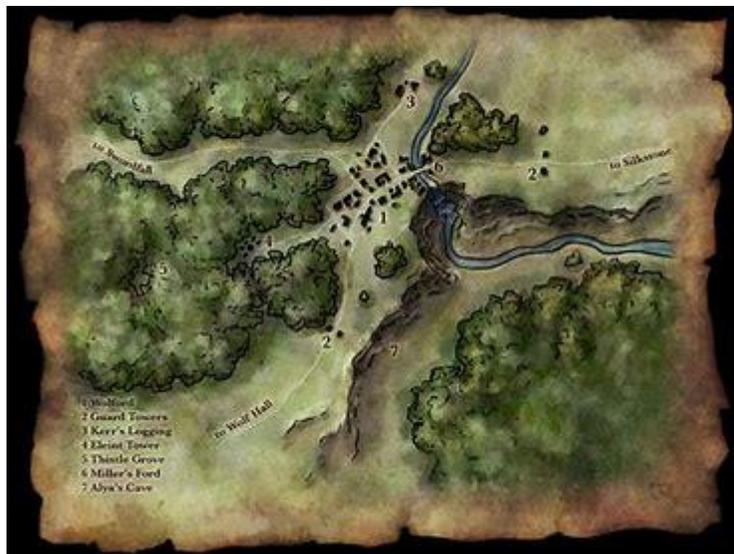


Image courtesy of [fantasticmaps.com](http://fantasticmaps.com)

<p><b>Topic: Working Together</b></p>	<p><b>Clean Community Challenge</b></p>
<p><b>Grade Levels:</b> Secondary School</p> <p><b>Time Needed:</b> 45 minutes</p> <p><b>Key Points</b></p> <ul style="list-style-type: none"> <li>• Creating safe communities requires working together.</li> <li>• We can use math, maps and new research to design new projects.</li> <li>• Each neighborhood may have a slightly different biological response to the same health conditions. Prevention projects should be simple but fact-based and specific to the need.</li> <li>• Working in unity requires us to gather information on the number of people served and the number who will unite in service.</li> </ul>	<p><b>Teacher or Self-Learner:</b></p> <ul style="list-style-type: none"> <li>• Uses maps from previous activities as the basis to plan community service.</li> <li>• Conducts a needs assessment based on area, with mathematical inputs from local population and available student participants.</li> <li>• Creates a hypothetical plan for a project that models the action it teaches.</li> </ul> 



# Clean Community Unity Challenge

Imagine you were planning to teach your community how to stop the spread of infectious disease. Your team of 35 high school students will divide the area on your map. Here are some planning questions your team will ask:

1. Is the current disease highly contagious and breathable in the air? How is it spread? This will determine whether you must send the information door to door, or by posting it in a public place or by presenting it at community meetings or by sending it through another means.
2. You plan to initiative a public sanitation project as well as teaching others. You have already measrued the squares on your map. If you divide the area into 35 sections, and each student works with a partner, how many squares will each team need to inform and to clean? How will they involve the public?
3. Estimate how many people live in each section. How will they egage those people in a safe way? What other services will they provide? How will you make sure the students and residents are both safe?
4. How will you research the best way to clean the area in each part of the map? Will the market need the same type of information and services that the patients near the clinic need? Will the open-air homes need the same information that closed offices need? What about those buildings with public restrooms compared to a community without running water?
5. Imagine you are having a planning conversation. Write out the math as if you had an assignment for each group. When it is safe to do so, carry out the plan with classmates.