2DIY 3D User Guide
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2DIY 3D is a 3D game maker tool. It allows users to create a themed maze with 'treasure' and 'baddies' that affect the player's success. The maze is played in a 3D view. Pupils can add instructions for their game and can choose various customization options. 2DIY 3D games are really adaptable to whatever topic you are studying from nature themes to Greek Labyrinths. Finished mazes can be shared in a number of ways.

2DIY 3D has “Simple” and “My Game” modes:

- In Simple mode there is one kind of wall and one kind of scenery (scenery are things like trees), plus a ground and a sky.

- In My Game mode there is an additional wall option, another scenery option, plus fire, water, and effects such as changing the brightness, background music and the height of the walls.

There is an in-built bank of sky and background images or children can create their own.

Teachers can design 2DIY 3D games and set them as 2Dos for their pupils.

For more information about 2Dos see the 2Dos User Guide.
2 Creating Games

When you open 2DIY 3D, you will reach the following screen:

- In My Simple Game there is one kind of wall and one kind of scenery (scenery are things like trees), plus a ground and a sky.

- In My Game there is an additional wall option, another scenery option, plus fire, water, and effects such as changing the brightness, background music and the height of the walls. You can also create a game with up to five levels.

The following guide will take you through all the steps in creating a game and indicate where there are differences between the two modes.
2.1 The Play Environment

Firstly, create the play environment.

Note, you can click on the or button at any time to preview your game. The button previews just the level that you are on, so in multi-level games you do not have to play the other levels before reaching the one that you want to see. It is advisable to save your game before doing this.

2.1.1 The Ground

The ground can be drawn using the painting tools or you can select ready-made grounds or upload your own images.

Click for the painting tools and draw directly onto the game area or click .

Choose from the in-built examples

or click the button to upload your own images.

2.1.2 The Sky

In My Game mode you can create a sky. If you wish to create a sky, click and select the sky style you like.
2.1.3 The Ceiling

In My Game mode, you can add a ceiling. Click on \(\text{ Ceiling }\) then either; draw a ceiling tile design, click on the clipart picker to select a ready-made design or upload an image from your device.

2.1.4 Walls

Click \(\text{ Wall }\) to add walls to the environment. The default walls are wooden. In My Game mode, there can be two different styles of walls. Use the \(\text{ Wall Style }\) to add another style of walls.

You can select other designs or design your own walls by clicking on the pencil icon that appears on the button \(\text{ Pencil }\). There are some ready-made walls to select from in the clipart picker \(\text{ Clipart picker }\) or you can upload an image from your device.

Then 'draw' on the ground to make the walls.

To remove walls, click \(\text{ Remove Wall }\) then on the walls you wish to remove.
2.1.5 Scenery

You can add scenery by clicking on [image] or [image] (My Game mode only). Add these in the same way as the walls, there are some ready-made images that you can use or create your own.

2.1.6 Water

In My Game mode, you can add areas of water, these are not passable by the player (you can't walk over them). Add water by clicking [image] and drawing on the plan. You can edit the colour of the water using the pencil icon.

2.1.7 Fire/Lava

In My Game mode, you can add areas of fire/lava, for each square of fire/lava that the player walks on, they will lose half a life. Add fire/lava by clicking [image] and drawing on the plan. You can edit the colour of the fire using the pencil icon.
2.1.8 Other Options

In My Game mode, you have a few extra options to set your scene accessed by clicking

These are:

You can alter the lighting level by selecting one of the offered options. You can later the height of the walls by increasing the wall height number. You can add background music; clicking on the button opens the sounds picker. You can choose one of the build-in sounds or or your own sounds.
2.2 Characters

The characters in the game are 'baddies' and 'treasure'. There can be up to 8 of each per level of the game. The aim of the game is to avoid the baddies and collect the treasure.

2.2.1 Baddies

These can be found and edited on the right-hand side of the screen. Click on one of and drag it somewhere on the play environment. A pencil icon will appear, which you can use to edit the baddie options:

You can draw a baddie using the paint tools or use the clipart picker to select some clipart or upload an image from your device.

- **Movement**: there are the following options for the way characters move, select one of these:
  - None; the character won't move.
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- **Up and Down**
- **Left and Right**
- **Random;** the character will take a random route around the play environment.
- **Hunt the Player;** the character will try to catch the player.

- **Action;** there are the following options for actions that the baddies can make whilst moving, select one of these;
  - **None;** the character won't move.
  - **Rotate**
  - **Grow and Shrink**
  - **Wobble;** to simulate walking.
  - **Spin;** turning on the spot. This can look a bit strange with people or animals as the images are 2D.

- **Sound Effect;** select a sound effect for the baddie; sometimes it might be better without a sound, especially if you have background music. Clicking will open the sound picker.

- **Damage;** decide from the choices, what should happen if the player collides with the baddie.

The baddies can be individually designed or you can use the button to copy the design and options to all of the baddies, these can then be individually edited if required.
2.2.2 Treasure

These can be found and edited on the right-hand side of the screen. Click on one of and drag it somewhere on the play environment. A pencil icon will appear, which you can use to edit the treasure options:

You can draw the treasure using the paint tools or use the clipart picker to select some clipart or upload an image from your device.

- **Movement**: there are the following options for the way the treasure can move, select one of these:
  - None; the treasure won’t move.
  - Up and Down
  - Left and Right
Random; the treasure will take a random route around the play environment.

- **Action;** there are the following options for actions that the baddies can make whilst moving, select one of these;
  - None; the treasure won’t move.
  - Rotate
  - Grow and Shrink
  - Wobble; to simulate walking.
  - Spin; turning on the spot. This can look a bit strange with people or animals as the images are 2D.

- **Sound Effect;** select a sound effect for the treasure when it is collected; Clicking will open the sound picker.

- **Points;** decide how many points the player gets when they collect the item; this can be varied for each item of treasure so those that are harder to reach have more points.

The treasure can be individually designed or you can use the button to copy the design and options to all of the baddies, these can then be individually edited if required.

### 2.2.3 Player

You can change the starting position of the player by dragging the player object on the playing environment to whichever square you wish them to start on.
2.3 Levels

In My Game mode, pupils can create up to 5 levels. To add a level click on the controls on the top right of the screen.

In game play, the player will move to the next level once they have collected all the items.

2.4 Game Options

To enhance playability of the game on devices, you can change the resolution of images in the game. 2DIY 3D uses a lot of memory and if you experience crashes (particularly on older tablets, and iPads) then try a lower resolution setting.
2.5 Creating Instruction Screens and Titles

Click on the button so set up an Instruction screen.

Click in the text areas to add a title and instructions as required.

Use the , and to change the background colours, text fonts and size and to add a recorded instruction.

**Lives**

Allows you to set the number of lives the player starts with (up to 5).

**10:00**

Allows you to set the time limit for the game.

**Game over**

Allows you to set a sound to play when the game is over because all lives are lost.

**Level completed**

Allows you to set a sound to play when the player completes a level.
3 Play Mode

Play the game by clicking the green button.

Move around the game using the keyboard arrow keys or the on screen arrow keys.

4 Saving and Sharing Games

Games that you have made can be saved and shared as 2Dos like any other resource. They can also be shared by pupils to blogs, displayboards and other links.

Save the game and then click on the green square button for sharing options.

For further details about Share Links see the guide at Share Link User Guide.

For further details about 2Dos, see the manual at 2Dos User Guide.