Pipo is a collection of education games on CD-ROM that, through their presentation and the creative way they treat different themes, quickly capture children’s interest. The software build up different areas of the school curriculum and the skills necessary for children’s learning and development.

They have been created and coordinated by child psychology professionals, including contributions from teachers and specialists in each area. Clear, simple and very stimulating, they aim to let children work through the activities by themselves at their own pace and learn through play, encouraging and stimulating intuition, reasoning, creativity...

Although the child sees these games as just games and has fun trying to solve them, from a pedagogical point of view, each one delivers a specific set of learning goals for children.

They cover an extensive range of ages, going from 2 years old up to 8, 10 or even 12 years old. Children move forward at their own personal learning pace, depending on their age and prior knowledge. Some programs also include the possibility of
regulating the level of difficulty. These have proved to be very useful for children with learning difficulties or in special education.

**MATHEMATICS WITH PIPO**

Mathematics with Pipo is aimed mainly at children between 3 and 7 years old. Even so, many games can be played with help from 2 years old and others, at their higher levels, are suitable for children older than 7 years.

The learning areas are varied: counting, ordering number series, simple and complex math operations, logical sequences, geometric shapes, puzzles, measuring, and using money.

The objectives of the program concentrate on the promotion and stimulation of logical-mathematical mental abilities, as well as other skills such as attention span, observational skills, memory, spatial organization, co-ordination…

Mathematics and logical reasoning are areas that are sometimes presented in a way that is not stimulating for children. In Mathematics with Pipo we offer fun and attractive contents, and aim to develop to the utmost the incredible capacity that children have for learning.

The games are very stimulating and quickly capture the child’s interest thanks to their dynamics and design. These mean that every time children play they want to beat their personal best.

The duration of each game varies according to the learning speed, needs, and abilities of each child. There is no time pressure and you can interrupt and leave the game at any time.

**FOR PARENTS AND TEACHERS**

The concept of Pipo was created so as the child can interact with the computer as if it were a toy, with the objective of learning and having fun at the same time. It is important that they explore, investigate and discover the options of the game allowing a greater interest, motivation and output in their learning.

The game offers the possibility of playing in three different languages: Spanish, English and Catalan, in this way allowing the child to have a basic knowledge of other languages apart from their own. For the very small up to four years old it is recommended for them to play in their own maternal language or at least until they become familiar with the game. It is especially useful for children who are learning a second language.

The games count the hits and misses: the points are important as they serve as an incentive to motivate the child to continue playing, making them try harder to improve their learning, but you must keep in mind that they are not significant in themselves.

Also, all the games have various levels of difficulty, which allows you to adapt the game and move up through the levels while you learn and interiorize the contents. Once you have succeeded in a level, the program asks you if you want to change the level or, on the other hand, if you prefer to continue at the same level.

This new edition of the product contains the new learning objective (see page 18). This motivates children a lot as they can see their progress in a fun way. However, since this product is aimed at a wide age range, the higher levels and some games can only be solved by older children. It is important not to put any pressure on children to solve all the games or to solve games that do not correspond to their age.

We recommend the following (at the easiest levels) for younger children: to color, the school robot, puzzle, the helicopters (find the number), the roller coaster
(logical sequences), the crocodile (calculate jumps), and the games from the adding machine.

HELP BUTTON

In all the games you can press on the green question mark to get a summary of how the game works. You can also go at any time to General Help. This consists of the following parts:

1. How does the program work.
2. Games.

USE OF THE MOUSE

Using the mouse means that children can easily manage all the games. It is preferable that the child learns to use a standard mouse from the beginning. Some 2-year-old children can use it and from 3 years old almost all can.

We recommend alternatives such as a trackball, a mouse that is easier to use, only when it is not possible to control a standard mouse or for those who have problems with motor control.

For younger children, you could use a smaller mouse (designed for laptops), which can help children learn to use the mouse.

To move objects in the Pipo games, we use the philosophy of “one click” to pick something up and “another click” to let it go. This is simpler than the click-and-drag method since, once the child has picked something up, it is not released until the child decides to let it go using another click.

TO START

You can choose to play with your nickname or with the name that appears in the register.

Help. Gives a brief rundown of the functions of the game, from here you can access the general helpline where you can consult useful guidelines for parents and teachers.

Summary. A general visit to all the contents.

F9. A visual up-date of the childs progress.

F8. Access to the configuration screen.

THE BRIDGE

Once we have clicked the PLAY button, we go to the bridge of Pipo’s spaceship, where we can see the different sections.
Here you will get a global overview of the whole product.

Clicking F8 takes us to the configuration screen where you can change the following things:

- **DECIMAL SIGN**
  You can choose between the decimal point [.] or the comma [,].

- **DIVISION STYLE**
  You can choose between the Spanish or Anglo-Saxon layout.

- **CURRENCY**
  You can choose between euro (€) and dollar ($).

- **PRINTER**
  You can also activate or deactivate the printer. If you don’t want to print the diploma or the score screen, deactivate the button.

  To avoid young children using the button by mistake we recommend that you only turn it on when you need to.

In a fun and attractive way, the games in this section stimulate the mental abilities of logical and abstract reasoning, develop creativity and aid understanding numbers.
Learning aims: Practice the numerical sequence.

How to play? Join the dots of the picture in order (from smallest to biggest) and discover what is hidden in the picture.

There are 5 levels in this game:

Level 1: Numbers from 1 to 10.
Level 2: Numbers from 10 to 20.
Level 3: Multiples of ten up to 100.
Level 4: Numbers from 20 to 100.
Level 5: Numbers in five up to 100.

Learning aims: Recognize numbers and colors. Stimulate the artistic capacities of the child.

How to play? The game is coloring in pictures that are divided into different areas.

There are 3 levels in this game:

Level 1: When you click on an area of the drawing the color will appear automatically and you will hear the number.
Level 2: You have to choose the color that has the same number as the area that you want to color and then click it.
Level 3: There are no numbers on the pictures. At this level, you have to click on an area, listen to the number, choose the corresponding color and then click on the area to color it in.
**PUZZLE**

**Learning aims:**
Strengthen attention span and concentration.
Increase perception and visual memory.
Develop hand-eye coordination.

**How to play?**
Complete the puzzle.

There are **4 levels** of difficulty:

- **Level 1:** Place the colored pieces on the gray background. With help.
- **Level 2:** Place the colored pieces. Without help. If you need help, click on the lifebelt button to see the completed picture.
- **Level 3:** There is only one empty area. When you click on a piece it will move to this area. Click on the lifebelt button to see what piece should go in the empty area.
- **Level 4:** Sliding puzzles. This is a very difficult level (even for adults). You can only move the pieces next to the empty space.

**BASIC MATHEMATIC EXERCISES**

With these games you can compare the progress in the four basic mathematical operations. Each game is structured into different levels, starting with simple operations using numbers of one digit, then harder operations, up to operations with three digits.

- With the airships you will learn how to divide.
- With the rockets you will learn how to add.
- With the submarines you will learn how to multiply.
- With the aeroplanes you will learn how to subtract.

**THE ROCKETS**

**Learning aims:**
Learn to carry out mental calculations.
Develop mental agility.

**How to play?**
Solve the addition that Pipo sets you. To answer, you can click on the correct rocket or type the answer into the square on the bar and then click the OK button or press the ENTER key to see if you are right.
There are **10 levels** of difficulty:

**Level 1:** Additions with result less or equal to 5.
**Level 2:** Additions with result less or equal to 7.
**Level 3:** Additions with result less or equal to 10.
**Level 4:** Additions with result less or equal to 20.
**Level 5:** Multiples of ten plus one digit.
**Level 6:** Addition of multiples of ten.
**Level 7:** Addition of to 5 to multiples of 5.
**Level 8:** Add 10 to any number.
**Level 9:** Add 2-digit numbers plus 1-digit numbers.
**Level 10:** Add 2-digit numbers plus 2-digit numbers.

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**THE AEROPLANES**

**Learning aims:**
Learn to carry out mental calculations
Develop mental agility.

**How to play?**
Solve the subtraction that Pipo sets you. To answer you can click on the correct aeroplane and type the answer into the square on the bar and then click the OK button or press the ENTER key to see if you are right.

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**THE SUBMARINES**

**Learning aims:**
Learn to carry out mental calculation.
Develop mental agility.

**How to play?**
Solve the multiplication that Pipo sets you. To answer, you can click on the correct submarine or type the answer into the square on the bar and then click the OK button or press the ENTER key to see if you are right.

There are 10 levels of difficulty:

- **Level 1**: One times table.
- **Level 2**: Two times table. Up to 2x 5.
- **Level 3**: Three times table. Up to 3 x 4.
- **Level 4**: Two times table.
- **Level 5**: Three times table.
- **Level 6**: Four times table.
- **Level 7**: Five times table.
- **Level 8**: Six and seven times tables.
- **Level 9**: Eight and nine times tables.
- **Level 10**: Multiples of ten up to fifty by 1, 2, 3, 4 or 5.

**THE AIRSHIPS**

**Learning aims:**
Learn to carry out mental calculation.
Develop mental agility.

**How to play?**
Solve the division that Pipo sets you. To answer, you can click on the correct submarine or type the answer into the square on the bar and then click the OK button or press the ENTER key to see if you are right.

There are 10 levels of difficulty:

- **Level 1**: First operations of the two and three times tables.
- **Level 2**: Two times table.
- **Level 3**: Three times table.
- **Level 4**: Four times table.
- **Level 5**: Five times table.
- **Level 6**: Six times table.
- **Level 7**: Seven times table.
- **Level 8**: Eight times table.
- **Level 9**: Nine times table.
- **Level 10**: Ten times table.
THE INTELLIGENT MACHINE

With the intelligent machine you will learn to add, subtract, multiply and divide. All its components, processes, and contents. Also, these are reinforced in a pictorial and fun way.

To choose the game, click on the screen that has the symbol for the operation that you want to practice.

THE ADDING MACHINE

Learning aims:
Practice the addition.

How to play?
Solve the addition. Type the solution of the addition in the top part of the worm. You have to bring in the numbers from the right to the left following the worm cursor, which will show you where to write.

Help:
- with marbles: you will see visually how the sum is done.
- with hands: Pipo will show you how to count using the hands.

There are 8 levels of difficulty:

Level 1: Addition up to 10.
Level 2: Addition up to 20.
Level 3: Addition up to 99 (without carrying over).
Level 4: Addition up to 99 (using carrying over).
Level 5: Addition of two-digit numbers.
Level 6: Addition of three-digit numbers.
Level 7: Addition of four-digit numbers.
Level 8: Addition of five-digit numbers.

THE SUBTRACTING MACHINE

Learning aims:
Practice the subtraction.

How to play?
Solve the subtraction. Type the solution of the subtraction in the top part of the worm. You have to bring in the numbers from the right to the left following the worm cursor, which will show you where to write.
There are 8 levels of difficulty:

Level 1: Subtraction of one-digit numbers less than five.
Level 2: Subtraction of one-digit numbers. Without carrying over.
Level 3: Two-digit numbers minus a one-digit number. Without carrying over.
Level 4: Two-digit numbers minus a one-digit number. Using carrying over.
Level 5: Subtraction of two-digit numbers. Without carrying over.
Level 7: Subtraction of three-digit numbers.
Level 8: Subtraction of four-digit numbers.

**THE MULTIPLICATION MACHINE**

**Learning aims:**
Practice the multiplication.

**How to play?**
Solve the multiplication. Type the solution of the multiplication in the top part of the worm. You have to bring in the numbers from the right to the left following the worm cursor, which will show you where to write.

The numbers you need to multiply blink.

"Levels" button

To make solving the operation easier, the numbers you need to multiply blink.

There are 4 levels of difficulty:

Level 1: Multiply numbers less than 100 by 1, 2, or 3.
Level 2: Multiply three-digit numbers by numbers between 2 and 9.
Level 3: Multiply four-digit numbers by numbers between 2 and 9.
Level 4: Multiply five-digit numbers by numbers between 2 and 9.

**THE DIVISION MACHINE**

**Learning aims:**
Practice the division.

**How to play?**
Solve the division. Type the solution of the division in the top part of the worm. You have to bring in the numbers from the right to the left following the worm cursor, which will show you where to write.
There are 4 levels of difficulty:

**Level 1:** Divide one-digit numbers by numbers between two and five.
**Level 2:** Divide two-digit numbers by numbers between two and nine.
**Level 3:** Divide three-digit numbers by numbers between two and nine.
**Level 4:** Divide four-digit numbers by numbers between two and nine.

**THE SHIP – MULTIPLICATION TABLES**

**Learning aims:**
Learn and practice the multiplication tables from one to ten.

With the boat you will learn the multiplication tables from one to ten. In this game the multiplications are represented pictorially, so that the child can easy understand and practice them.

To play, choose the table you want to learn and click on the hatch that has the same number.

Choose the table you want to learn and click on the hatch.

**How to play?**
**Level 1:** Learn the table, moving the ship with the arrows of the crate. Click the OK button to see if you are right.
**Level 2:** Practice the table, (moving the ship with the crate arrows is optional) and then solve the operation (type the number). Click the OK button to see if you are right.

Here you can see the result of the multiplication

Use the arrows to move the boat.

**M usical note:** Pipo sings you the multiplication table that you are practicing.
Click OK to see if you are right.

**QUANTITY, WEIGHT, MEASUREMENT AND MONEY**

There are 7 different games where you can learn lots of mathematical concepts:

The martians
The weights of the scales
The box of sweets
The money

The helicopters
The cash register
The fish
THE HELICOPTERS

Learning aims:
Identify numbers from 1 to 999.

How to play?
Click on the helicopters with the number that Pipo asks you for.

“Loudspeaker” button: to repeat the enouncement.

There are 6 levels of difficulty:
Level 1: Numbers from 1 to 10. With help.
Level 2: Numbers from 1 to 10.
Level 3: Numbers from 10 to 20.
Level 4: Numbers from 20 to 50.
Level 5: Numbers from 50 to 99.
Level 6: Numbers from 100 to 999.

“Speed” button: to change the speed of the helicopters.

THE MARTIANS

Learning aims:
Reinforce learning the concepts and processes of addition, subtraction, multiplication and division.

How to play?
Place the number of Martian that Pipo tells you into the rockets. Click on the Martians, place them in the rocket you want, and click again to let go of them. You can also place them using the buttons at the top of each rocket. When you think you have the correct result click on the OK button to see if you are right.

The total number of Martians in the rockets appears here.

“More and less” buttons: a quick way to add or take Martians out of the rocket.

Click OK to see if you are right.

There are 5 levels of difficulty:
Level 1: Count. Numbers from 1 to 10.
Level 2: Concept of addition.
Level 3: Concept of subtraction.
Level 4: Allocate. Concept of multiplication.
Level 5: Allocate. Concept of division.

THE CASH REGISTER

Learning aims:
Learn the concepts of bigger and smaller.
Learn the positional value of numbers (units, tens, hundreds and thousands).
How to play?
Make the number that Pipo asks you for. Click on the + or – arrows in each column until you get the number shown in the bar. Press the OK button when you finish.

“Lever”: to change the numbers on the cash register.
Arrows:
More: next number.
Less: previous number.

There are 5 levels of difficulty:
Level 1: One-digit numbers.
Level 2: Two-digit numbers. From 10 to 20.
Level 4: Three-digit numbers.
Level 5: Four-digit numbers.

THE WEIGHTS OF THE SCALES

Learning aims:
Strengthen and stimulate logic-mathematical abilities.
Use conventional measuring instruments (the scales).
Identify numbers from 1 to 120.
Practice the additions.

How to play?
Place the weights on the scales and balance them.
To choose a weight from the shelves, click on it. Take it to the side of the scales where you want to place it and click again to let it go.

“Loudspeaker” button:
to repeat the enouncement.
“Levels” button.

Trash can: if you have made a mistake with a weight, click on the trash can and it will return to the shelves.

There are 4 levels of difficulty:
Level 1: 3 weights and addiction up to 8.
Level 2: 4 weights and addiction up to 16.
Level 3: 3 weights and addiction up to 20.
Level 4: Addition of 4 weights up to 20.

THE BOX OF SWEETS

Learning aims:
Strengthen and stimulate logic-mathematical abilities.
Use conventional measuring instruments (the scales).
Identify numbers from 1 to 120.
Practice the additions.

How to play?
Balance the scales with the weights and calculate the weight of the bag of sweets. To choose a weight from the shelves, click on it. Take it to the side of the scales
where you want to place it and click again to let it go. To write the reply, use the
keyboarding numbers and then click the OK button or the ENTER key.

“Loudspeaker” button: to repeat the announcement.

Trash can: if you have made a mistake with a weight, click on the trash can and
it will return to the shelves.

Ways to play:
Weights only on one side (from levels 1 to 5): you can balance the scales by trial and
error. Then you will have to solve a sum.
Weights on both sides (from levels 6 to 10): to balance the scales you have to
place a weight on each side and do a subtraction.

There are 10 levels of difficulty:

Level 1: Two numbers less than 10. Weights on one side.
Level 2: Numbers less than 10. Weights on one side.
Level 3: Numbers between 7 and 20. Weights on one side.
Level 4: Two numbers less than 50. Weights on one side.
Level 5: Three numbers less than 50. Weights on one side.
Level 6: Two weights and addition up to 10. Weights on both sides.
Level 7: Three weights and addition up to 10. Weights on both sides.
Level 8: Two weights and addition up to 20. Weights on both sides.
Level 9: Two weights and addition up to 100. Weights on both sides.
Level 10: Three weights and addition up to 50. Weights on both sides.

THE MONEY

Learning aims:
Learn to use money correctly.
Learn to calculate the exact price of different objects.

How to play?
Put in the correct amount of money to buy the object in the machine.
Click on the coins or notes that you want to use and take them to the appropriate
column, depending on whether they are euro/dollar or cents. Then, click again to let
them go. Continue until you have the exact price of the object and click the OK
button when you think you have finished.
You can play with euro or dollars by changing the configuration (F8 key).

There are 6 levels of difficulty:

Level 1: Additions of cents up to 20.
Level 2: Addition of euros/dollars up to 20.
Level 3: Addition of cents up to 1.50 euros/dollars.
Level 4: Addition of euro/dollar and cents (less than 25).
Level 5: Addition of euro/dollar (only notes).
Level 6: Addition of euro/dollar and cents.
**THE FISH**

**Learning aims:**
Learn to measure using a ruler.
Practice addition and subtractions.

**How to play?**
How long is each fish? Place the fish at the beginning of the ruler and see how many inches long it is. Then put the fish in the cave that has the right number in its bubble.

There are **8 levels** of difficulty:

- **Level 1:** Numbers from 1 to 10.
- **Level 2:** Numbers from 1 to 20.
- **Level 3:** Numbers from 1 to 30.
- **Level 4:** Addition up to 10.
- **Level 5:** Addition up to 20
- **Level 6:** Subtraction with numbers from 1 to 10 (without carrying over).
- **Level 7:** Subtraction with numbers from 1 to 20 (without carrying over).
- **Level 8:** Subtraction with numbers from 1 to 20 (using carrying over).

**LOGIC GAMES**

The logic games try in a fun way to develop logical-deductive reasoning.

**THE CROCODILES**

**Learning aims:**
Stimulates mental abilities in calculations and logical reasoning.
Identify numbers up to 10 and their numerical sequence.
Practice the additions and subtractions.

**How to play?**
Calculate the number of jumps that Pipo has to make to reach a stone.

Different answers may be possible, but be careful! The crocodiles are very hungry and you mustn’t fall on top of them.

You have to click on the lily pad leaf that has the correct answer written on it.
There are 5 levels of difficulty:

**Level 1:** Jumps from 1 to 10.

**Level 2:** The number of jumps is expressed in additions. Pipo will help you: if you hold the mouse over the lily pad (without clicking), he will say the statements and the result.

**Level 3:** The number of jumps is expressed in additions. Without help.

**Level 4:** The number of jumps is expressed in subtractions. Pipo will help you: if you hold the mouse over the lily pad (without clicking), he will say the statements and the result.

**Level 5:** The number of jumps is expressed in subtractions. Without help.

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**THE BEES**

**Learning aims:**
Practice and revise the numerical series.
Practice basic mathematical operations.

**How to play?**
Help the bees put the signs in order. Place them on the pole from lowest to highest number. The smallest number goes at the bottom.

Click on the sign that you want to place and drag it to the pole (you will see dotted lines appear). When you think it is in the right position, click again to let it go. If you want to change the position of any sign, click on it and move it to another place. Pipo will not confirm that it’s right until all the signs have been placed.

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There are 10 levels of difficulty:

**Level 1:** Numbers from 1 to 10.

**Level 2:** Numbers up to 20.

**Level 3:** Two-digit numbers.

**Level 4:** Three-digit numbers.

**Level 5:** Three and four-digit numbers.

**Level 6:** Addition with solution less than 5.

**Level 7:** Addition of two-digit numbers plus one-digit numbers.

**Level 8:** Addition of two-digit numbers.

**Level 9:** Multiplication tables.

**Level 10:** Divisions.

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**THE ROLLER COASTER**

**Learning aims:**
Learn to deduce logical sequences.
Reason and think in an abstract and deductive way.
How to play?
Finish the sequence on the train. To do this, choose the correct shapes from the ones in the sky and place them on the last three wagons. To place them, click on the shape in the sky, drag it to the correct wagon, and click again to let it go.

Click on the shape to take it to the wagon.

“Trash chute”: if you have chosen the wrong shape, throw it down the trash chute to get rid of it.

Type of shape button: choose if you want to play with flat or three-dimensional shapes.

The program follows up the **progress and scores** of each player. This keeps the children constantly motivated to improve and continue playing.

When you pass the mouse over the icons you will see a short description of the game.

**Printer** button.

So that the parents and/or tutors can assess the progress, they can look at the score screen where the results for each game are shown. This page can be printed, with the name of the player and the date.

Remember that you can deactivate access to the printer in the configuration screen so that young children don’t press the button indiscriminately and waste paper.

THE SPACESHIP – LEARNING OBJECTIVE
This new edition includes a fun tally of progress to motivate children to solve different levels. In each game you will receive lots of energy cells that you keep in the storage battery. Click on this storage battery to get an energy cell and place it in the spaceship’s external fuel tank.

As you deposit cells, the spaceship will start to get ready for take off (the lights will light up, the door will open, the motors will fire up, etc). When you have placed all the energy cells, the aliens will enter their spaceship to travel to their planet.

THE DIPLOMA
As a reward for so much work and as a way of saying thank you for having helped the Martians, Pipo and V1 will give you a very special present, the Diploma.

The diploma has the name of the player and the date on which he or she finished the product. You can print the diploma in black and white so that the child can color it.