

Pysycache



User Manual

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1. Overview

PySyCache is an educational software:

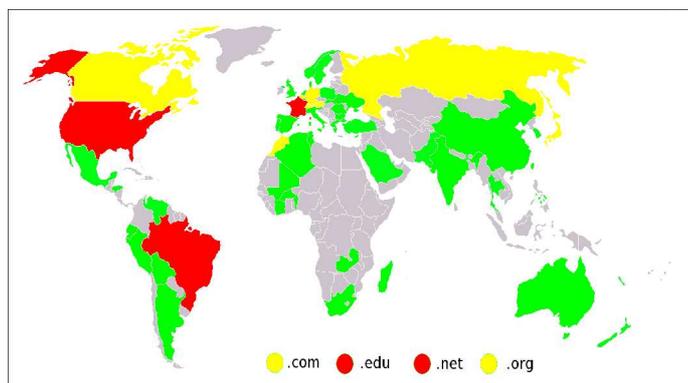
- for young children (4 to 7 years old)
the targeted users of PySyCache are young kids, but they may be older (i.e. users which aren't used to computers) or disabled persons (PySyCache used in their rehabilitation)
- which main purpose is helping them in using the mouse like:
 - mouse movements
 - clicks (with left, right or middle buttons)
 - drag and drop.

PySyCache was thought for an optimal use:

- interface adapted to young people: the mouse cannot leave the zone of the screen, impossible to click by inadvertency at the time of an activity on a button,
- adaptation of the levels: for each activity, there are three levels of difficulty (means, easy, difficult) and two modes of plays (free or directed),
- On the principal menu, the activities suggested go in a logical order of use of the mouse: displacement, click, double-click then drag'n drop.

PysyCache doesn't require a powerful computer (1GHz processor and 512MB of RAM), and can be used:

- at home with your children
- at school.



PySyCache has been created by Vincent DEROO in 2005 ; it has been translated in several languages (english, german, italian, spanish, portuguese, dutch, finnish) ; 2.0 and 2.1 versions were downloaded 4 000 times by users who are located in thirty countries.

PySyCache is part of some curriculum (In Spain or Quebec). Several articles had been written about PySyCache.

License:

PySyCache is licensed under the GPL V2 licence.

The current documentation is under the GFDL

On PySyCache Web Site (<http://www.pysyCache.org/>) you could find :

- some documentation for each activity (rules, FAQ, themes detail)
- last version of the software
- additional themes link (<http://themes.pysyCache.free.fr/>)
- some users testimonials

2. Installation

Requirements

To run PySyCache, you need python (<http://www.python.org/>) and pygame (<http://www.pygame.org/>).

PySyCache is known to work on FreeBSD, Linux, Macintosh and Windows operating systems. : Linux (Debian, Mandriva, SuSE, Ubuntu), Macintosh (G3) et Windows XP.

Installation of the required libraries

- Linux platform: python and pygame belong to all the recent distributions.
- platform Macintosh: the installation of python is easy, but that of pygame more complicated. However, if one follows the instructions of the site www.pygame.org, the installation is held correctly and functions of the first blow. Binary copies of files for Macintosh are available on the site of PySyCache. However, the installation of these libraries is useless if you install PySyCache from the `pysycache.app` file.
- Windows platform: the installers python and pygame are available since the sites of these libraries or on the site of PySyCache where a copy is available. However, the installation of these libraries is useless if you install PySyCache starting from the provided setup file : indeed, this one integrates already the libraries python and pygame.

PySyCache's installation

- Linux platform:
 - either using `script.install.sh` present in the file which you downloaded
 - either using your manager of packages (PySyCache packages are available for various distributions: Debian, Mandriva, Slackware).
- platform Macintosh:
 - either using `script.install.sh` present in the file which you downloaded.
 - either using the file `pysycache.app`
- Windows platform:
 - either using the file `install.beats.beats` present in the file which you downloaded
 - either using the setup that you downloaded.
- FreeBSD platform: a bearing was carried out (see the heading remote loading of the site of `pysycache`). Installation of additional topics.

Additional themes installation

For reasons of size and licence, PySyCache is delivered with some themes by defect, but it is possible:

- to create your own topics: in the repertory `Doc.` of `pysycache`, you find `scripts-fu` for gimp and the files allowing to create its masks, its parts of puzzle
- to install additional topics provided by PySyCache: it is then enough to decompress the file which you downloaded in the repertory of PySyCache (the tree structure is created automatically).

The additional themes are subjected to a licence of the Creative type commons and often do not authorize a commercial use of it.

Tips

PySyCache is very easy to use and you can add your own themes thanks to provided documentation and with the files examples present in the repertory "`Doc.`" (moreover, of `script-fu` for Gimp avoid you the repetitive tasks).

You can create themes on your city, your village, your district...

If you make a teaching exit, you can take photographs and quickly integrate them in the themes of PySyCache.

PySyCache proposes various topics with a spirit of opening on the world: the additional images can thus be used as teaching support.

3. PySyCache's configuration

PySyCache is very flexible of use: for example, it is possible for you to create your own topics and to store them in your personal repertory.

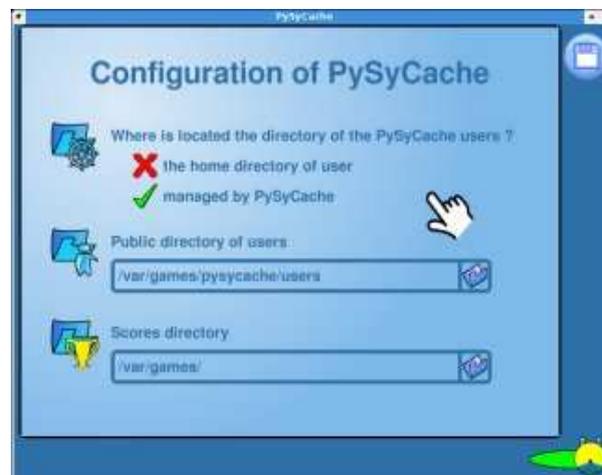
PySyCache manages its users in two ways:

- Independent users: in the case of a user on a machine or several users on the same machine, but with various accounts
- Gathered Users: in the case of several users on the same machine with the same account. The interest of this regrouping is to provide various levels of difficulty for various users without having to connect/disconnect from the machine.

The choice of this management of the users makes that with the launching of PySyCache, its identity should be chosen:



The configuration of PySyCache is regulated by launching PySyCache with the option “- admin”. It is done automatically during the first launching of PySyCache:



You must then specify:

- how users are managed,
- the directory where the themes and the configuration file of users are stored (if the users are managed by PySyCache)
- the directory of the scores.

TIPS

Why use users managed by PySyCache ?

It's very usefull in a classroom with kids with different levels : each kid can have it's own level or themes without login/logout computer : for example, Barbara is older and have a "difficult" level, Charly is younger and will use the "medium" level...

4. Interfacepresentation

Keyboard shortcuts

For not over load the screen, the buttons visibility is different according to the user level. But, actions can be executed from the keyboard . The following table shows the buttons visibility:

Button	Shortcut	Level of display mode (associated difficulty level)		
		Simply (easy)	Normal (middle)	Full (difficult)
Change the theme	F3	YES	YES	YES
Previous picture of the theme	Left arrow	NO	YES	YES
Next picture of the theme	Right arrow	NO	YES	YES
Level button	Up arrow	NO	NO	YES
Game mode (free/directed)	F4	NO	NO	YES
Chronometer	F5	NO	NO	YES

You change the visibility by typing F2 if one time you need to view some buttons.

TIPS

Sécurité pour les jeunes utilisateurs

Pour les jeunes utilisateurs, PySyCache évite des actions intempestives dues à un clic mal venu : dans toutes les activités, les boutons ne sont actifs qu'au bout de 2 secondes : ainsi, un enfant peut cliquer sur l'écran sans soucis, aucune action ne se passera et il pourra faire son activité sans soucis.

For the young users, PySyCache avoid mistakes caused by a click at the non correct time : in all activities, buttons are available after 2 seconds. To activate them, you have to put the mouse cursor over the button, and wait. After 2 seconds, button becomes bigger and then, you can click.

Explication on the chronometer usage

Chronometer is available only for the « difficult » level, several pictures indicate the leaving time :



more than 30 seconds to finish activity

between 15 and 30 seconds to finish activity

between 5 and 15 seconds to finish activity

less than 5 seconds to finish activity

5. Arrange your preferences

Your preferences permit you to customize PySyCache: that way you don't have to give any option each time you run it. For changing yours preferences, click on  in the menu window. Then, you get the following choices:



You must then specify:

- choice of the screen mode (fullscreen or windowed 800x600)
- with sound or muted
- default level selection: three levels are available (easy, medium or difficult). This level will be used at the beginning of an activity, but you may change it during the game. Click on arrows for changing the level.
- transition speed between two screens (the higher the number is the longer the transition will last. A zero value means a very quick transition)
- your selected language for the menus (not the ABCBook or themes numbers). The available languages are read from the `lang` directory

Don't forget to save your preferences (click on floppy disk button).

When the preferences are saved, they are made available immediately.

6. The "Move" activity

Educational object

To learn to move mouse on screen area.

Activity rules

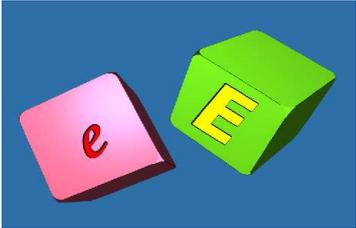
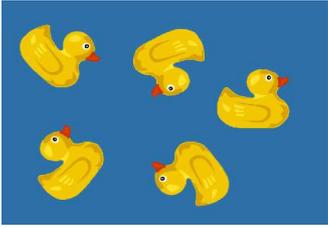
The principle is that child must uncover a picture hidden by a cache. For this, the movements of the mouse erase the cache and step by step, the picture appears.

Présentation of the screen area



1. Chronometer activation (only for difficult level) : child have 60 seconds for uncover all the picture... and enter in the 8 best times !
2. selection of the game mode :'
 - "normal" : you have to uncover the picture
 - "ghost" : you have to uncover the picture... but each second, a cache that have disappeared, appears again !
3. button for select the level of the activity (and adjusts it with the children age) :
 - easy : cache size : 120x90 pixels (6 cols x 6 rows)
 - middle : cache size : 72 x 54 pixels (10 cols et 10 rows)
 - difficult : cache size : 48 x 36 pixels (15 cols et 15 rows).
4. button for select the previous and next pictures in the theme (you can use the left and right arrows of the keyboard).
5. button for select the theme : you click on the button and the theme changes immediatly.
6. button for quit the activity.
7. mouse uncovering the picture.

Available Themes by default

ABC	Numbers
	

TIPS

How can I make a personal theme for the "move" activity ?

- go in the themes-move directory
- create a sub-directory (for example my-theme)
- copy (or create) in your theme directory a file named logo.png. You can use the file masque-button-theme.png located in the directory doc of PySyCache.
This picture will identify your theme at children. The size of the picture must be of 64 pixels width and 64 for height.
- copy in your theme directory :
 - the pictures to uncover : they must have a size of 720 pixels width and 540 of height. You can use the file masque-image-clair.png located in the directory doc of PySyCache. The extension of these files may be '.jpeg', '.png' or '.bmp'
 - sounds that will be played when the picture will be totally uncovered
- create a sub-directory cache
- copy in the cache directory :
 - the caches of the pictures that children must find. They must have a size of 702 pixels of width and 527 of height. You can use the file: masque-image-fonce.png located in the directory doc of PySyCache.
 - sounds that will be played when the cache appears at the screen.
- go back in the directory of your theme and create the file of the association between the caches and the pictures. This file must have the same name of your picture and the extension .dfg (for example, for a picture named mypicture000.jpeg, the definition file will be mypicture000.dfg) In this file, add a line by available cache it contents :
 - the name of the cache to use
 - a comma
 - the sound that will be played when cache will appears (if no sound have to be played, leave empty)

```
b. jpeg,b.ogg  
cache-avion.jpeg,b.ogg
```
- PysyCache will choose randomly one on these lines.
- create the files credits.txt and copyright.txt.

How resize my pictures for make caches ?

For resize your pictures in order to have correct caches, you can :

- make it yourself with your preferred software : resize your picture at 720 x 540 pixels
- use the gimp script-fu :
 - launch The Gimp
 - open your picture (it must have a scale of 4/3 in landscape format)
 - go in the "Script-fu/PySyCache" menu and choice the Scale picture... entry
 - validate, and your picture is automatically resize at the correct size.

7. The "Click" activity

Educational object

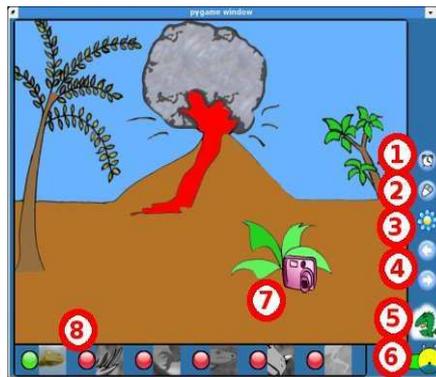
To learn to click with buttons (any of them) on pictures areas.

Activity rules

The child must find photographs hidden in a landscape.

In this order, it must move it's mouse over all the screen area : when it ear a "beep" or when the camera is coloured in red it's means that the mouse have found the photography and that child can click.

Presentation of the screen area



1. Chronometer activation (only for difficult level) : child have 60 seconds for find all the picture... and enter in the 8 best times !
2. selection of the game mode :
 - "normal" : you have to search photographs
 - "ghost" : you have to search an accurate photography marked by a yellow spot.
3. button for select the level of the activity (and adjusts it with the children age) :
 - easy : Camera becomes red when it is located less that 50 pixel of the photography
 - middle : Camera becomes red when it is located less that 35 pixel of the photography
 - difficult : Camera becomes red when it is located less that 20 pixel of the photography.
4. button for select the previous and next lists of photographs in the same theme.
5. button for select the theme : you click on the button and the theme changes immediatly.
6. button for quit the activity.
7. mouse over the picture :



normal moving



camera that have found a photography : don't forget to click for see it

8. List of photographs to find :



photography don't have be taken

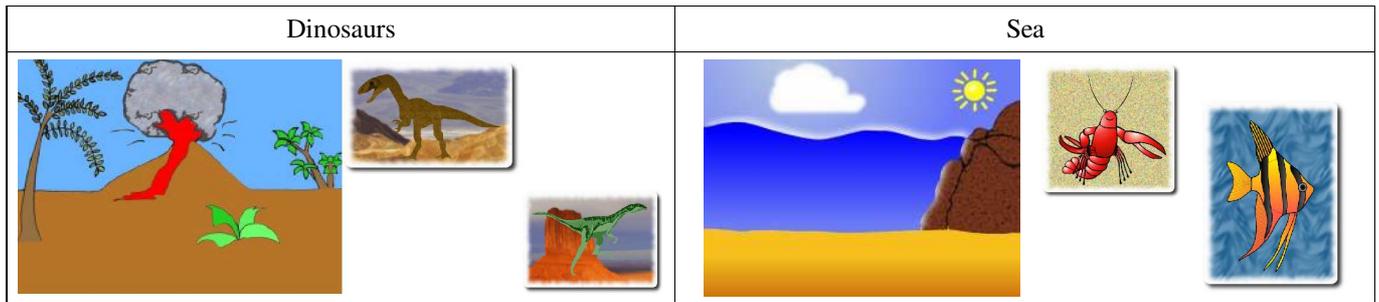


photography have already been taken



photography to found in the ghost mode

Available Themes by default



TIPS

How to add a personal theme at the "click" activity ?

- go in the directory themes-click of PySyCache.
- create a sub-directory (for example montheme)
- copy (or create) in this sub-directory a file named logo.png. You can use the file masque-button-theme.png located in the directory doc/pysyCache. This picture will identify your theme at children. The size of the picture must be of 64 pixels width and 64 for height.
- copy in this sub-directory :
 - the background picture
 - the pictures to be found. I advice you a size of approximately 450 x 450. For make the borders, I use Gimp and the Script-Fu/Shades/Bordures floues and Coins arrondis . The name of these pictures isn't important, but their extension must be .png
 - the miniatures of these pictures that you can create from the models xxxx-off.png and xxxx-on.png located in the doc/pysyCache directory. These miniatures must have the same name that the main picture but with -on and -off additionned.
- create in the directory of your theme the file of picture placement. The name of the file isn't important, but it must have the .dfg extension. In this file, add one line for the background picture and 6 lines by photographie to take it contents :
 - the name of the photography file
 - a pipe
 - the position (from the left border) of the background photography)
 - a pipe
 - the position (from the top border) of the background photography)
 - a pipe
 - the radius that define the area that will authorize the snapshot

fond.png			
a006.png	634	384	40
a000.png	262	170	40
a004.png	262	296	40
a003.png	175	442	40
a002.png	50	290	40
a001.png	630	200	40

- create the files credits.txt and copyright.txt

How make thumbnail for the "click" activity ?

For make thumbnail for photographies of your theme, you can :

- make it yourself :
 - resize a section of your picture at 50 x 50 pixels
 - copy this section on the files xxxx-on.png, xxxx-off.png et xxxx-selected.png located in the directory doc of PySyCache.
- use the gimp script-fu :
 - launch The Gimp
 - resize a section of your picture in a square format (may be 50 x 50 pixels, but not obligatory...)
 - go in the "Script-fu/PySyCache" menu and choice the Theme click... entry
 - choice the target directory for receive your thumbnail, validate, and yours three thumbnails are automatically made !

8. The "Buttons" activity

Educational object

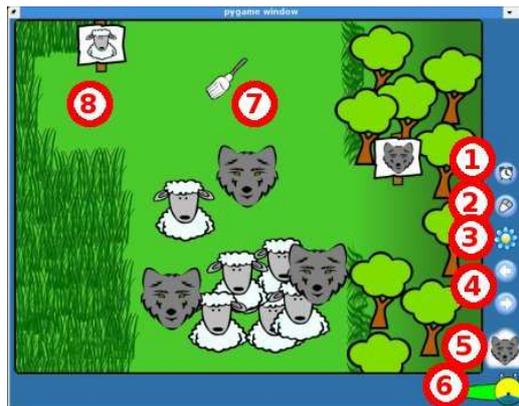
To learn to click with left, right or central button of the mouse.

Activity rules

Child must bring all same items in the correct area of landscape.

For this, il must click on items for drive them at right or left with the correct button of the mouse.

Presentation of the screen areas



1. Chronometer activation (only for difficult level) : child have 60 seconds for uncover all the picture... and enter in the 8 best times !
2. selection of the game mode :
 - "normal" : you have to lead an animal to it's home
 - "ghost" : you have to lead an accurate animal to it's home (it is choiced by pysyache and it's color is differents, other are in grey)
3. button for select the level of the activity (and adjusts it with the children age) :
 - easy : slow speed
 - middle : normal speed
 - difficult : high speed.
4. button for select the previous and next pictures in the theme (you can use the left and right arrows of the keyboard).
5. button for select the theme : you click on the button and the theme changes immediatly.
6. button for quit the activity
7. mouse and available actions :
 - left button : the animal moves to left
 - middle button : the animal reverses it's movement
 - right button : the animal moves to the rightThe child must bring the animal in the destination area until it's disappears.
8. destination area of the left animal.

Available themes by default

Ice	Bee	Wolf	Crapaud

TIPS

How add a personal theme at the activity "Buttons" ?

- go in the directory themes-buttons of PySyCache.
- create a sub-directory (for example montheme)
- copy (or create) in this sub-directory a file named logo.png. You can use the file masque-button-theme.png located in the directory doc/pysycache.
The size of the picture must be of 64 pixels width and 64 for height.
- copy in this sub-directory :
 - the background picture
 - pictures for the two items that should move to left and right. (Theses pictures must have a size of 96 x 96 pixels).The name of these pictures is not important, but their extension must be .png
- create in your theme directory the file of description of the items. The name of this file isn't important, but it must have the .dfg extension. The file is structured like this :
 - the name of the background file
 - the left top corner of the movement area of items
 - the right bottom corner of the movement area of items
 - the coordonates of the target area of left items
 - the coordonates of the target area of right items
 - the file with the picture of the left item , a line, the maximum number of this item (pysycache will randomize the exact number)
 - the file with the picture of the right item , a line, the maximum number of this item (pysycache will randomize the exact number)
 - the left limit that will make invisible the item
 - the right limit that will make invisible the item
 -

```
fond01.png
188 | 10
508 | 513
7 | 260 | 189 | 424
508 | 128 | 692 | 292
01.png | 4 | 01b.png | 01.png
02.png | 4 | 02b.png | 02.png
50
650
```

- create the files credits.txt and copyright.txt

9. The "doubleclick" activity

Educational object

To learn to double-click on an unmoved element.

Activity rules

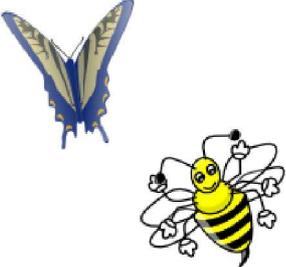
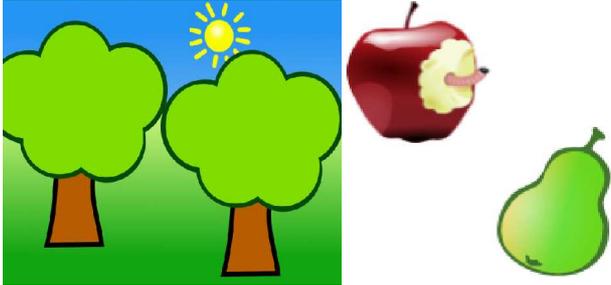
Child must catch items by double-clicking on them.

Presentation of the screen areas



1. Chronometer activation (only for difficult level) : child have 60 seconds for uncover all the picture... and enter in the 8 best times !
2. selection of the game mode :
 - "normal" : you have to double-click on the item you want
 - "ghost" : you have to double-click on the item that PySyCache have selected for you.
3. button for select the level of the activity (and adjusts it with the children age) :
 - easy : Items appears one by one. The delay for double-click is 900/1000 of second
 - middle : Items appears by group of 3 or 4. The delay for double-click is 600/1000 of second
 - difficult : Items appears by group of 3 or 4 but sometimes, one items disappears and reappears... so, user must double-click quickly ! The delay for double-click is 300/1000 of second.
4. button for select the previous and next pictures in the theme (you can use the left and right arrows of the keyboard).
5. button for select the theme : you click on the button and the theme changes immediatly.
6. button for quit the activity.
7. mouse on the screen with items to double-click.
8. list of item to double-click :
 -  item don't have been clicked
 -  item have already been clicked
 -  item (choiced by PySyCache) to double-click in the ghost mode.

Available themes by default

Butterfly	Apple and pear
 	

TIPS

How can I make a personal theme for the "Double-click" activity ?

- go in the directory themes-dblclick of PySyCache.
- create a sub-directory (for example montheme)
- copy (or create) in this sub-directory a file named logo.png. You can use the file masque-button-theme.png located in the directory doc/pysyCache. This picture will identify your theme at children. The size of the picture must be of 64 pixels width and 64 for height.
- copy in this sub-directory :
 - the background picture
 - the pictures to found (with a maximum size of 96x96 pixels).
- create in the directory of your theme the file of picture placement. The name of the file isn't important, but it must have the .dfg extension . This file contents :
 - the name of the background picture
 - an unfixed number of lines with :
 - the normal picture of the item to double click on (without extension)
 - a separator (|)
 - the number of items
 - a separator (|)
 - the top left and right bottom corner of the area where will placed the items (separated by a pipe)

```
img186.jpeg  
bee01|5|7|10|630|470  
papillon01|3|7|10|630|470  
papillon03|6|7|8|630|470
```

- create the files credits.txt and copyright.txt

10.The "drag'n'drop"activity

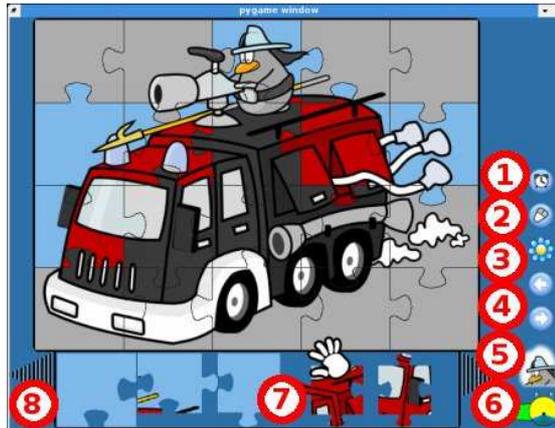
Educational object

To learn to move a visual element on screen.

Activity rules

Child must make a jigsaw by drag and drop pieces at their correct location.

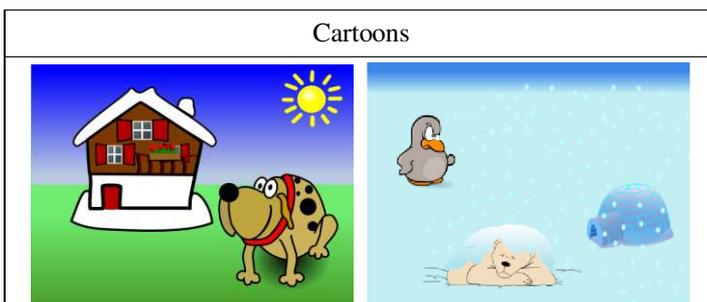
Presentation of the screen areas



1. Chronometer activation (only for difficult level) : child have 60 seconds for make the jigsaw... and enter in the 8 best times !
2. selection of the game mode :
 - "normal" : you have to place the piece that you want
 - "ghost" : you have to place the correct piece that pysycache indicate you.
3. button for select the level of the activity (and adjusts it with the children age) :
 - easy : Jigsaw is made with simply pieces or 4 pieces. The acceptable distance with the correct position is 40 pixels.
 - middle : Jigsaw is made with 6 to 16 pieces. The acceptable distance with the correct position is 30 pixels.
 - difficult : Jigsaw is made with more than 16 pieces. The acceptable distance with the correct position is 20 pixels.
4. button for select the previous and next pictures in the theme (you can use the left and right arrows of the keyboard).
5. button for select the theme : you click on the button and the theme changes immediatly.
6. button for quit the activity.
7. box with all pieces of the jigsaw.
8. button for navigate in the box with jigsaw pieces.

When all pieces are putted, a new combinaison of jigsaw is randomized selected in the same theme.

Available theme by default



TIPS

How can I make a personal theme for the "Drag'n'drop" activity ?

- go in the directory themes-puzzle of PySyCache.
- create a sub-directory (for example montheme).
- copy in this sub-directory the final pictures to found
- create three sub-directories named 0, 1 and 2 for the levels
- copy (or create) in these sub-directories a file named logo.png. You can use the file masque-button-theme.png masque-button-theme.png located in the directory doc/pysyCache. This picture will identify your theme at children. The size of the picture must be of 64 pixels width and 64 for height.
- copy in each sub-directory :
 - the model picture
 - the pieces of the jigsaw
 - the association file between background and pieces : this file must have the .dfg extension : that contents :
 - the picture to found
 - the modele (in grey) of the picture to found
 - the name of the file with the piece, a separator (|), left position of the piece, a separator (|), top position of the piece a separator (|), the piece used in the ghost mode for indicate which piece to put

```
fond01.png
fond01-04-modele.png
fond01-04-01-01.png | 0 | 0 | piece-04-01-01.png
fond01-04-01-02.png | 242 | 0 | piece-04-01-02.png
fond01-04-02-01.png | 0 | 241 | piece-04-02-01.png
fond01-04-02-02.png | 242 | 241 | piece-04-02-02.png
```

How can I make pieces for the jigsaw ?

Step 1 : make the model

For make the model, you have to :

- launch The Gimp
- make an empty picture of 640 x 480 pixels (in white background)
- go in the "Filter/Render/Motif" menu and choice the Jigsaw entry
- select the number of cols and rows that you want
- validate
- you have the white model for the piece of the jigsaw.

Step 2 : sharp the pieces

For sharp the pieces of jigsaw, you have to :

- launch The Gimp
- open your model
- go in the "Script-fu/PySyCache" menu and choice the Jigsaw - Sharp pieces. entry :
- select the number of cols and rows of your model
- select the target directory where your pieces will be saved
- validate
- wait fews minutes
- you have in your target directory all the caches for made your jigsaw.

How can I make a jigsaw from my picture ?

For make a jigsaw from your picture, you have to use the **gimp script-fu** :

- launch The Gimp
- open your picture (it must have a 640 x 480 pixels of size)
- go in the "Script-fu/PySyCache" menu and choice the theme jigsaw... entry :
 - select the directory with correct pieces (size and number) and model
 - select the target directory where pieces will be copied
 - give the prefix for the name of pieces (name will be : prefix-row-col.png)
- validate, and wait... : yours pieces are automatically drawn and resized
- you can make your modele in grey
- don't forget to copy the .dfg file located in the jigsaw's model directory in your theme directory, and edit the name of the pieces (with your editor and find/replace for example)
- copy in your theme directory the pieces for the ghost mode : they are located in the background directory of the gimp scripts-fu.

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