


INTRODUCTION

Dear Teacher,

Welcome to *AfterMaths™*. These reproducible books are designed to engage students in using a variety of maths skills that will be important to them as developmental learners and as thinkers in the years ahead. Students will use critical thinking, problem solving, and computation skills as they complete the activities.

The activities in the *AfterMaths* student book are based on seven concepts. These concepts are numeration, number theory, measurement, geometry, prealgebra, data interpretation, and logical reasoning. A list of activities and the skills covered appears on the following page.

These books may be used to supplement and reinforce classroom lessons. They may be used to extend or enrich daily lessons. Or, they may be used to provide challenges to students who enjoy experimenting with maths. The activities are designed for students to work on their own, in pairs, or in small groups at their own pace.

The activities provide a variety of experiences for students, including writing, computing, experimenting, completing small projects, conducting research, and playing games. An icon  marks challenging creative-thinking items. Students will become aware that mathematics is not just reserved for the classroom; it is a vital part of the world around them.

Try to preview all the activities in the student book before assigning particular activities. The activities can be done in any order that fits your needs. Note that some maths experiments require the use of basic hands-on materials such as calculators, number cubes, playing cards, dominoes, and rulers.

***AfterMaths, Book F* is designed specifically for students in grade six.** However, the activities can be used with advanced mathematics students in grade five, as well as with students who require mathematics skills reinforcement in year seven.

Enjoy the activities. Encourage students to do as many as possible. Galileo once said that mathematics is the alphabet in which the universe was created. So, let's begin to learn that alphabet.

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EVENS, ODDS, AND ENDS

That's Odd

What do the odd numbers in each box have in common?

33	69	129
27	3	51

BOX ONE

9	19	11	21
15	17	23	13

BOX TWO

49	81	121
9	25	1

BOX THREE

1. BOX ONE: _____
2. BOX TWO: _____
3. BOX THREE: _____

We're Even

For each item, determine what three consecutive even numbers less than 50 are addends that produce the sum shown on the right.

1. _____ + _____ + _____ = 132
2. _____ + _____ + _____ = 96
3. _____ + _____ + _____ = 78
4. _____ + _____ + _____ = 60
5. _____ + _____ + _____ = 42
6. _____ + _____ + _____ = 24

Name That Number

Write the number described in each paragraph.

1. I am a four-digit number. My first digit is an odd number that is $\frac{1}{9}$ the size of my last digit. My middle digits make up the smallest two-digit number divisible by 3. What number am I? _____
2. I am a five-digit number. My first digit is the largest single-digit even number. My last digit is the smallest one-digit number that evenly divides into my first digit. My middle three digits make up the number that represents 12 squared. What number am I? _____
3. I am a six-digit number. My first digit is $\frac{1}{2}$ of my last digit. My last digit is a one-digit number divisible evenly by itself, 1, 2, and 3. My middle digits make up the amount represented by the number of cents in \$50, minus 25 cents. What number am I? _____

IT'S A DATE

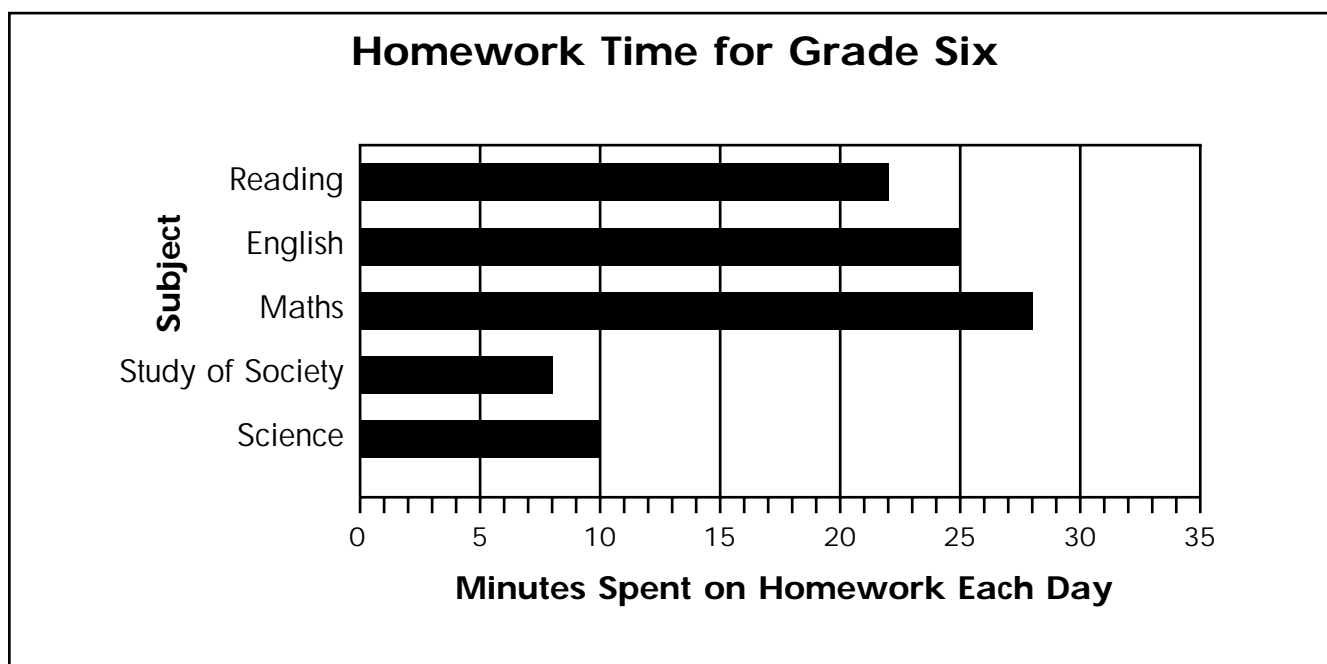
Here's a trick you can do with a calendar. Practise the trick with this sample calendar first, and then try it on other calendars!

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

- Step 1.** On the calendar, draw a box around a section that has four dates on the top, four dates on the bottom, and four dates on each side (there should be a total of 16 dates in the box). See the boxed section on the sample calendar above.
- Step 2.** Select and circle one date within the boxed section. Cross out all other dates that are in the same row and the same column as the circled date.
- Step 3.** Select and circle another date from the remaining dates in the box. Cross out all other dates that are in the same row and the same column as this second circled date (some dates may already be crossed out from Step 2).
- Step 4.** Select and circle a third date from the remaining dates in the box. Cross out all other dates that are in the same row and the same column as this third circled date (some dates may already be crossed out from Step 2 and Step 3).
- Step 5.** Circle the one remaining date in the box.
- Step 6.** Add the numbers of the four circled dates. Write the sum. _____
- Step 7.** Add the two numbers at the ends of each of the two diagonals in the boxed section. Add the two sums and write the total sum. _____
- Step 8.** What do you notice about the numbers that you got in Step 6 and in Step 7?
- Step 9.** Try this trick with 16-date sections on other calendars. Do you always get the same relationship between the numbers from Step 6 and Step 7?

SKILL BUILDERS 6

Look at the bar graph. Then answer the questions.



1. Write the subjects in order, from the subject that requires the least amount of homework time to the subject that requires the greatest amount of time.

2. According to this graph, what subjects require more than twice the amount of homework time than that of study of society?

3. Approximately how many minutes of maths homework does a grade six student do in a five-day school week?

4. How many days' worth of science homework are equal to two days' worth of English homework?

5. How many total minutes of homework does a typical grade six student have each day?
