Instructions to customize Villagers To Players ressource pack.

This pack intend to let you add player skins to villagers. It will need few textures modifications, therefore it is recommended that you already have ressource pack notion and know a program to modify png's. Examples in this document uses Paint.net

The model has been worked from a port of Fresh Animation's villager by Young SoulluoS to, at the time of minecraft 1.17 beeing compatible with CEM mod. I thank them again for letting me use ther base work.
The said model has animations that will blend nicely if you use Fresh Animation ressource pack.
This pack should works on 1.18.2 and onward thank to optifine or preferably Entity Texture Features and Entity Model Features

Basic application:

The texture of this model is 128*128. It is divided in four "64*64" cases where each is a vanilla texture location.
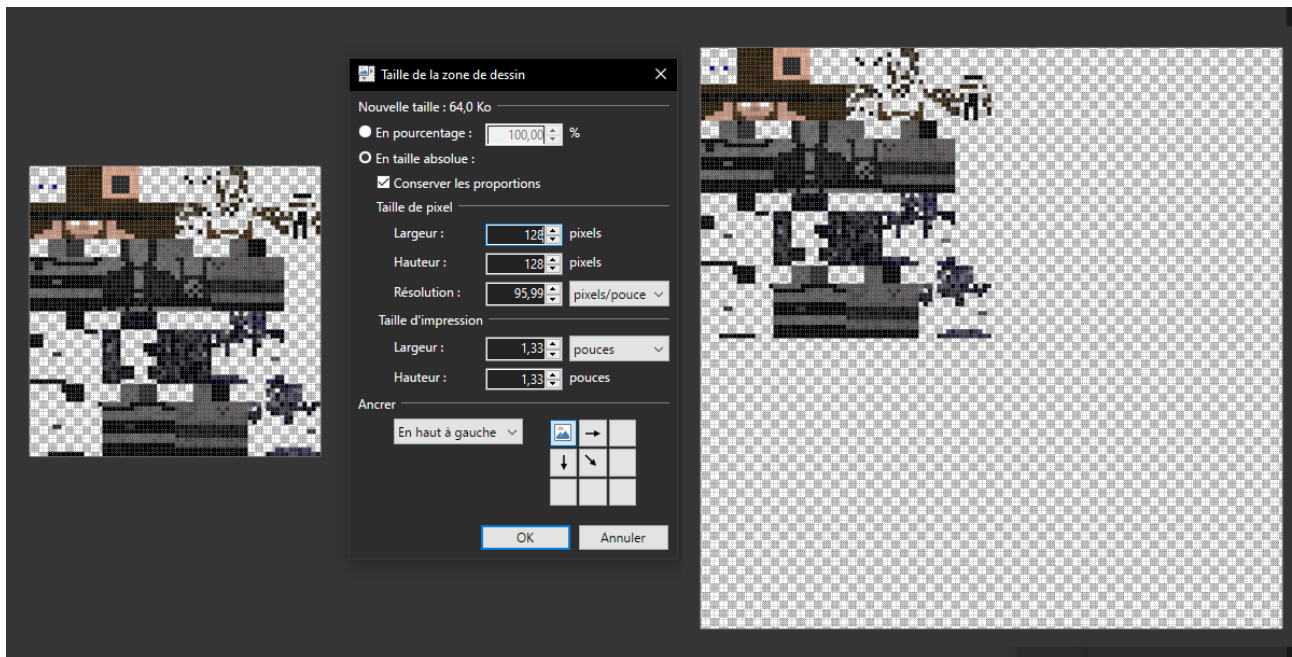> -Player skin is in top left corner
> -Villager work outfit, and job level is in bottom left corner
> -Villager biome outfit is in bottom right corner
> -Top right corner is reserved for slim skin arms and optional stuff

To add a player skin to a villager, resize it to a 128*128 while keeping the skin resolution. (On most software it will be called "adjust drawing zone".
If your skin is a slim player model, select your arms and second layer arms parts and shift them to the right of 64px. If you forget this part, you gonna have a hole in the back of villager's arms

Eyes animation are also possible, check **advanced tips** for more info
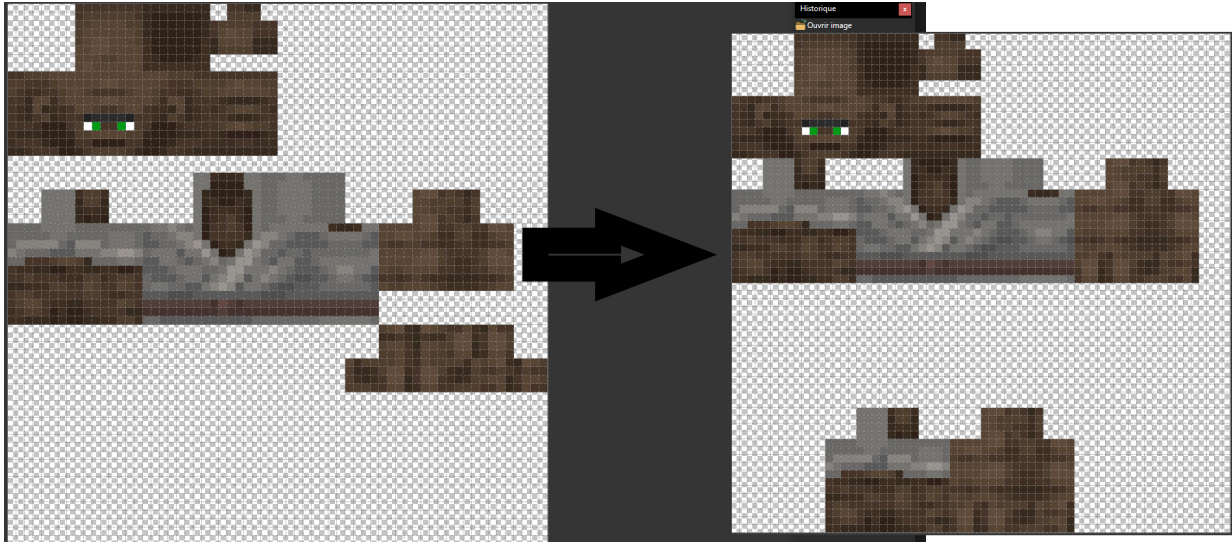(See at the end for the overall texture layout).

Illustration.

Then place this texture in the classic location of a villager texture. Do the same for biome and job outfits. Vanilla ones with resized head are already present in this pack.
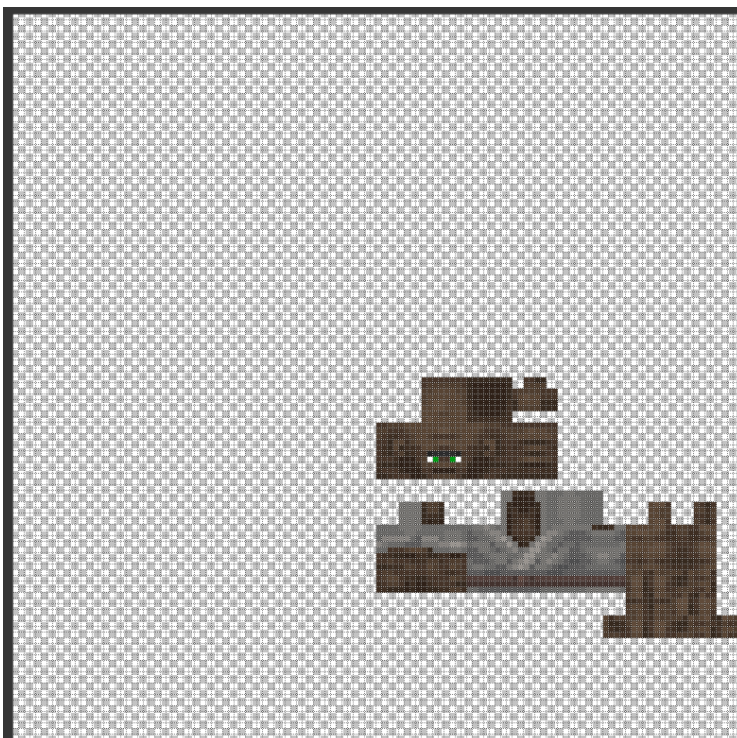
If you want to add villagers from a ressource pack you have two options

1) You can keep the villager texture to the upper left corner and make their texture match a player skin one. Basically you need to resized/delete their head texture down by 2 pixel. You also need to resized the top/bottom texture of the body, remove the horizontal texture of the arms, extend the vertical ones, and duplicate arms and legs. The following picture give you an idea starting with one texture from **More Villager RP** from **Zozozrob1**.You also can check the texture template for reference.

2) You can simply resized the texture to a 128*128 and put them in the bottom right corner (Biome). You'll still will have to extend their vertical arm texture, and move the "down UV" by 4 pixel to the right. but no other modifications will be necessary
Check the picture below for a reference. Eyes animation are also possible, check **advanced tips** for more info

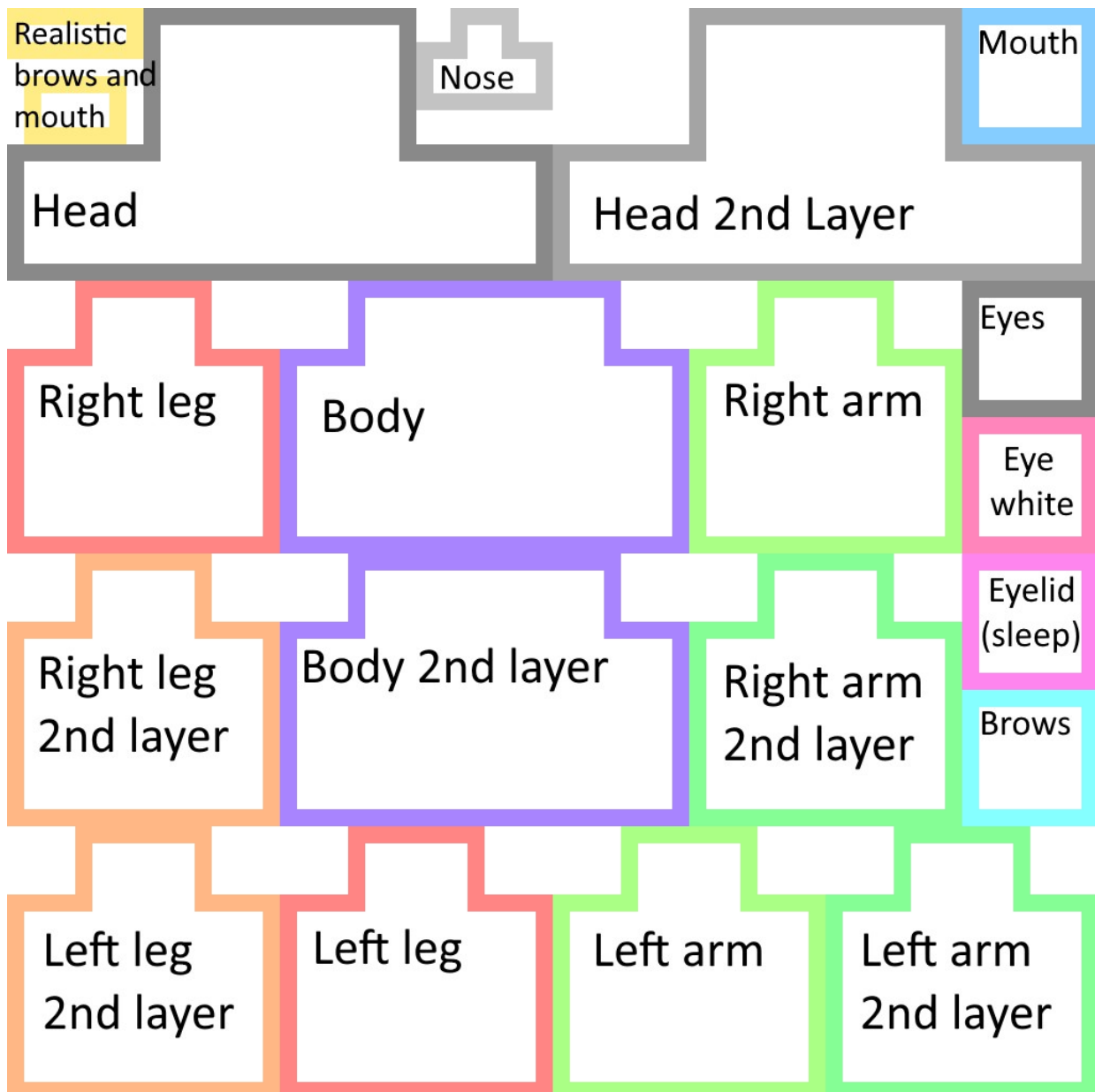Note that the second method is not pixel consistent.

Advanced tips:

-This model supported eyes animation in the FA styles. Depending of your type of skin it can look a bit funky under certain angles, but this is the downside of having 100% of face possibility covered. (100% assuming your eyes are on the face).

-The model will also not display the job outfits if it not work time (2000 to 9000 ticks)

-They will randomly cross their arms during the day.

-Capes can be displayed.

-Biome hats (similar to the job once) can be displayed

-Gloves and breast

-Other models

Eyes animations: like in FA, you'll have to edit the texture file. Use the next picture as a reference to where to put them for a player skin. Each square is the size of the head. For ease you can copy and paste you whole face, then delete everything except the part you need. Each case is divided in 2 "left" and "right" parts

"realistic brows and mouth" don't display in pixel constistency. They give an anime feel to these parts, but only fits classic steve/alex faces. Check an example next page to see how it looks

Realistic brows and mouth		Nose		Mouth
Head			Head 2nd Layer	
Right leg	Body		Right arm	Eyes
				Eye white
Right leg 2nd layer	Body 2nd layer		Right arm 2nd layer	Eyelid (sleep)
				Brows
Left leg 2nd layer	Left leg		Left arm	Left arm 2nd layer

"Normal"

"Realistic"

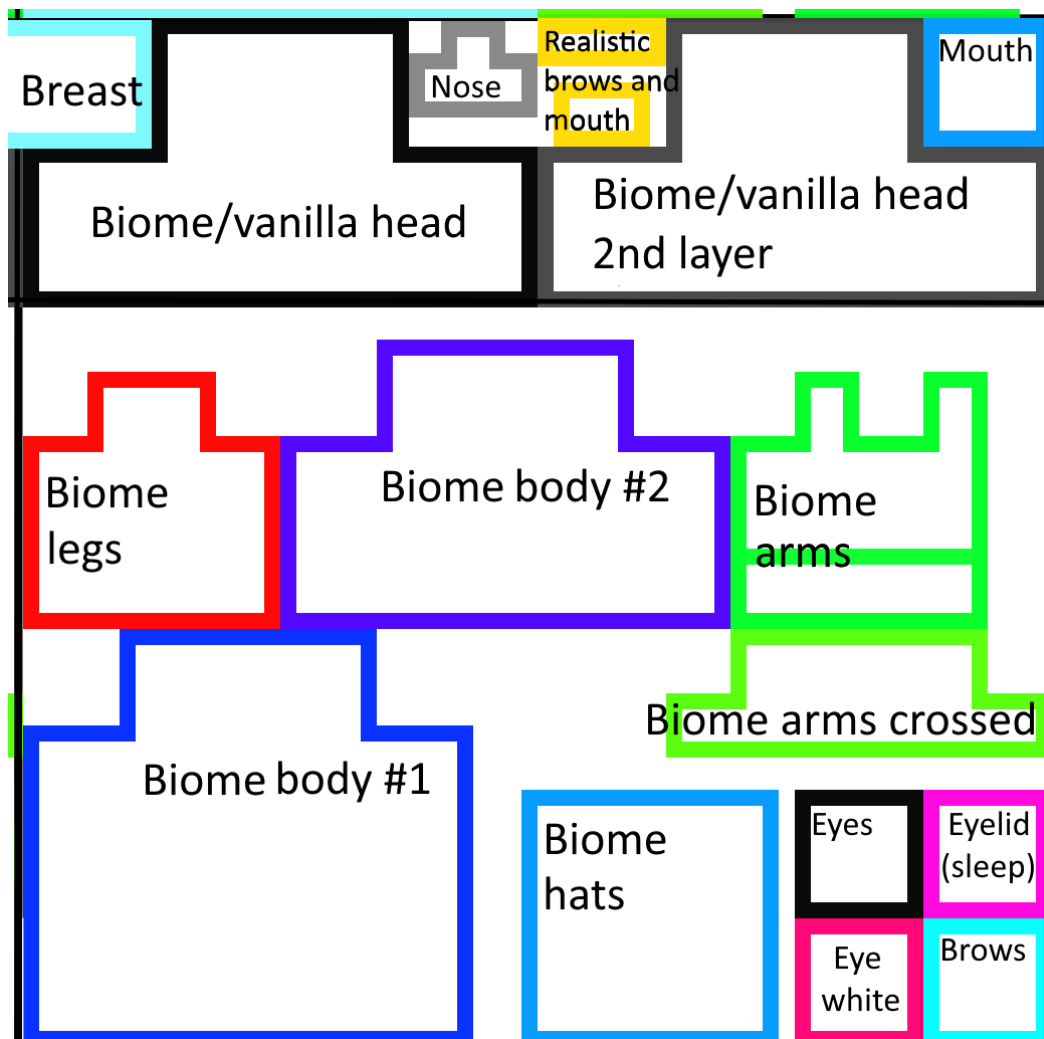Feel free to experiment this with different sizes, shapes or colors to suit you needs

If you put a villager in the biome area, eyes related texture need to be as shown on this picture

Breast

Nose

Realistic brows and mouth

Mouth

Biome/vanilla head

Biome/vanilla head 2nd layer

Biome legs

Biome body #2

Biome arms

Biome body #1

Biome arms crossed

Biome hats

Eyes

Eyelid (sleep)

Eye white

Brows

<u>Biomes outfits:</u> By default everymodel will have a biome outfit. So the skin you've added might not be much visible.
To counteract this there are 2 solutions:

1) You can set variable textures using the optifine format. Remember that .properties files of villager and type will provide the same result is they match.
So for example if you set the index 2 to the villager texture, and 3 to your skin:
You then set the index 2 to the vanilla biome texture, and create an index 3 wich is completely transparent.
Both .properties files have this: skins.1= 2 3, weights.1=4 1, then your skined villager will always appear without the biome overlay.

2) You could also make all the vanilla type textures transparent. You then create 8 villagers in the random folder. You put the biome texture on the bottom right of these 8 files, and uses the .propertie to set wich index appear in wich biome.

<u>Jobs outfits:</u> By default they won't display them all the day. This is set via animation in the model.
To change this, edit the model. Here is the part of the code (right after the variables)

```
"work_head.visible" "between(day_time,2000,9000)",
"work_body.visible" "between(day_time,2000,9000)",
"work_left_arms.visible" "between(day_time,2000,9000)",
"work_right_arms.visible" "between(day_time,2000,9000)",
"work_arm_rotation.visible" "between(day_time,2000,9000)",
"work_right_leg.visible" "between(day_time,2000,9000)",
"work_left_leg.visible" "between(day_time,2000,9000)",
"work_hat.visible" "between(day_time,2000,9000)",
```

You could also use the first trick for your skinned villagers to not display jobs anytime. Don't forget you'll also need to do it for the job levels.
Job/biome and level textures do not need any edit on the head size. Obviously he model will not be 100% pixel consistent on that part, and some feature might not fit every face, but hats and face stuff fits quite nicely most skins I tested.

<u>Arm Crossing:</u> Randomly during several part of the day, the model will switch arm to a classic villager pose. No need to edit anything on your skin as it will match part of your arms textures. But in some cases it can look a bit funny. Villagers will not cross their arms while they sleep.
To edit the code in the model is the following:

```
"var.cross_arms1" "sin((10*sin(0.5*(random(id)+age/200)-1)))
+sin(5*(random(id)+age/200)-1)"
"arms.visible" "(var.cross_arms1>0&&between(day_time, 10, 3000)) ||
(var.cross_arms1>0&&between(day_time, 9000, 10000)) ||
(var.cross_arms1>0&&between(day_time, 12000, 15000)) ||
(var.cross_arms1>0&&between(day_time, 19000, 21000))",
"player_arms.visible" "!(arms.visible)",
```


On this picture you can see what I consider "crossed arms"
Arms beiing the "vanilla" ones.
Player_arms beiing obviously the arms displayed like players
Var.cross_arms1 is what make it random. It is a weird sinus fonction.

Capes: You can put a minecraft cape texture to your villagers. There are 4 slots available in the top right corner (See at the end for the overall texture layout).
By default, the cape #1 has 2 out of 10 chance to display, capes #2,3&4 will have 1 out 10 each. So overal it should be a 50/50 chance to see any cape if you set 4 of them.
The code in the model for this randomisation is the following:

```
"cape_alt_1.visible": "between(random(id), 0.5, 0.7)",
"cape_alt_2.visible": "between(random(id), 0.7, 0.8)",
"cape_alt_3.visible": "between(random(id), 0.8, 0.9)",
"cape_alt_4.visible": "between(random(id), 0.9, 1)"
```

Biome hats: This is not present in the vanilla biome textures, but now you can add some. They have the same relative location as the farmer/fishermen hats in the bottom right part. (See at the end for the overall texture layout).

Gloves: Biome textures will have the end of the end covered when it's raining
Note, if the entity swim it won't appear. I don't know how to fix that as for now. Also wish it would detect they are in snowy meteo. :(
The code for it:

```
"biome_right_arms_end.visible": "(is_wet&&!(is_in_water))",
"biome_left_arms_end.visible": "biome_right_arms_end.visible",
```

Sleeping model: In the CEM folder, you'll find 2 active models for the villagers. Model 2 is the awake one, and model 3 for sleeping.
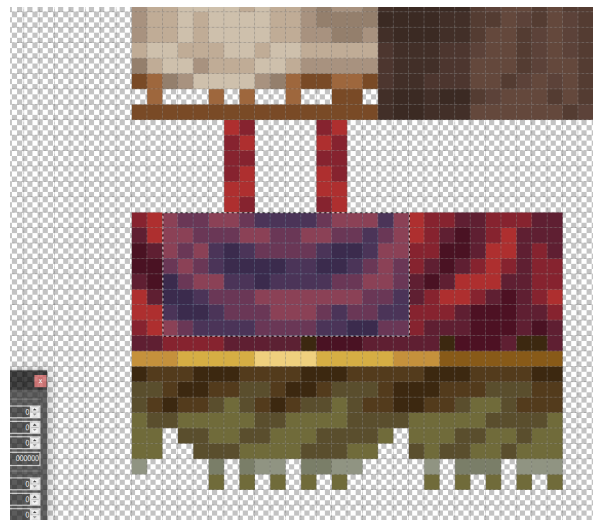They are both the same with a few exceptions:
        -All the eyes animations are removed. They will have a closed state during sleep. Mouth and brows still are animated.
        -The cape, biome long coat, job outfit and the crossed arm stuff are removed from this model.

Breast: You can add breast to your skins by editing the textures. Check the general layout to know where it is. Simply copy a 16*8 area from the chest area. It should be centered and right on the bottom of the top section of the body area.
Use this image as a guide:

No animations: If for some reason you don't like the life that bring fresh animations work, you can use model 4
Note: It still use feature like job display, cross arms, Sleeping is then model 5

General Texture Layout:
Use the picture next page as a reference and guide. In the pack, you'll find this file named "skin template labeled" along "skin template"

Skin template is a 128*128 version you can use as a temporary mask in your edit software to easily move around elements you chose to add.

Realistic brows and mouth

Head

Nose

Head 2nd Layer

Mouth

Cape #1

Cape #4

Right leg

Body

Right arm

Eyes

Eye white

Right arm

Cape #2

Eyelid (sleep)

Right leg 2nd layer

Body 2nd layer

Right arm 2nd layer

Brows

Cape #3

Right arm 2nd layer

(Slim player arms)

Left leg 2nd layer

Left leg

Left arm

Left arm 2nd layer

Left arm

Left arm 2nd layer

Breast

Breast 2nd layer

Work Breast

Biome Breast

Nose

Realistic brows and mouth

Mouth

Profession head

Profession head 2nd layer

Biome/vanilla head

Biome/vanilla head 2nd layer

Profession legs

Profession body #2

Profession arms

Biome legs

Biome body #2

Biome arms

Work arms crossed

Biome arms crossed

Profession body #1

profession hats

profession hats #2

Biome body #1

Biome hats

Eyes

Eyelid (sleep)

Eye white

Brows