Number Munchers ™

Munch on Math!

With *Number Munchers*, learn basic math skills the easy and fun way! Help your Muncher avoid the mischievous Troggles as you maneuver through the gameboard, munching on multiples, factors, prime numbers, equalities, and inequalities. If you earn enough points and avoid those troublesome Troggles, you'll be sure to enter the Muncher Hall of Fame!
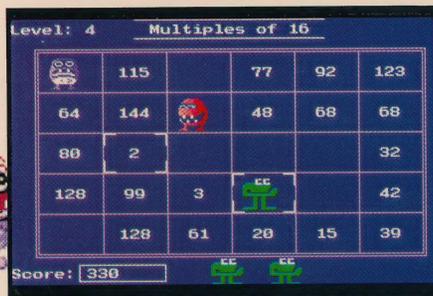
IBM/Tandy version

Chomp the right numbers!

Macintosh version

See animated cartoons as you progress!
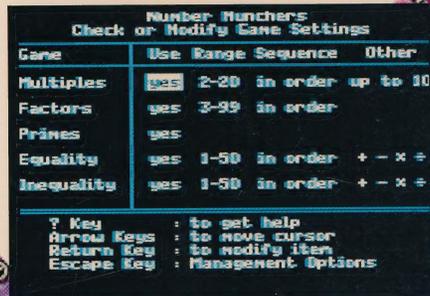
Apple II version

Change settings for new challenges!

Macintosh version

Earn enough points to join the Hall of Fame!

This award-winning package includes:

- Hundreds of different gameboards, making every game new and exciting.

- Management Options, giving you the ability to control the difficulty level of each game.

- An easy-to-follow User's Guide, allowing you to begin playing with little start-up time.

- MECC's 30-Day Satisfaction Guarantee or your money back.

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For the love of learning.

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Month Year

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Phone _____ Product Name _____ Product Disk No. _____

Platform (check one) ☐ Apple   ☐ MS-DOS   ☐ Macintosh   Disk Size (check one) ☐ 3.5" ☐ 5.25"

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Number Munchers™

HAP113-5
Apple II Series
Version 1.3

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*"ECTYPE" is a real word that means a faithful reproduction.

SYNCOM
Your flexible alternative

Protect
Proteger
Protéger
Schützen
保護

No
No
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Falsch
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Insert Carefully
Insertar
Inserer avec soin
Sorgfältig Einsetzen
挿入注意

Never
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Jamais
Nie
絶対禁止

10°C→52°C
50°F→125°F

Never
Nunca
Jamais
Nie
絶対禁止

SYNCOM
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Number Munchers

User's Guide

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Number Munchers™
Version 1.x

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6160 Summit Drive North
Minneapolis, Minnesota 55430-4003

Welcome to *Number Munchers*™

Number Munchers focuses upon several different but complementary mathematics skills. Using an arcade-like game format, players must maneuver the "Number Muncher" around a game board and direct it to "eat" numbers or arithmetic expressions that match a key value. If they munch an incorrect number or expression, they lose a turn. Players must also avoid "Troggles," creatures that love to catch and devour Munchers.

Five different versions of *Number Munchers* can be played: Multiples, Factors, Primes, Equality, and Inequality. Management Options are available that enable parents or teachers to select which versions of the game students may use, to set game parameters, and to erase the "Hall of Fame" list.

One program
For use by one player
Ages 8 to Adult

Level of Play

Target Criterion

Troggle!

Number Muncher

Score

Remaining Munchers

Safe Zone

1
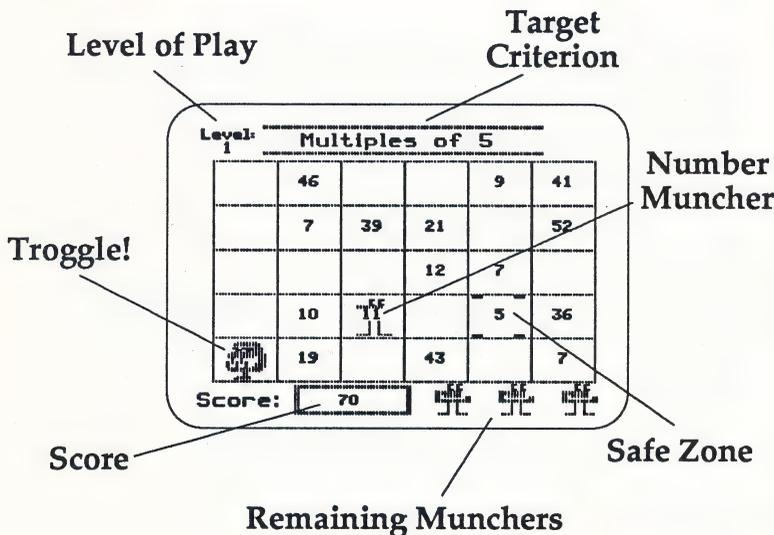
Munchers love to eat numbers—if they are the right ones! Be sure that the Muncher eats only numbers that match the key value displayed at the top of the game screen. If you make a mistake or if the Muncher gets caught by a Troggle, then the Muncher is lost.

You start the game with four **Munchers** *(Munchicus digitus)*—three in reserve and one on the game screen. You may earn one additional Muncher if your score reaches 1000 points and another at 10,000 points. Munchers are under your control. This means that you choose which direction the Muncher moves and when it eats a number or expression (the "target"). If the target that is eaten matches the key value displayed at the top of the game screen, then points are earned.

Reggies *(Trogglus normalus)* are the most common species of Troggle. When a Reggie enters a cell containing a number or expression, it eats the number or expression and leaves another in its place.

Helpers *(Trogglus assistus)* are Troggles that eat numbers or expressions and leave nothing in their place. They're nice to have around because they help the Muncher in its number-gobbling task, but they can still be nasty if they catch up with a Muncher.

Workers *(Trogglus laborus)* are Troggles that hate to see empty cells. When they find one, they put a number in it!

Bashfuls *(Trogglus timidus)* are shy Troggles. If they get close to a Muncher, they tend to move away from it.

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Watch out for **Smarties** (*Trogglus smarticus*)! They're Troggles that know where the Muncher is and will try to follow it and hunt it down.

Keyboard: The following keys may be used to control the direction of the Muncher's movement. (Note: The ↑ and ↓ Keys are not available on the Apple II or Apple II Plus.)

Key	Direction
↑ I A	Up
↓ M Z	Down
→ K	Right
← J	Left

Once the Muncher is in a cell that contains a target number, press the Space Bar (or the Ⓒ or Key) to make the Muncher eat the number.

Press the ? Key to call "time out" and freeze the game. Points will be deducted from your score each time you do this. To start playing again, you may press the ? Key again, an Arrow Key, the Space Bar, or an Apple Key, or you can move the joystick.

Joystick: If your computer is equipped with a joystick, you may use it to play *Number Munchers*. Simply move the joystick in the direction you want the Muncher to move and press the fire button to make it eat a number. *Number Munchers* is not designed to be controlled by game paddles or a graphics table.

A special note to Apple IIGS owners: Use the control panel to set the system speed to "normal" while you are first learning to use **Number Munchers.**

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Safe Zones   Safe zones are special cells that Munchers can enter but Troggles cannot. They are indicated by small markers in each corner of the cell. Use them to escape a Troggle or as a place to rest temporarily while you look for the next number to munch. Be careful, however, because a safe zone can turn back into a regular cell without warning.

Scoring   Points are earned whenever the Muncher eats a correct number or expression. The number of points earned is dependent upon the level of the game:

Level	Point Value	Level	Point Value
1-3	5	9	35
4	10	10	40
5	15	11	45
6	20	12-18	50
7	25	19+	75
8	30		

Versions   Five versions of *Number Munchers* are available: Multiples, Factors, Primes, Equality, and Inequality.

Multiples   The object of Multiples is to direct the Muncher to eat numbers that are multiples of the key value displayed at the top of the game screen. Management Options are available that permit teachers or parents to control the range of key values (2-99) and the sequence of key values (fixed or random).

Factors   The object of Factors is to direct the Muncher to eat numbers that are factors of the key value. The Management Options may be used to determine the range of key values (2-99) and the sequence of the

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key values (fixed or random). You may also determine the minimum number of different targets that must be available before a particular key value is used. For example, if the minimum number of factors is set to 5, *Number Munchers* would not display the key value of 14 since 14 has only four factors—1, 2, 7, and 14.

The object of Primes is to direct the Muncher to eat prime numbers. Management Options may be used to control student access to this game. Prime numbers are automatically restricted by range and sequence.

Primes

The object of Equality is to direct the Muncher to eat expressions that, when solved, equal the key value. For example, if the key value is 15, then the following expressions would be valid targets: 10 + 5, 5 x 3, 20 - 5, 30 ÷ 2.

Equality

Management Options permit you to control student access to the game, set the range of key values (2-50) and the sequence of the key values (fixed or random), and the minimum number of different targets that must be available before a particular key value is used.

You may also use the Management Options to control which arithmetic operations are used (addition, subtraction, multiplication, and division). Any combination of these four operations may be used.

This version is very similar to Equality, except that the object is to eat expressions that do *not* equal the key value.

Inequality

Levels of Play

When a game screen has been cleared of all the numbers or expressions that match the key value, the screen is erased and a new level of play is begun. The current level of play is indicated in the box in the upper left corner of the screen.

Each level of play is more difficult than the preceding one. As play progresses, you will find that the number, variety, and speed of Troggles on the screen increase and that the number and duration of safe zones decrease.

Muncher "Cartoons"

After you have successfully cleared three game screens in a row, you will be able to watch the Muncher and a Troggle in a brief "cartoon." This is your reward for helping the Muncher eat the right numbers!

Sound

Should you wish to use *Number Munchers* without its sound effects, you may do so by typing Control-S whenever the computer is waiting for a response. To type Control-S, hold down the Control Key while simultaneously pressing the S Key.

If you wish to stop playing before all of your Munchers are gone, press the Escape (Esc) Key twice whenever the computer is waiting for a response. You will be allowed to return to the main menu or to restart the program.

Number Munchers maintains a list of the ten highest scores for each version of the game and the names of the players who got them. If your score is higher than the lowest score on the list, you will have a chance to add your name to the list.

You can view the "Hall of Fame" list by choosing "Hall of Fame" from the main menu.

Management Options allow you to determine which versions of *Number Munchers* players will be allowed to use and make adjustments to the educational content of each version. You may also erase the Hall of Fame (Winner's List). To access the Management Options, press Control-A (hold down the Control Key and press the letter A) when the main menu is displayed.

```
            Number Munchers
          Management Options

    1.  Check or modify game settings
    2.  Restore normal game settings
    3.  Delete a Hall of Fame entry
    4.  Erase all Hall of Fame lists


    Arrow Keys  : to move cursor
    Return Key  : to select item
    Escape Key  : to exit to main menu
```

Specifying the Game Settings

If you wish to check or modify the current game settings, choose Option 1 from the Management Options menu and press Return. The game settings screen is then displayed.

Note: You can get help at many points while specifying the game settings by pressing the ? Key.

Versions of *Number Munchers* are listed vertically in the left-most column. To the right of each version is information about the current setting for each version. Note that if a column is blank, then it is not possible to affect that setting for that particular version of *Number Munchers*.

Use

Indicates whether players are allowed to choose this version of *Number Munchers* (Yes). If students are not allowed to choose this version (No), it is not displayed as a choice (Default = Yes).

To modify this setting, use the Arrow Keys to move the cursor within this column until it rests by the version you wish to modify and then press Return.

Range

Indicates the range of key values that may be displayed. Range does not apply to the Primes version.

The default ranges are:
        Multiples 2-99
        Factors   3-99
        Equality   1-50
        Inequality 1-50

To modify a setting, use the Arrow Keys to move the cursor within the "Range" column to the version you wish to modify and then press Return. You may enter a number for the lower value in the range and then for the upper value in the range.

Indicates whether the key values increment in order or are randomly chosen (Default = In order). Sequence does not apply to the Primes version.

To modify a setting, use the Arrow Keys to move the cursor within the "Sequence" column to the version you wish to modify and then press Return.

Sequence

Indicates settings applicable only to Multiples, Equality, and Inequality.

Other

In Multiples, you can determine the maximum value of the "hidden" multiplier, which, in turn, affects the maximum value of the targets and distractors. For example, if the object of the game is for the Muncher to eat multiples of 3, and the setting in this column reads "up to 10," then the target values in the game cells will range between 3 (3 x 1) and 30 (3 x 10).

To modify this setting, use the Arrow Keys to highlight the "up to . . ." entry in the "Other" column and press Return. You will then be prompted to enter a new value (between 3 and 50).

For the Equality and Inequality games, this column indicates which arithmetic operations (addition, subtraction, multiplication, and division) are used in the problems displayed in the game cells. Any combination of these operations is permissible.

To modify the operations selected, use the Arrow Keys to highlight the settings for the game you wish to modify and press Return.

You will then see a different screen where you may then proceed to toggle each operation "On" or "Off" until the settings are correct. When finished, press the Escape Key to return to the "Check or Modify Game Settings" screen.

Restoring Defaults

If you wish to set all of the versions of *Number Munchers* to their original settings, you may do so by choosing Option 2, "Restore normal game settings," from the Management Options menu. Note that, in doing so, any special settings you have made will be lost. When finished checking or modifying the game settings, press the Escape Key to return to the Management Options menu.

Erasing the Hall of Fame

Number Munchers maintains a list of the ten best scores for each version of the game. After the tenth score is entered, only a score higher than the lowest score on the list may be recorded. Option 3, "Delete a Hall of Fame entry," allows you to erase one score from a list, whereas Option 4, "Erase all Hall of Fame lists," enables you to erase all scores in all lists.

Other Exciting Programs

If you enjoy using *Number Munchers*, you'll surely enjoy other MECC products for the Apple II series of computers, including *The Oregon Trail*, *USA GeoGraph*, *Word Munchers*, and *World GeoGraph*.

Many MECC products are available from leading software stores across the country, or they can be ordered directly from MECC. To place an order or to obtain a catalog describing the complete MECC line of educational software, call toll-free 800/685-MECC. Or write:

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6160 Summit Drive North
Minneapolis, Minnesota 55430-4003

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