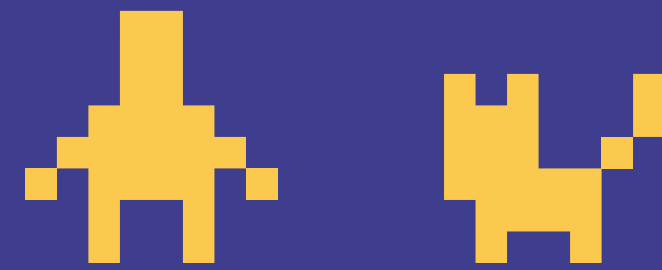# bitsy workshop
for nywf at nywf
by @haraiva

→ bit.ly/nywf-bitsy

who am i? ✕

hello i'm **cecile** and here are some fun facts about me:

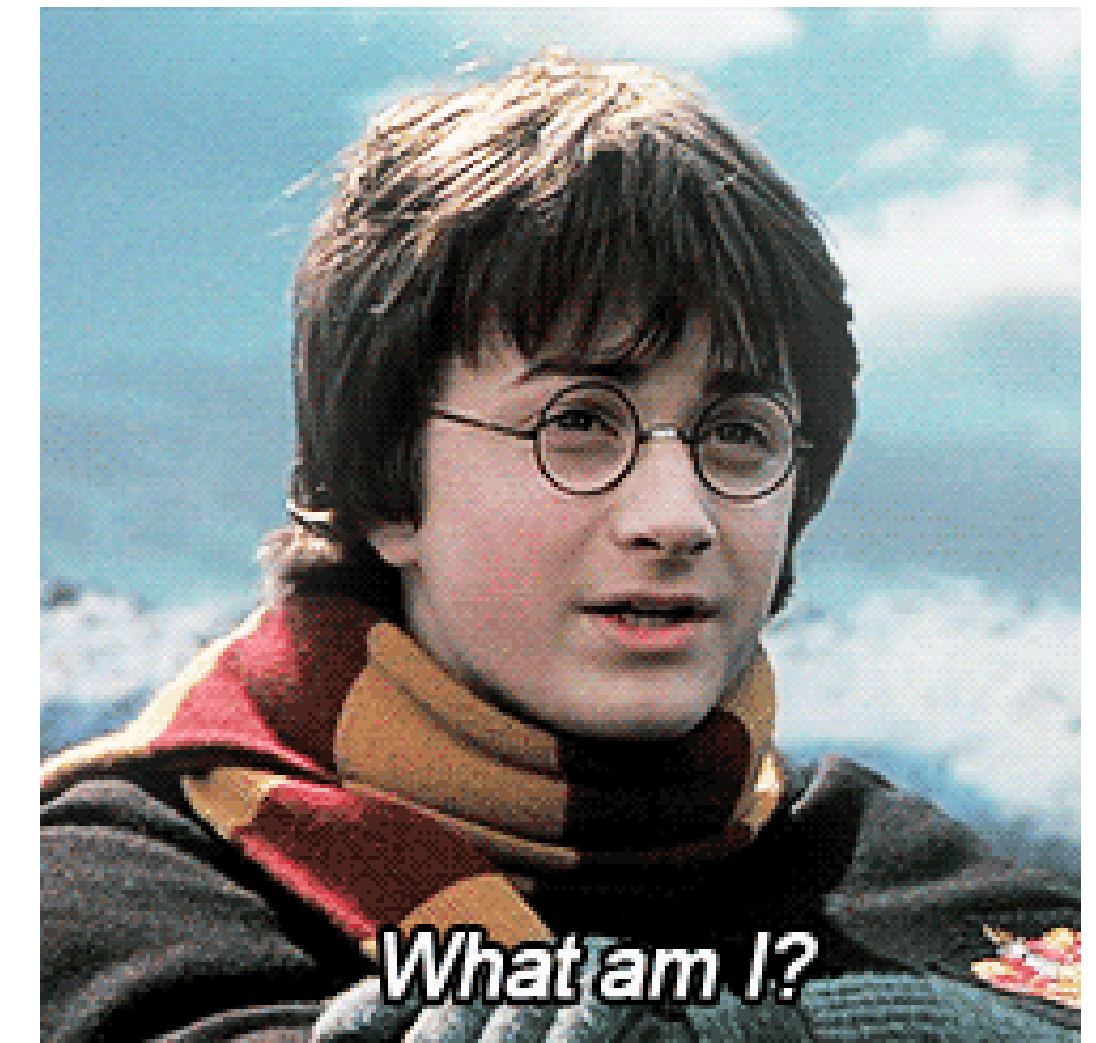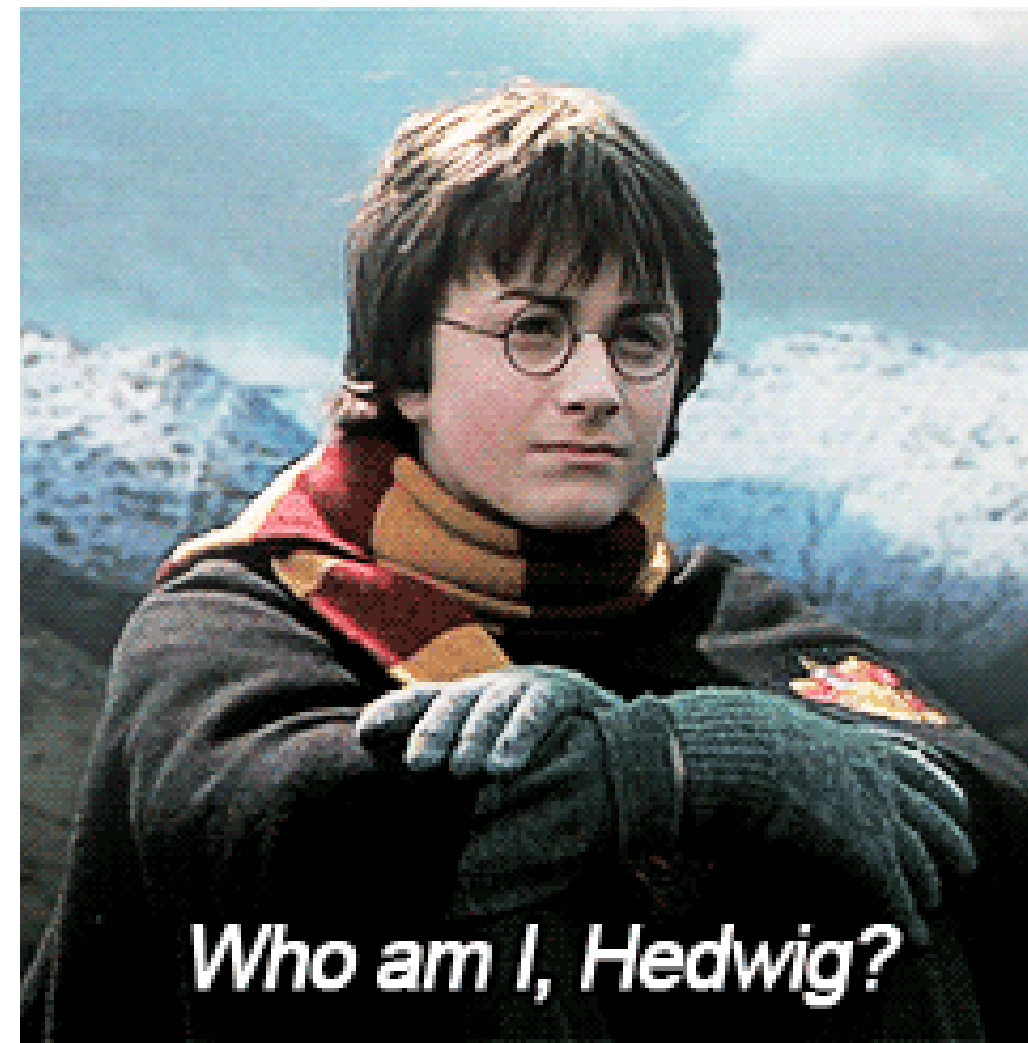i'm a melbourne-based ~~graphic designer/illustrator/comics artist/~~ **tiny game dev.**

i am non-binary and my pronouns are **they/them**.

i like magpies and afl.

this year i made two games so far, **<u>novena</u>** and **<u>touch melbourne</u>**.

i am here to talk to you about bitsy.

harrypotter.gif ✕

Who am I, Hedwig?

What am I?

where you can find me ✕

website   **<u>cecile-richard.com</u>**
twitter   **<u>@haraiva</u>**
games   **<u>haraiva.itch.io</u>**

what's bitsy? ✕

"bitsy is a little editor for little games or worlds. the goal is to make it easy to make games where you can walk around and talk to people and be somewhere."

— **adam le doux, father of bitsy**

i like bitsy because ✕

- it's easy and satisfying to use.
- pixel art is (mostly) accessible and fun.
- it's versatile while also having constraints.
- the community is cool
- there's a bitsy jam every month!

what should i make? ✕

you can make (almost) anything! short narrative games are the most common, but you could also make a vignette game, or a tiny adventure. some people even made a bitsy mmo!

for inspiration, you can take a look at the **bitsy pieces twitter** or **claire morley**'s cool examples of cool games at the bottom of **her tutorial**.

bitsy has a growing, diverse, extremely supportive community, and is a genuinely exciting tool because of its versatility.
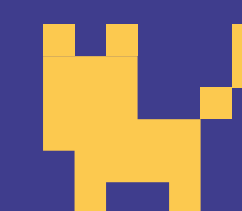
bitsy basics

let's start with the basics.
once you have the editor open you can take a look at the various tools/panels. toggle your toolbar by clicking on the tools button next to the title field.

a **room** is a place or scene in your game world.
you can make multiple rooms that you connect with each other using **exits**.
a **tile** is a piece of scenery in your room. you can make your tile into a **wall**, making it impassable.
the **avatar** is the player character, which you control using the arrow keys, and you can interact with **sprites** by walking up to them.
an **item** is a sprite you can pick up. you can assign **variables** to your items if you want, but you don't have to.
an **ending** is an exit that ends the game. you can have multiple endings.

buttons

< >   navigate rooms/tiles/sprites

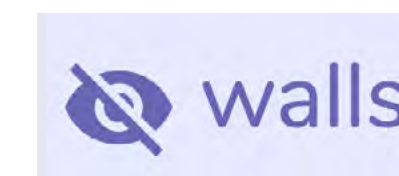🔍   find specific room/tile/sprite

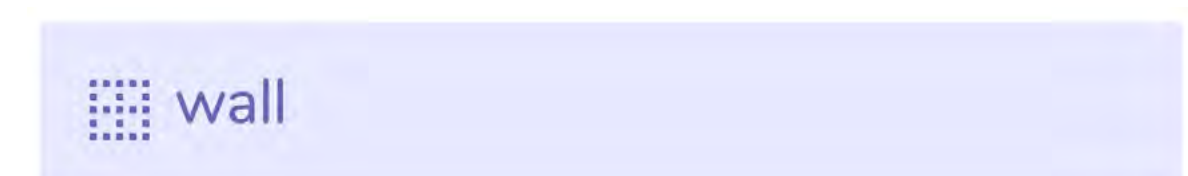+   create new room/sprite

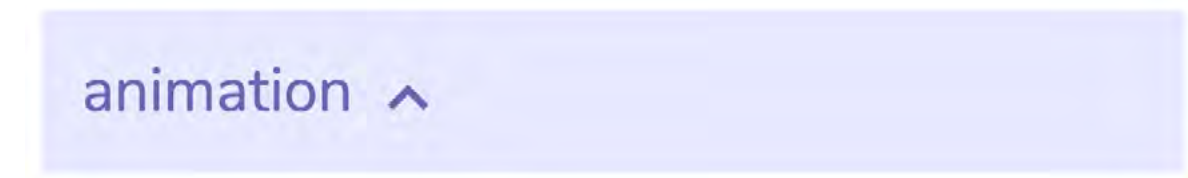⧉   duplicate room/tile/sprite

⊖   duplicate room/tile/sprite

👁 grid   toggle grid view

👁 walls   toggle walls view

▦ wall

toggle to make your tile a wall

animation ⌃

toggle for 2 frame animation

drawing in bitsy

each tile and sprite's canvas is a **8×8 grid**. you can draw in the `paint` panel by clicking on the squares.

once you're done making your avatar, you can click on `animation` to make a **two-frame animation**. edit your second frame and now your avatar is moving!

this process is the same for tiles and sprites.

paint — avatar | tile | sprite | item

grid

animation

paint — avatar | tile | sprite | item

grid

animation

preview | frame 1 | frame 2
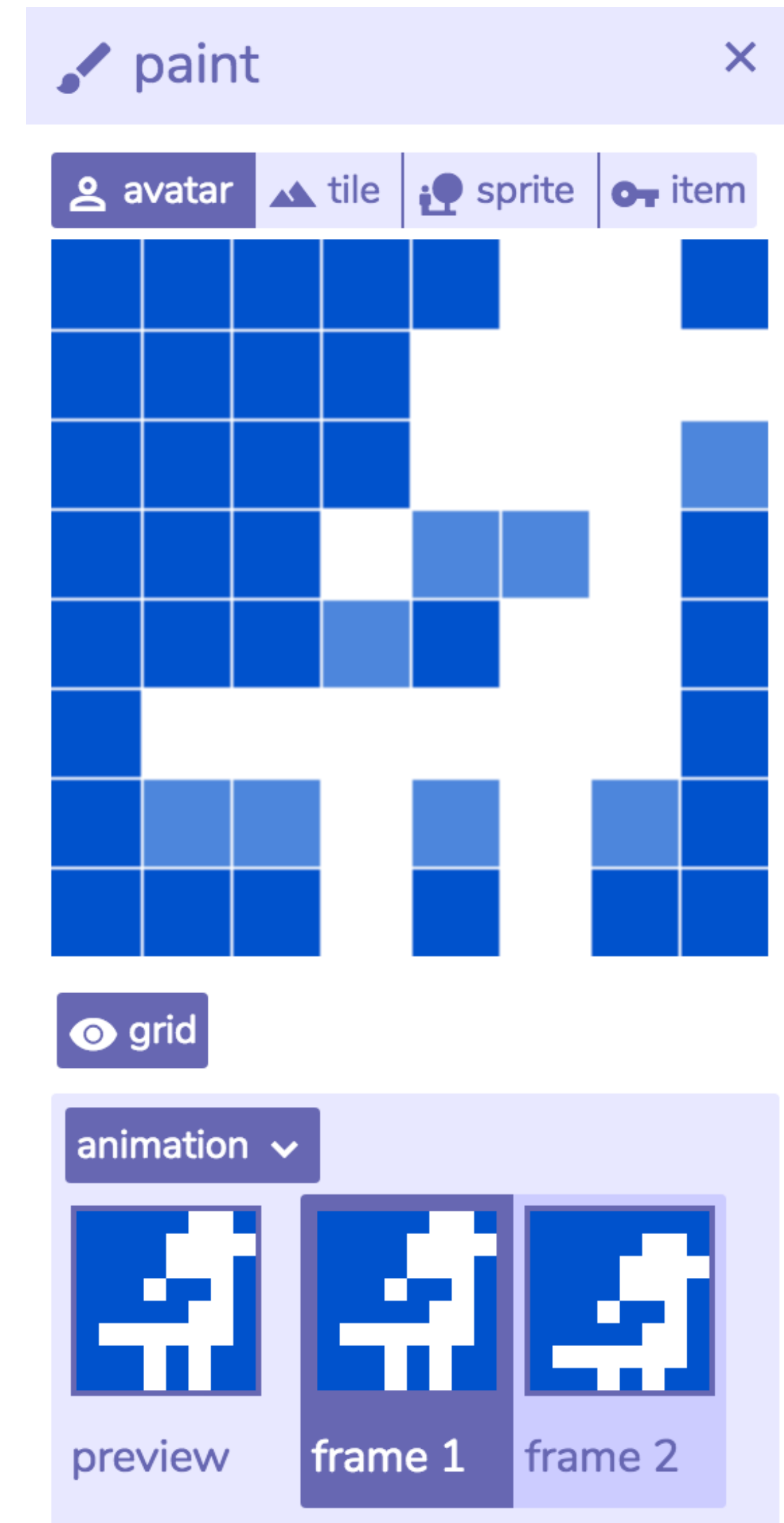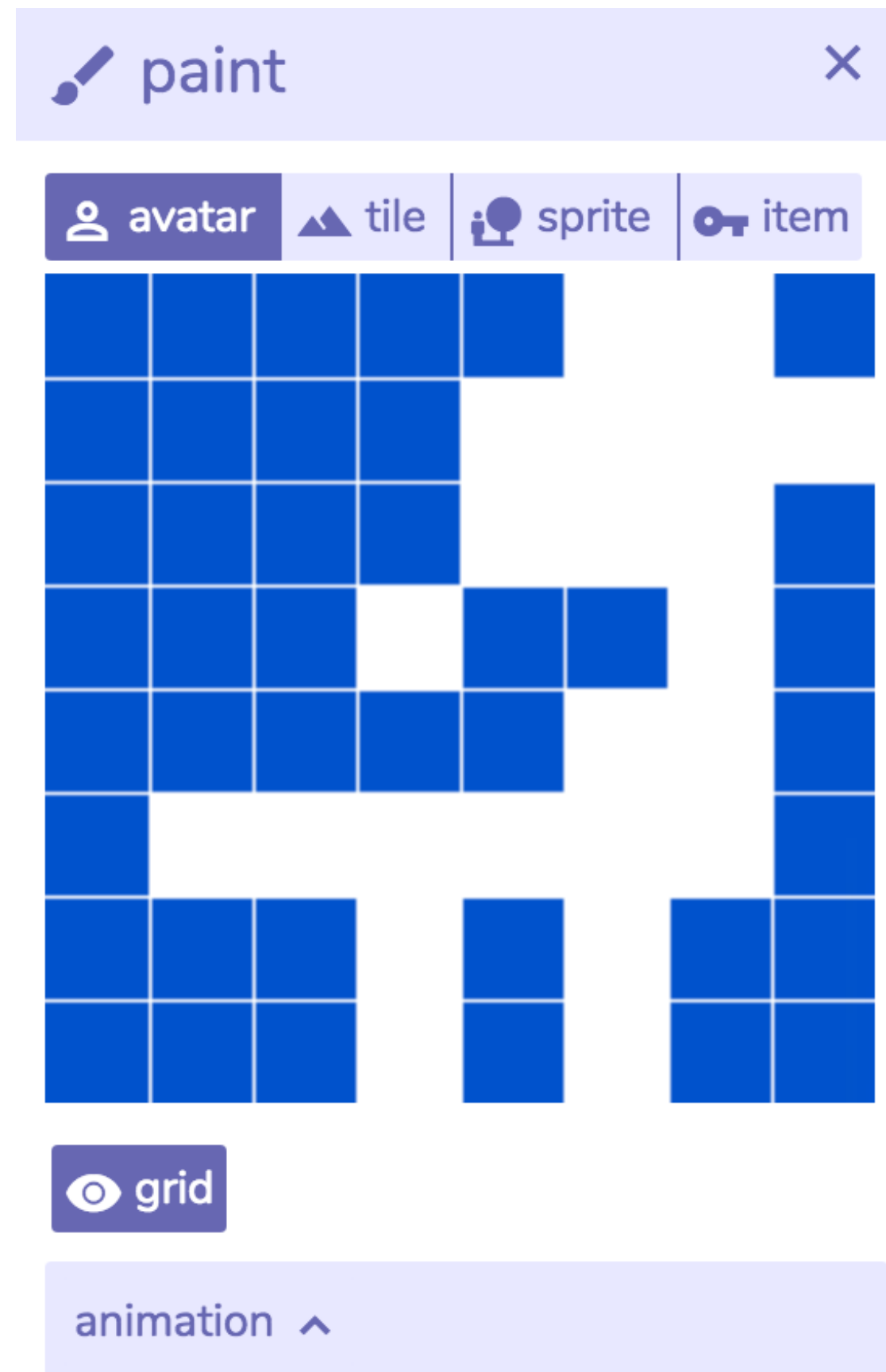
drawing in bitsy ✕

the one thing that's different in tiles is the `wall` **button**.

you can toggle this to make your tile **impassable**, which means your avatar can't go through, or on it.

you can make as many tiles as you want.

also, you can only have one iteration of a given non-item sprite in a game, so if you want multiples of the same sprite, you have to `duplicate` them.
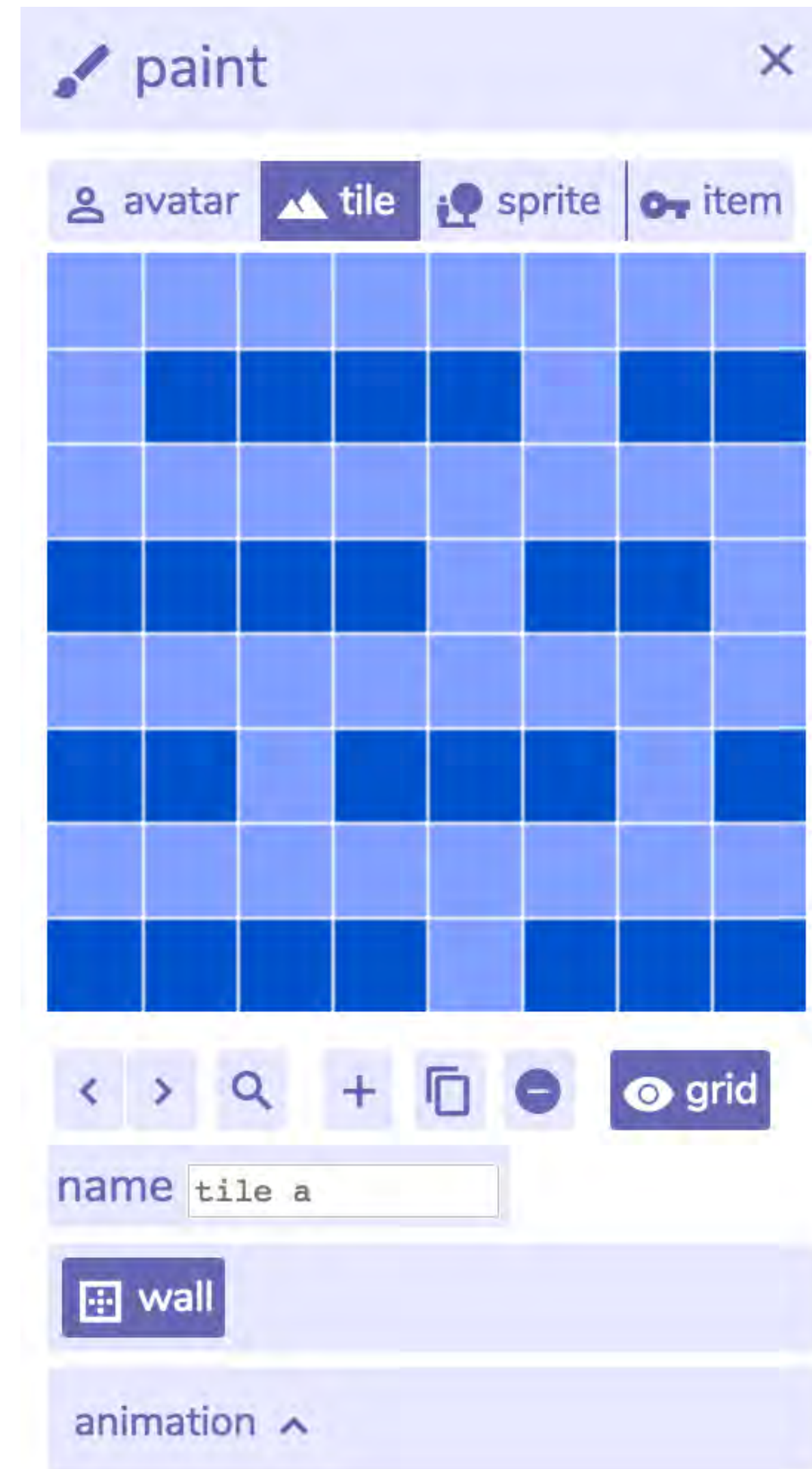
tips

don't overthink your drawings! in pixel art it's important to get across the essence of whatever you're drawing, but it's also okay to keep it vague. vagueness can bring interesting results.

don't forget to name your tiles and sprites! it's helpful when you end up having a lot of them and you can easily search them using the `find` **button**.

room design

now that you have some sprites and tiles set up, it's time for some interior design. let's put the tiles in your **room**!

you can **find** your tiles and sprites easily in the `find drawing` **panel**.

place your tiles in your room. **click and drag** on the room if you want to place a tile multiple times quickly.

find drawing

avatar tile sprite item

wall flower grass

door path window

roof flag right flag left

filter drawings

room

▶ play

room tools
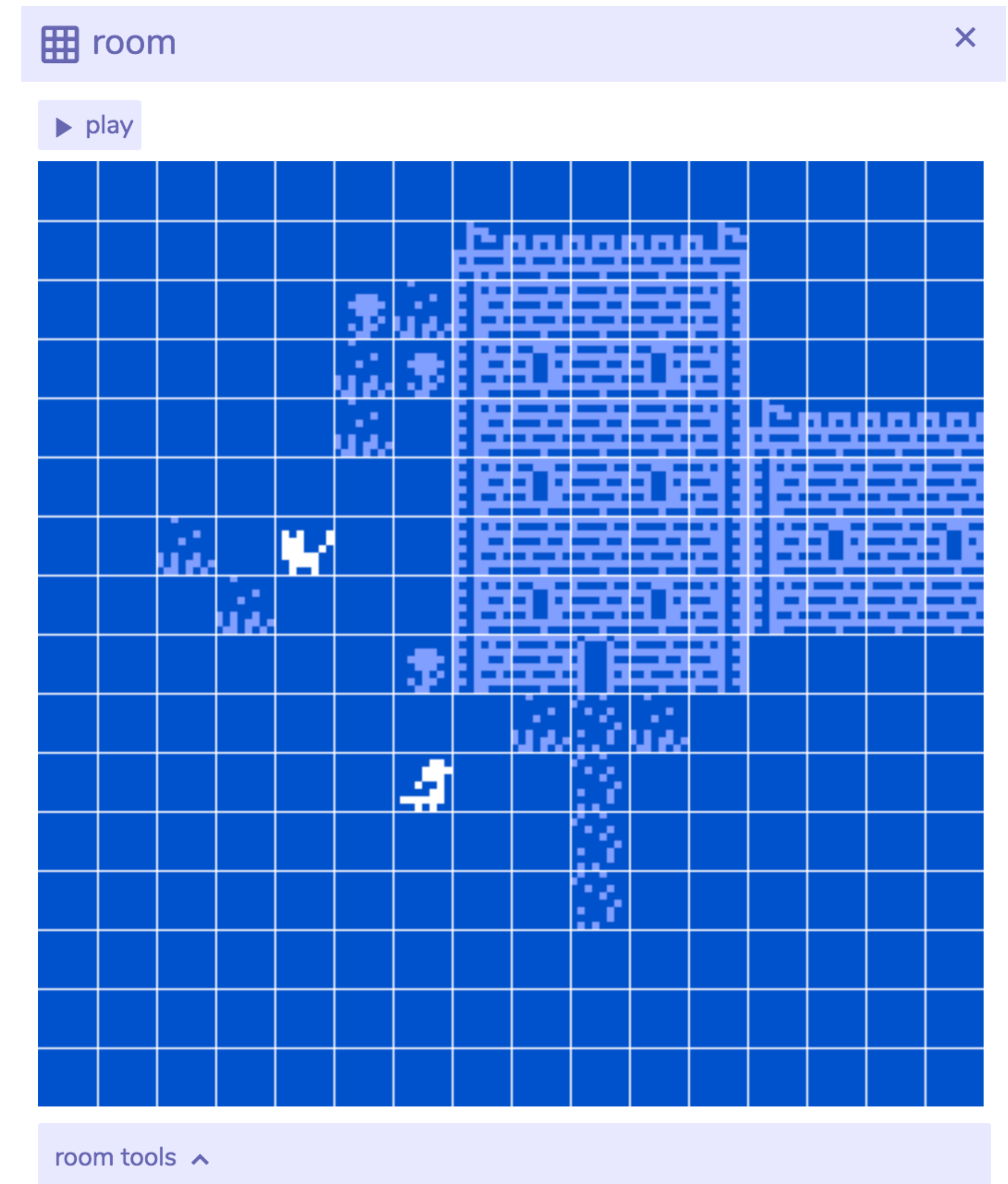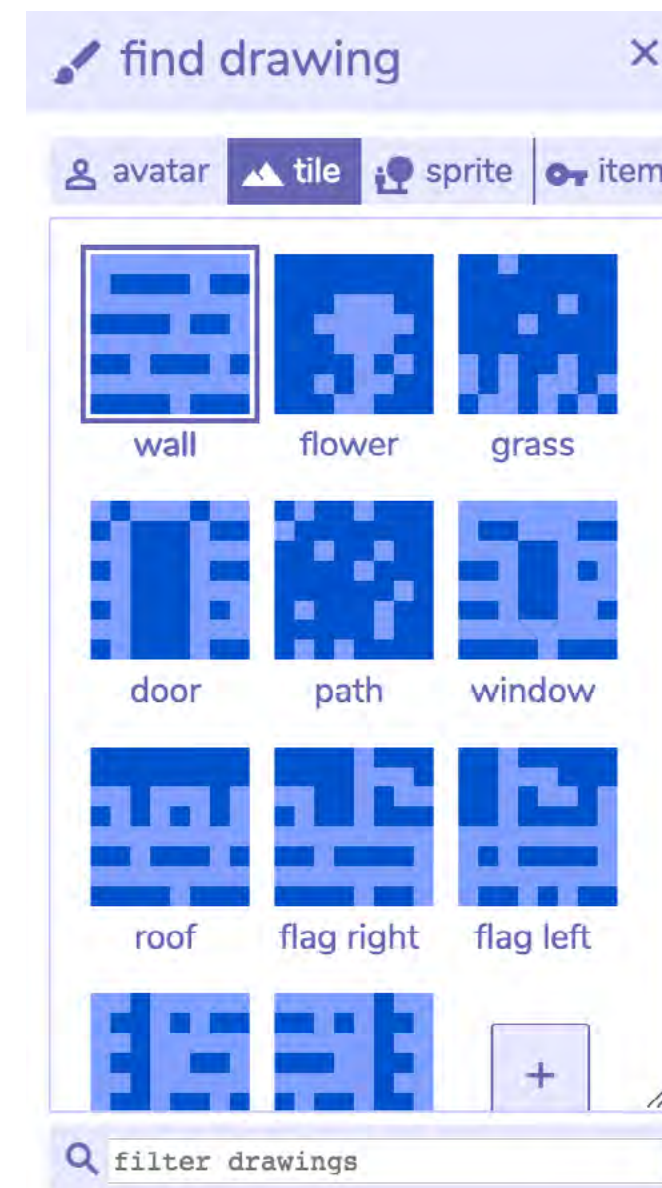
room design

toggle the `wall` button in the `room` panel to **see where your walls are**.

click the `play` button to, well, **play your game**. that way you can check if your walls work, and you can also just get a feel of how to navigate your game.
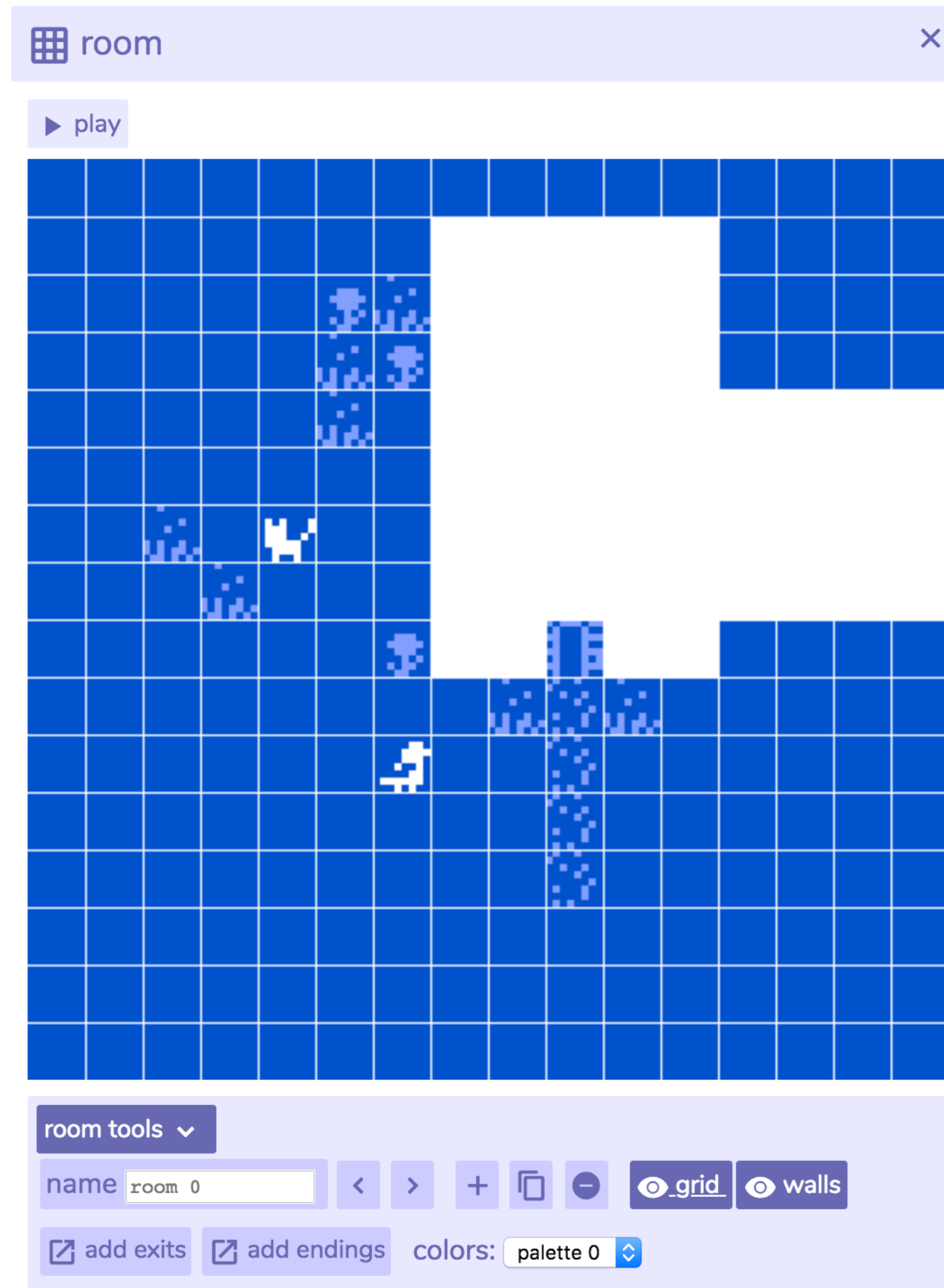
once you have at least two rooms, you can connect them using **exits**.

room panel (illustration labels)

▦ room ✕

▶ play

room tools ⌄

name `room 0`   ‹ › + ⧉ ⊖   👁 grid 👁 walls

⬈ add exits   ⬈ add endings   colors: `palette 0` ⌄
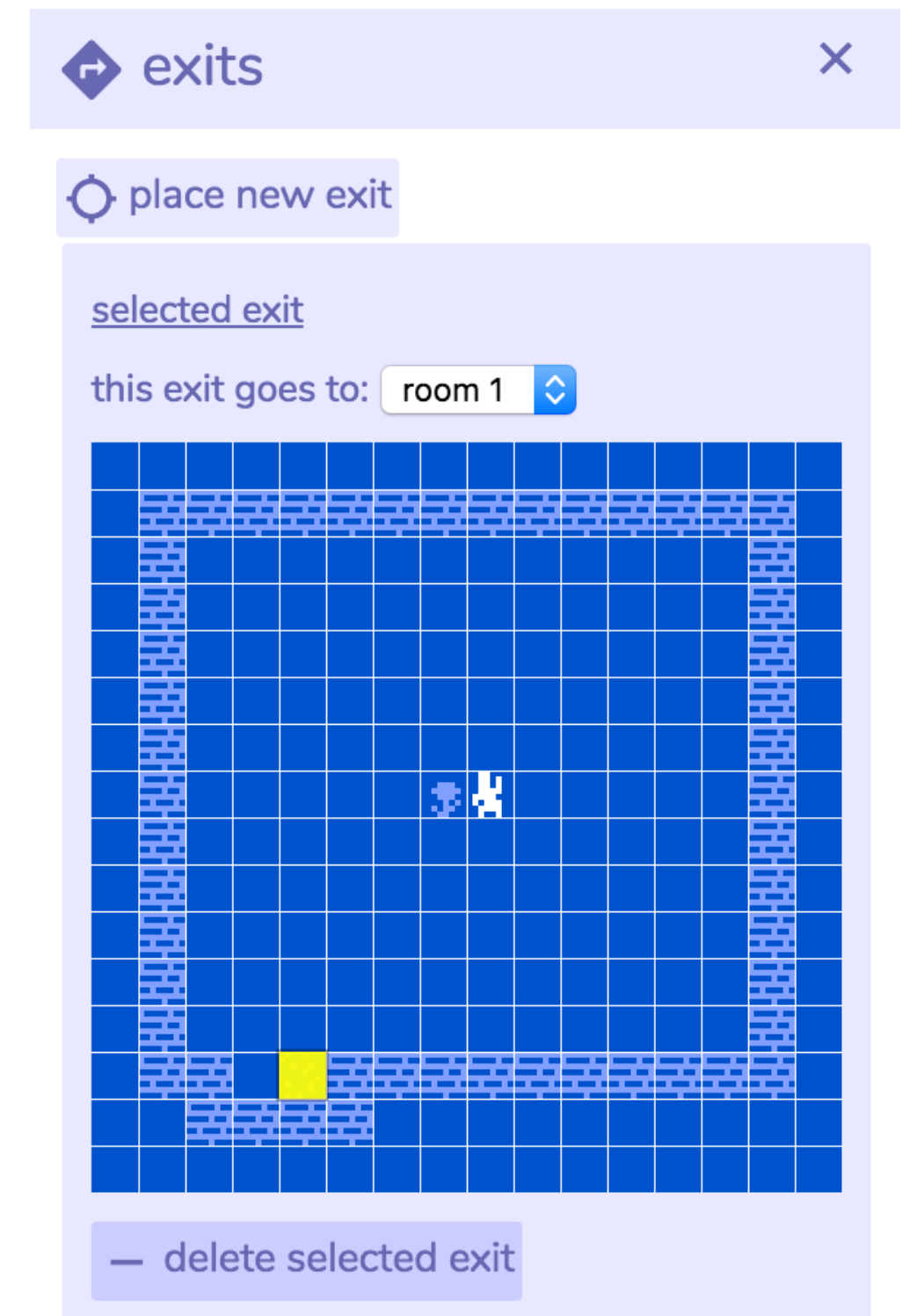
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tips

i generally roughly plan out my rooms on paper, then create them, adding placeholder tiles where i want my walls and exits to be.

there are some bitsy pieces that take place only in one room, but **you can add as many rooms as you want**, so you can go wild with them as well.

exits

✕

you've heard of "making an entrance", let's make an **exit**.

open the `exits` panel, and click the `place new exit` button. a **mini-map** of the room will appear with a **dropdown list** of all your rooms. select the room you want, and then click in the mini-map to create an **exit destination**.

▦ room ✕

▶ play

To room 1

room tools ⌃

↪ exits ✕

◇ place new exit

selected exit

this exit goes to: room 1 ⬍

— delete selected exit
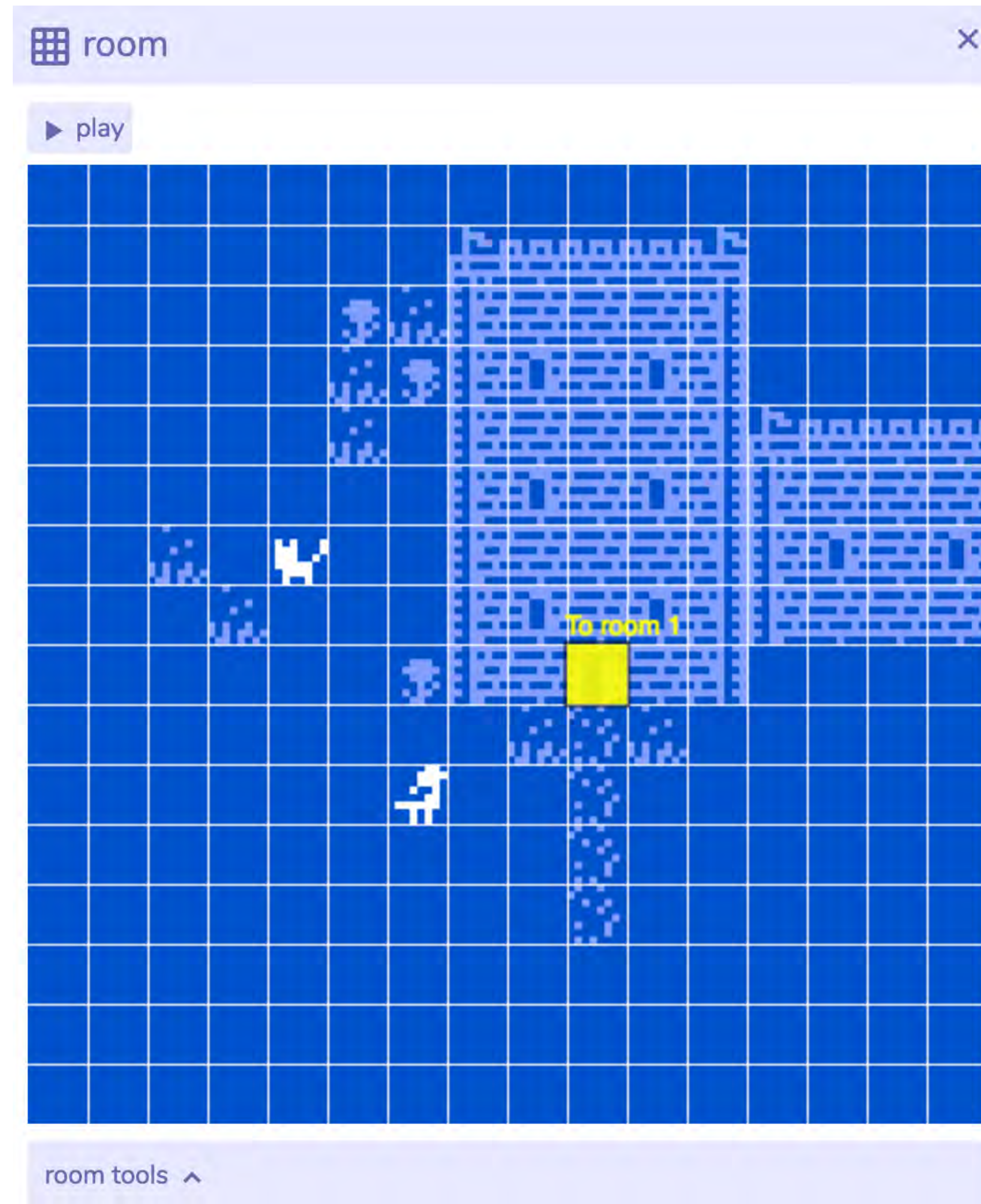
editing an exit ✕

while the `exits` panel is still open, click on its tile in the `room` panel to select it, and the mini-map will reappear so that you can click on a new tile for the destination, or drag it over to the desired tile.

tips ✕

always remember to **test your game** to see if your exits work as you want them to.

you can add exits going back to the previous room to make it **two-way**.

generally, you want to make it obvious **where the exits in a room are**, unless it's part of your game to make it confusing.

thinking about exits ✕

exits are commonly used as **doors between rooms**, but i've seen them being used to make animations, show the passing of time, or making sprites appear out of nowhere.

if you're placing them as doors, it's important to keep **continuity** in mind, as to not confuse the player (unless that's your aim). for example, it makes sense for the character to exit at the right-side and enter a new room from its left side.
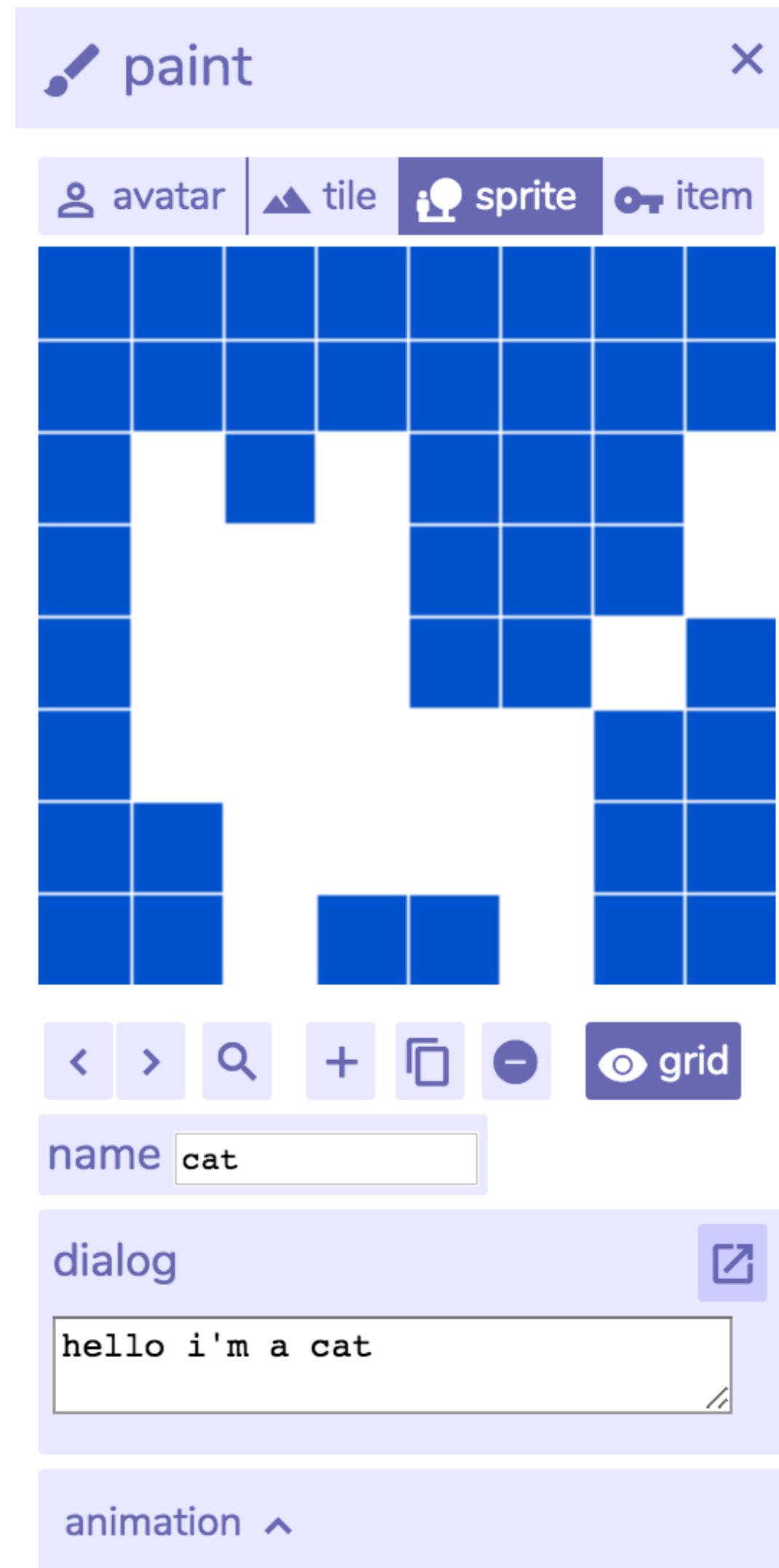
dialog ✕

now that we have most of the basics covered, let's talk about **dialog**.

sprites and items are the only elements to which you can add dialog.

to edit dialog for each sprite you make, go to the `paint` **panel and type into the** `dialog` **field.**

now click play and walk up to the sprite and it will talk to you!

paint ✕

👤 avatar	⛰ tile	🗨 sprite	🔑 item

name `cat`

dialog ⧉

`hello i'm a cat`

animation ⌃

tips ✕

dialog is usually one of the last things i add to my game.

what i do is write down all of my dialog in a text editor and then copy/paste and edit that dialog in bitsy for each of my sprites.

advanced dialog ✕

with your `paint` panel still open, click on the `dialog` tool to open the advanced `dialog` panel.

there you can find different kinds of **dialog sections** (simple, list, conditional).

and **text effects**! you can change colours of your text or make it wavy, or shaky, or rainbow, or all of them at the same time!

💬 dialog ✕

▶ preview   <> show code

⊕ new section   A text effects

color 1   color 2   color 3   wavy   shaky   rainbow

☰   1. dialog   ✕

{rbw}hello i'm a cat{rbw}

hello i'm a cat

memo ✕

list dialog is used if you want your sprite to say a lines in a **sequence** (say the lines only once), a **cycle** (say the lines once then repeat from the first line), and **shuffle** (say lines in a random order).

conditional dialog is used in association with item variables. for example a sprite will say a line only once you have picked up a specific item.

colour palettes ✕

set **colour palettes** for your game in the `colors` panel. you can make multiple colour palettes and apply them to different rooms by selecting the one you want in the dropdown menu in the `room` tools.

game data ✕

in the `game data` **panel,** you can find the text version of the game itself. you could tweak it in the editor, but i recommend pasting it in a text editor like **sublimetext** for that. this is also the data you need to use with hacks like **borksy**.

settings ✕

in the `settings` panel you can change the **background colour** of the html file of the game (so that it matches the background colour of your room), set the **game window size** and change **dialog fonts**.

inventory ✕

the `inventory` panel is the one you use for setting variables. check out the **tutorials** if you want to know more about them.

download game ✕

in this panel you download your **game's html file.** that's the file you need for uploading to itch.io. you can also **import** a game from its html here.

useful tools

image to bitsy — turn any **image into a bitsy room**.

pixilart — online pixel art tool i use for making room backgrounds. set the canvas to **128×128px**, draw, save. import your drawing to image to bitsy, get the code. easy!

fontsy — make a **custom font** for your bitsy's in-game text.

spritesy — **sprite editor**, mainly used for collaborations and multiple frame animations.

borksy — tool for incorporating various **bitsy hacks** easily.

sublimetext — for working on your **html code** outside of the bitsy editor.

tutorials

text tutorial — this is a tutorial by **claire morley**. it's very good and inspired me a lot for these slides.

video tutorial — if you're more of a video person, **dan cox** has got you covered.

variables tutorial — a tutorial by **andrew yolland** about variables, which you may have noticed in `inventory`.

note: adding music to your bitsy ✕

you can add music to your bitsy using the aforementioned **borksy**,
but if it confuses you (understandable) or if you want just **one track**
looping in your game, you can:

1. place your audio file somewhere relative to your bitsy html file
   (in the zip if you're uploading to itch.io). name it `music.mp3`.

2. open your bitsy html in **sublimetext**
   copy-paste
   ```
   <audio loop="loop" autoplay="autoplay">
              <source src="music.mp3">
   </audio>
   ```
   in `<!-- DOCUMENT BODY -->`
   before the `</body>` **tag.**

this works **only** if you upload on itch.io. test if your music
implementation is working either inside your itch project by making
a private upload/project or in a browser other than google chrome.
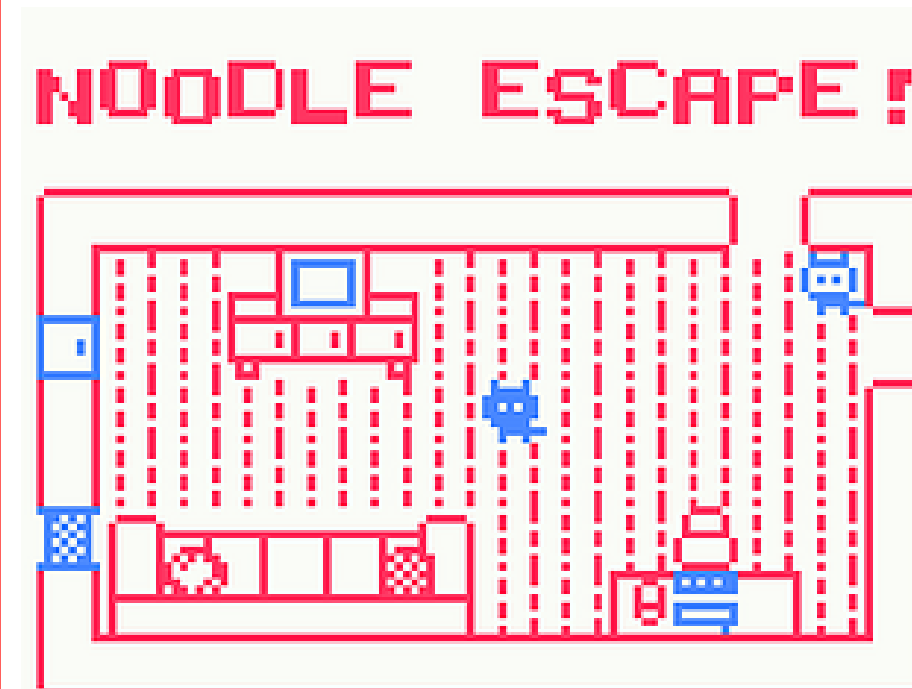
some bitsy pieces

✕

here are some examples of what you can make with bitsy. click through to play.
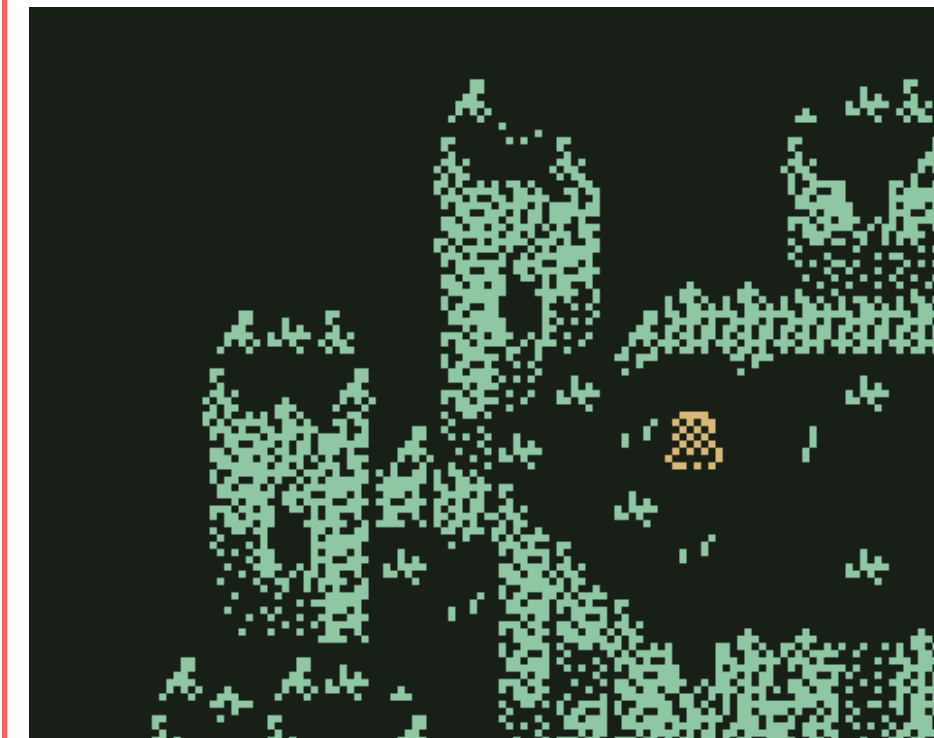
→ vitreous
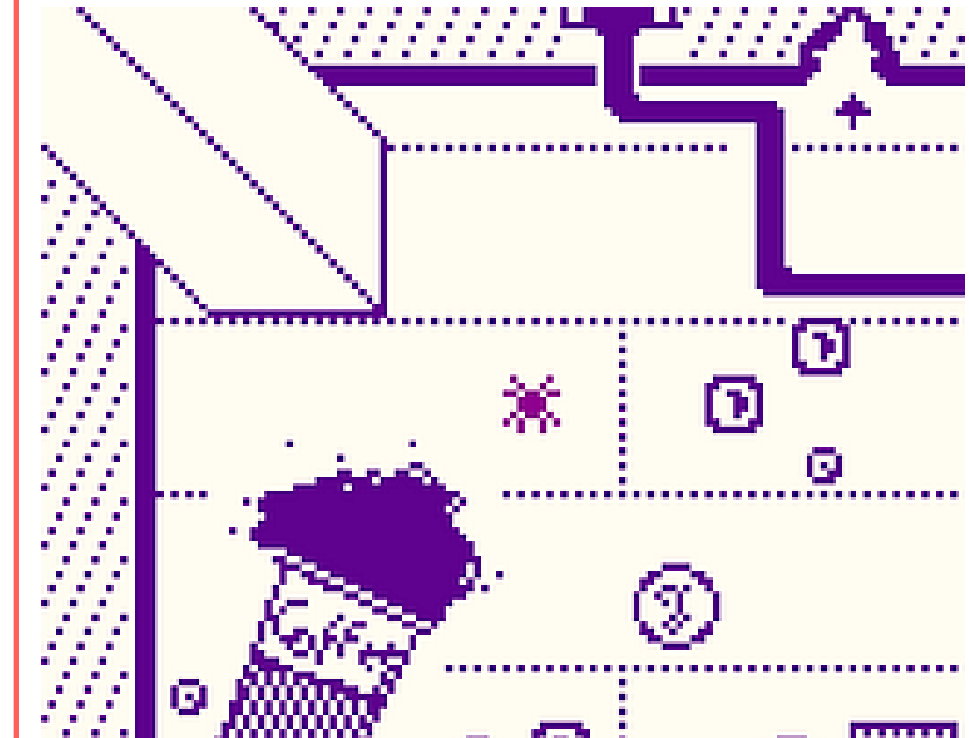
by breogan hackett

→ noodle escape !

by mary t., pete ellison, vince bondy

→ forgotten depths

by mark wonnacott

→ bitsy spider

by rabbitboots

→ silverybield foss

by twisted tree

→ the eviction game

by raulhaagensen

→ the_right_song_now.mp3

by karina popp

→ novena

by haraiva (me)

thanks   @haraiva

cecile-richard.com   thanks