

HORIZONS MATH 3 MANIPULATIVES SCHEDULE

This schedule will help you stay organized as you work your way through the Horizons Math 3 Manipulatives kit. To use it most effectively, be sure to check the "Parent Provided" column each time you begin a lesson to make certain you have all the materials required. Please also note that "optional" manipulatives are listed in *italic font* in your Teacher's Guide.

The Number Charts referenced in several lessons are from Horizons Math 1 and 2. If you do not own these, create your own charts, one from 0-100 and one from 100-199. Keep a master copy ... then laminate the Number Charts to increase their longevity. The Multiplication Chart in Lesson 13 is found in your Teacher's Guide (Worksheet 7). Be sure to keep a master copy and laminate one of these as well.

You can create your own place value and fraction materials. Create the place value pieces with several groups of ten straws with rubber bands around them for tens. For the one hundreds, take ten groups of ten and put a large rubber band around them. Use single straws for the ones. To make the fraction materials, trace around a small dinner plate on a piece of construction paper. Cut out the shape and divide it in to 4 equal parts. Create as many fraction "pies" as you need to demonstrate the fraction parts taught in various lessons.

Additionally, a handful of lessons contain projects that require poster board. You may or may not choose to include these in your planning. They are not required for teaching the concepts presented.

Finally, please refer to the Flash Cards Instruction Sheet each time you see a reference to *Plain index cards to create _____ flash cards*. This is included at the end of the schedule.

Lesson	Kit/Book Provided	Parent Provided
1		Number chart, Place value materials, Calendar, Money
2	Number flash cards ¹	Number chart, Place value materials, Money
3	Number flash cards, Clock	Number chart, Place value materials, Money
4	Clock	Number chart, Place value materials
5	Clock	Number chart, Place value materials, Money
6	Addition flash cards, Clock	Number chart, Place value materials, Money
7	Subtraction flash cards, Addition flash cards	Money
8	Addition flash cards	Money, Flannel board ²
9		Money

Lesson	Kit/Book Provided	Parent Provided
10	Subtraction flash cards, Multiplication flash cards, Counting tiles	Number chart, Money
11	Addition flash cards, Multiplication flash cards, Plain index cards to create <i>greater than and less than, shapes, and solids flash cards</i>	Number chart
12	Subtraction flash cards, Multiplication flash cards	Student-created shapes and solids flash cards
13	Multiplication flash cards, Roman numeral flash cards, Multiplication chart, Plain index cards to create <i>subtraction terms flash cards</i>	Place value materials, Student-created shapes and solids flash cards
14	Multiplication flash cards, Roman numeral flash cards, Multiplication chart, Clock, Plain index cards to create <i>fraction terms flash cards</i>	Student-created subtraction terms, shapes and solids flash cards, Fraction materials
15	Addition flash cards, Multiplication flash cards, Roman numeral flash cards, Number flash cards, Multiplication chart, Clock	Number chart, Money
16	Addition flash cards, Multiplication flash cards, Number flash cards, Roman numeral flash cards, Multiplication chart	Number chart
17	Subtraction flash cards, Multiplication flash cards, Clock	
18	Multiplication flash cards, Clock	Parent-created number line
19	Multiplication flash cards, Clock	Student-created greater than and less than flash cards
20	Subtraction flash cards, Multiplication flash cards, Clock	Number charts (both)

¹ For word number drills simply use the back side of your Number flash cards to drill word numbers.

² Some lessons call for a flannel board. Please keep in mind that this program is also designed for classroom use where a flannel board would be standard equipment.

Note: Lesson 46 will require one cup, one pint, one quart, and one gallon containers.

Lesson	Kit/Book Provided	Parent Provided
21	Addition flash cards, Multiplication flash cards, Plain index cards to create <i>multiplication terms flash cards</i>	Number chart (100-199)
22	Subtraction flash cards, Multiplication flash cards, Multiplication chart, Plain index cards to create <i>addition terms flash cards</i>	Student-created greater than and less than flash cards
23	<i>Multiplication flash cards, Multiplication chart</i>	Money
24	Multiplication flash cards, Multiplication chart, Clock	Money
25	Addition flash cards, Multiplication flash cards, Clock	Money, Student-created shapes and solids flash cards
26	Addition flash cards, Multiplication flash cards, Roman numeral flash cards, Multiplication chart, Plain index cards to create <i>equal and not equal flash cards</i>	Student-created shapes, solids, and addition terms flash cards
27	Subtraction flash cards, Multiplication flash cards, Roman numeral flash cards, Multiplication chart, 3D shapes models (rectangular prism)	Student-created shapes, solids ³ , and greater than and less than flash cards
28	Multiplication flash cards, Roman numeral flash cards, Number flash cards, Multiplication chart	Student-created flash cards for shapes and solids
29	Multiplication flash cards, Roman numeral flash cards, Clock	Student-created flash cards for shapes, solids, and subtraction terms
30	Subtraction flash cards, Multiplication flash cards	Student-created flash cards for shapes, solids, and subtraction terms
31	Addition flash cards, Multiplication flash cards, Clock	Number line
32	Subtraction flash cards, Multiplication flash cards, Number flash cards, Ordinal number flash cards, Clock	
33	Multiplication flash cards, Clock	
34	Multiplication flash cards, Clock, Multiplication chart	Place value materials
35	Addition flash cards, Multiplication flash cards, Multiplication chart	

Lesson	Kit/Book Provided	Parent Provided
36	Addition flash cards, Multiplication flash cards	Place value materials
37	Subtraction flash cards, Multiplication flash cards, Yardstick ⁴ , Ruler	Money, Place value materials
38	Multiplication flash cards, Clock, Plain index cards to create <i>English Linear Equivalents flash cards</i>	Money, Place value materials
39	Multiplication flash cards, Roman numeral flash cards, Number flash cards, Ruler	Student-created multiplication terms flash cards
40	Multiplication flash cards, Roman numeral flash cards, Number flash cards	Student-created multiplication terms flash cards
41	Addition flash cards, Multiplication flash cards	Student-created shapes and solids flash cards, Fraction materials
42	Subtraction flash cards, Multiplication flash cards, Roman numeral flash cards	Student-created shapes and solids flash cards
43	Multiplication flash cards, Multiplication chart, Clock	Student-created fraction terms flash cards, Fraction materials
44	Multiplication flash cards	Fraction materials
45	Addition flash cards, Multiplication flash cards	
46	Addition flash cards, Multiplication flash cards, Clock, Ruler	English liquid measure containers (pint, quart, gallon)
47	Subtraction flash cards, Multiplication flash cards, Clock, Plain index cards to create <i>English liquid equivalents flash cards</i>	English liquid measure containers
48	Multiplication flash cards, Clock	English liquid measure containers, Student-created English liquid equivalents flash cards
49	Multiplication flash cards	Money, Student-created subtraction terms flash cards
50	Subtraction flash cards, Multiplication flash cards	Money, Student-created subtraction terms flash cards

³ Be sure to check your Teacher's Guide for Lesson 27 (Activity 4) for more information on shapes and solids. You may need to create additional flash cards if your student needs more drill.

⁴ The folding meter stick can be used for all activities requiring an inch or centimeter ruler, yardstick, or meter stick.

Note: Lesson 64 requires a slice of bread and a pound of butter.
Lesson 65 requires a pound of rice and a pound of beans.

Lesson	Kit/Book Provided	Parent Provided
51	Addition flash cards, Multiplication flash cards	Money
52	Subtraction flash cards, Multiplication flash cards, Multiplication chart	Money
53	Multiplication flash cards, Clock	Money, Place value materials
54	Multiplication flash cards, Roman numeral flash cards	Money, Place value materials
55	Addition flash cards, Multiplication flash cards, Roman numeral flash cards, Multiplication chart	Student-created shapes and solids flash card
56	Addition flash cards, Multiplication flash cards, Roman numerals flash cards, Ruler	Student-created shapes and solids flash cards, Fraction materials
57	Subtraction flash cards, Multiplication flash cards	Student-created shapes and solids flash cards, Fraction materials
58	Multiplication flash cards, Clock	Student-created shapes and solids flash cards
59	Multiplication flash cards	Student-created fraction terms and multiplication terms flash cards
60	Subtraction flash cards, Multiplication flash cards	Fraction materials
61	Addition flash cards, Multiplication flash cards, Multiplication chart	Bar graph ⁵
62	Subtraction flash cards, Multiplication flash cards, Plain index cards to create <i>division terms flash cards</i>	Bar graph
63	Multiplication flash cards, Multiplication chart, Clock	
64	Multiplication flash cards, Multiplication chart, Clock	Student-created division terms flash cards, Slice of bread, Pound of butter
65	Addition flash cards, Multiplication flash cards, Crayons, Multiplication chart, Platform scale	Pound of rice, Pound of beans, Two cup measuring cup
66	Addition flash cards, Multiplication flash cards, Multiplication chart	Money
67	Subtraction flash cards, Multiplication flash cards, Multiplication chart	

Lesson	Kit/Book Provided	Parent Provided
68	Multiplication flash cards, Clock, 3D solids models	Student-created shapes and solids flash cards, Place value materials
69	Multiplication flash cards, Division flash cards, Multiplication chart	Student-created shapes and solids flash cards, Place value materials
70	Subtraction flash cards, Multiplication flash cards, Division flash cards, Clock	Student-created shapes and solids flash cards, Fraction materials
71	Addition flash cards, Multiplication flash cards, Division flash cards, Clock	
72	Subtraction flash cards, Multiplication flash cards, Division flash cards, Number flash cards, Clock	
73	Multiplication flash cards, Division flash cards, Clock	Student-created fraction terms flash cards, Line graph ⁶
74	Multiplication flash cards, Division flash cards, Multiplication chart	Line graph
75	Addition flash cards, Multiplication flash cards, Multiplication chart	Student-created division terms flash cards
76	Addition flash cards, Multiplication flash cards, Division flash cards, Multiplication chart, Ruler	Student-created subtraction terms flash cards
77	Subtraction flash cards, Multiplication flash cards, Division flash cards, Multiplication chart, Plain index cards to create <i>English weight equivalents flash cards</i>	
78	Multiplication flash cards, Division flash cards, Roman numeral flash cards, Clock, Ruler	
79	Multiplication flash cards, Division flash cards, Roman numeral flash cards	
80	Subtraction flash cards, Multiplication flash cards, Division flash cards, Roman numeral flash cards, Multiplication chart	

5 Create your own bar graph similar to the graph on the Student Worksheet. You may use a sheet of the graph paper provided in your manipulatives kit.

6 Create a sample line graph similar to the graph on the Student Worksheet. You may use a sheet of the graph paper provided in your manipulatives kit.

Note: Lesson 85 requires a United States map. Lesson 110 requires blocks (any play blocks work well). Lesson 111 requires a shoe box. Lesson 119 requires a milliliter medicine cup.

Lesson	Kit/Book Provided	Parent Provided
81	Addition flash cards, Multiplication flash cards, Division flash cards, Roman numeral flash cards	
82	Subtraction flash cards, Multiplication flash cards, Division flash cards	
83	Multiplication flash cards, Division flash cards, Clock	
84	Multiplication flash cards, Division flash cards, Clock	Pictograph ⁷
85	Addition flash cards, Multiplication flash cards, Division flash cards, Clock	United States map, Pictograph
86	Addition flash cards, Multiplication flash cards, Division flash cards, Clock, Yardstick	Student-created English linear equivalents, English liquid equivalents, and English weight equivalents flash cards, String
87	Subtraction flash cards, Multiplication flash cards, Division flash cards, Multiplication chart	Student-created multiplication terms flash cards
88	Multiplication flash cards, Division flash cards, Clock	Student-created multiplication terms flash cards, Fraction materials
89	Multiplication flash cards, Division flash cards, Thermometer	Fraction materials
90	Subtraction flash cards, Multiplication flash cards, Division flash cards, Thermometer	Place value materials
91	Addition flash cards, Multiplication flash cards, Division flash cards, Roman numeral flash cards, Thermometer	Place value materials
92	Subtraction flash cards, Multiplication flash cards, Division flash cards, Roman numeral flash cards, Thermometer, Construction paper	Money
93	Multiplication flash cards, Division flash cards, Clock	Student-created shapes and solids flash cards, Money
94	Multiplication flash cards, Division flash cards	Student-created shapes, solids, English linear equivalents, English liquid equivalents, and English weight equivalents flash cards

Lesson	Kit/Book Provided	Parent Provided
95	Addition flash cards, Multiplication flash cards, Division flash cards	
96	Addition flash cards, Multiplication flash cards, Division flash cards, Number flash cards	Student-created English linear equivalents, English liquid equivalents, and English weight equivalents flash cards
97	Subtraction flash cards, Multiplication flash cards, Division flash cards, Number flash cards, Clock	Place value materials
98	Multiplication flash cards, Division flash cards, Clock	Place value materials
99	Multiplication flash cards, Division flash cards, Clock, Multiplication chart	Student-created division terms flash cards
100	Subtraction flash cards, Division flash cards, Clock	Student-created division terms flash cards
101	Addition flash cards, Multiplication flash cards, Division flash cards, Thermometer	Fraction materials
102	Subtraction flash cards, Multiplication flash cards, Division flash cards, Construction paper, Thermometer	Place value materials, Parent-cut symmetrical shapes as described in Teacher's Guide
103	Division flash cards, Clock	Student-created multiplication terms flash cards, Typing paper, Money, Mirror
104	Multiplication flash cards, Division flash cards	Money
105	Addition flash cards, Division flash cards, Roman numeral flash cards	Money
106	Addition flash cards, Multiplication flash cards, Division flash cards, Ruler, Meter stick, Yardstick	Student-created shapes and solids flash cards
107	Subtraction flash cards, Multiplication flash cards, Division flash cards, Ruler	
108	Division flash cards, Ruler, Clock	
109	Multiplication flash cards, Division flash cards, Multiplication chart	Checkbook and check
110	Subtraction flash cards, Division flash cards	Blocks, Double line graph

⁷ Create a sample pictograph similar to that found on the student worksheet.

Lesson	Kit/Book Provided	Parent Provided
111	Addition flash cards, Multiplication flash cards, Division flash cards	Blocks, Shoe box
112	Subtraction flash cards, Multiplication flash cards, Division flash cards, Clock, Multiplication chart	Fraction materials
113	Division flash cards, Multiplication chart, Clock	Place value materials
114	Multiplication flash cards, Division flash cards, Thermometer, Multiplication chart	
115	Addition flash cards, Division flash cards, Thermometer	
116	Addition flash cards, Multiplication flash cards, Division flash cards	Fraction materials, Ink ⁸ , Paper
117	Subtraction flash cards, Multiplication flash cards, Division flash cards, Geoboard ⁹ , Rubber bands	Student-created shapes and solids flash cards, Fraction materials
118	Division flash cards, Clock	Student-created shapes and solids flash cards, Number line
119	Multiplication flash cards, Division flash cards	Teaspoon, Milliliter medicine cup
120	Subtraction flash cards, Division flash cards, Plain index cards to create <i>metric liquid equivalents flash cards</i>	United States map
121	Addition flash cards, Multiplication flash cards, Division flash cards, Roman numeral flash cards	Student-created shapes and solids flash cards
122	Subtraction flash cards, Multiplication flash cards, Division flash cards, Roman numeral flash cards, Multiplication chart, Counting tiles, Platform scale	
123	Division flash cards, Clock, Plain index cards for creating <i>metric linear equivalents and metric weight equivalents flash cards</i>	Student-created metric liquid equivalents and English linear equivalents flash cards
124	Multiplication flash cards, Division flash cards, Clock	Place value materials, Pictograph
125	Addition flash cards, Division flash cards, Thermometer	Number line

Lesson	Kit/Book Provided	Parent Provided
126	Addition flash cards, Multiplication flash cards, Division flash cards, Thermometer	Student-created multiplication terms flash cards, Place value materials
127	Subtraction flash cards, Multiplication flash cards, Division flash cards	Place value materials
128	Division flash cards, Clock, Plain index cards to create <i>geometric terms flash cards</i>	
129	Multiplication flash cards, Division flash cards	Student-created division terms flash cards
130	Subtraction flash cards, Division flash cards	Money
131	Addition flash cards, Multiplication flash cards, Division flash cards	Student-created metric linear equivalents, metric liquid equivalents, and metric weight equivalents flash cards, Fraction materials, Money
132	Subtraction flash cards, Multiplication flash cards, Division flash cards	
133	Division flash cards, Roman numeral flash cards, Ruler, Clock	
134	Multiplication flash cards, Division flash cards, Roman numeral flash cards, Clock, Ruler	
135	Addition flash cards, Division flash cards, Clock	
136	Addition flash cards, Multiplication flash cards, Division flash cards	Student-created English equivalents and metric equivalents flash cards
137	Subtraction flash cards, Multiplication flash cards, Division flash cards	Student-created metric linear equivalents, metric liquid equivalents, metric weight equivalents, English weight equivalents, English liquid equivalents, and English linear equivalents
138	Division flash cards, Thermometer, Clock	

8 If you do not have ink available, this exercise can easily be done with paint as well.

9 The Geoboard (plastic square with pegs) is designed to be used with the rubber bands. Students make various geometric shapes by stretching the rubber bands around different pegs. Make multiple copies of Worksheet 59 from your Teacher's Guide so your students can do this exercise over again if you so desire.

Lesson	Kit/Book Provided	Parent Provided
139	Multiplication flash cards, Division flash cards	Student-created shapes flash cards, Grid ¹⁰
140	Subtraction flash cards, Division flash cards	Student-created shapes flash cards
141	Addition flash cards, Multiplication flash cards, Division flash cards	
142	Subtraction flash cards, Multiplication flash cards, Division flash cards	Parent/Student - trace and cut out a large square, circle, equilateral triangle, and hexagon from typing paper
143	Division flash cards, Clock	Clock
144	Multiplication flash cards, Division flash cards	
145	Addition flash cards, Division flash cards	Student-created division terms flash cards
146	Addition flash cards, Multiplication flash cards, Division flash cards	
147	Subtraction flash cards, Multiplication flash cards, Division flash cards, Clock	Calendar, Grid
148	Division flash cards, Clock	Student-created English linear equivalents, English liquid equivalents, English weight equivalents, metric liquid equivalents, metric linear equivalents, and metric weight equivalents flash cards, Grid
149	Multiplication flash cards, Division flash cards, Thermometer	Student-created English linear equivalents, English liquid equivalents, English weight equivalents, metric liquid equivalents, metric linear equivalents, and metric weight equivalents flash cards, Grid
150	Subtraction flash cards, Division flash cards, Thermometer	Student-created English linear equivalents, English liquid equivalents, English weight equivalents, metric liquid equivalents, metric linear equivalents, and metric weight equivalents flash cards

Lesson	Kit/Book Provided	Parent Provided
151	Addition flash cards, Multiplication flash cards, Division flash cards, Roman numeral flash cards	Grid
152	Subtraction flash cards, Multiplication flash cards, Division flash cards, 3D solids models (cube)	Student-created multiplication terms flash cards, Grid
153	Division flash cards, Clock, 3D solids models (rectangular prism), Graph paper	Grid
154	Multiplication flash cards, Division flash cards, Graph paper	
155	Addition flash cards, Division flash cards, Roman numeral flash cards, Ruler	Student-created geometric terms flash cards
156	Addition flash cards, Multiplication flash cards, Division flash cards	Student-created geometric terms flash cards
157	Subtraction flash cards, Multiplication flash cards, Division flash cards	Money, Grid
158	Division flash cards	Student-created English linear equivalents, English liquid equivalents, English weight equivalents, metric linear equivalents, metric liquid equivalents, metric weight equivalents, and geometric terms flash cards
159	Multiplication flash cards, Division flash cards	Student-created English linear equivalents, English liquid equivalents, English weight equivalents, metric linear equivalents, metric liquid equivalents, metric weight equivalents, and geometric terms flash cards
160	Subtraction flash cards, Division flash cards	

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¹⁰ Create a grid similar to the one shown on the student worksheet (#5).

FLASH CARD INSTRUCTION SHEET

One very effective way to help students learn a new concept is to assist them in making their own flash cards. For most of these math flash cards, help your student to draw the “front” side of the card and you can fill in the “answer” or back side of the card.

Note: If you’ve previously used Horizons Math 1 or 2, you may already own many of these flash cards.

Lesson Introduced	Flash Cards	Instruction
11	Greater Than/ Less Than	Help your student create two flash cards, one each with the greater than and less than signs on the front. Parent fills in the appropriate identification on the back.
11	Shapes	Using seven index cards, draw an oval, diamond, octagon, circle, triangle, square, and rectangle on individual cards. Allow your students to color each shape. Parent fills in the appropriate identification on the back.
11	Solids	Using four index cards, draw a sphere, a cylinder, a cube, and a cone. Allow your students to color each shape. Parent fills in the appropriate identification on the back.
13	Subtraction Terms	Help your student create three flash cards labeled Minuend, Subtrahend, and Difference. On the back sides, write a sample subtraction problem and have your student circle the appropriate number to match the term on the front of the card.
14	Fraction Terms	Help your student create two flash cards, one each labeled Numerator and Denominator. On the back side, write a sample fraction and have your student circle the appropriate number to match the term on the front of the card.

Lesson Introduced	Flash Cards	Instruction
21	Multiplication Terms	Help your student create three flash cards labeled Multiplicand, Multiplier, and Product. On the back side, write a sample multiplication problem and have your student circle the appropriate number to match the term on the front of the card.
22	Addition Terms	Help your student create two flash cards labeled Addend and Sum. On the back side, write a sample addition problem and have your student circle the appropriate number(s) to match the term on the front of the card.
26	Equal/Not Equal	Help your student create two flash cards, one each with the equal and not equal signs on the front. Parent fills in the appropriate identification on the back.
38	English Linear Equivalents	Help your student create two flash cards, one each with 1 Foot and 1 Yard on the front. Parent fills in the appropriate equivalent in inches and/ or feet on the back.
47	English Liquid Equivalents	Help your student create five flash cards with labels ounce, cup, pint, quart and gallon. On the back write these equivalents one cup = 8 ounces, 1 pint = 2 cups, 1 quart = 2 pints, 1 gallon = 4 quarts.
62	Division Terms	Help your student create two flash cards labeled Quotient and Dividend. On the back side, write a sample division problem and have your student circle the appropriate number to match the term on the front of the card.

Lesson Introduced	Flash Cards	Instruction
77	English Weight Equivalents	Help your student create two flash cards, one each with 1 pound and 1 ton. On the back write these equivalents 1 pound = 16 ounces, 1 ton = 2000 pounds.
120	Metric Liquid Equivalents	Help your student create two flash cards, one each with 1 Liter and 1 Milliliter on the front. On the back write these equivalents 1 Liter = 1000 milliliters, 1 Milliliter = .001 Liter.
123	Metric Linear Equivalents	Help your student create four flash cards, one each with 1 Meter, 1 Centimeter, 1 Millimeter and 1 Kilometer. On the back write these equivalents 1 Meter = .001 kilometer, 1 Centimeter = .01 meter (centi = one hundredth), 1 Millimeter = .001 meter (milli = one thousandth) and 1 Kilometer = 1000 meters (kilo = thousand).
123	Metric Weight Equivalents	Help your student create three flash cards, one each with 1 Gram, 1 Milligram and 1 Kilogram. On the back write these equivalents 1 Gram = 1000 milligrams, 1 Milligram = .001 gram, 1 Kilogram = 1000 grams.
128	Geometric Terms	Help your student create three flash cards with labels line, line segment, and ray. On the back draw the appropriate figures based on the student worksheet for Lesson 128.