

CHINESE DRAGON

G2

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INTRODUCTION

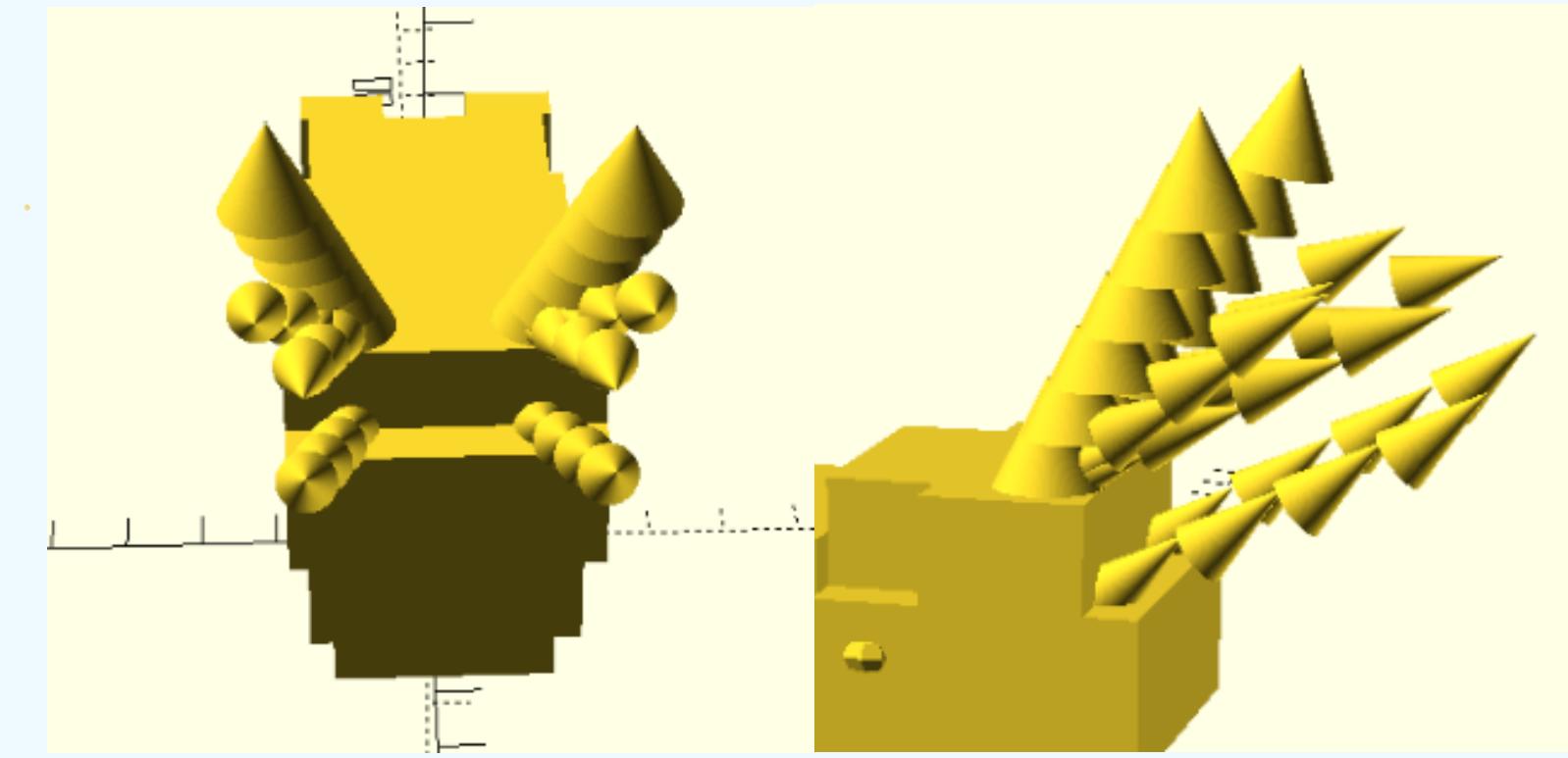
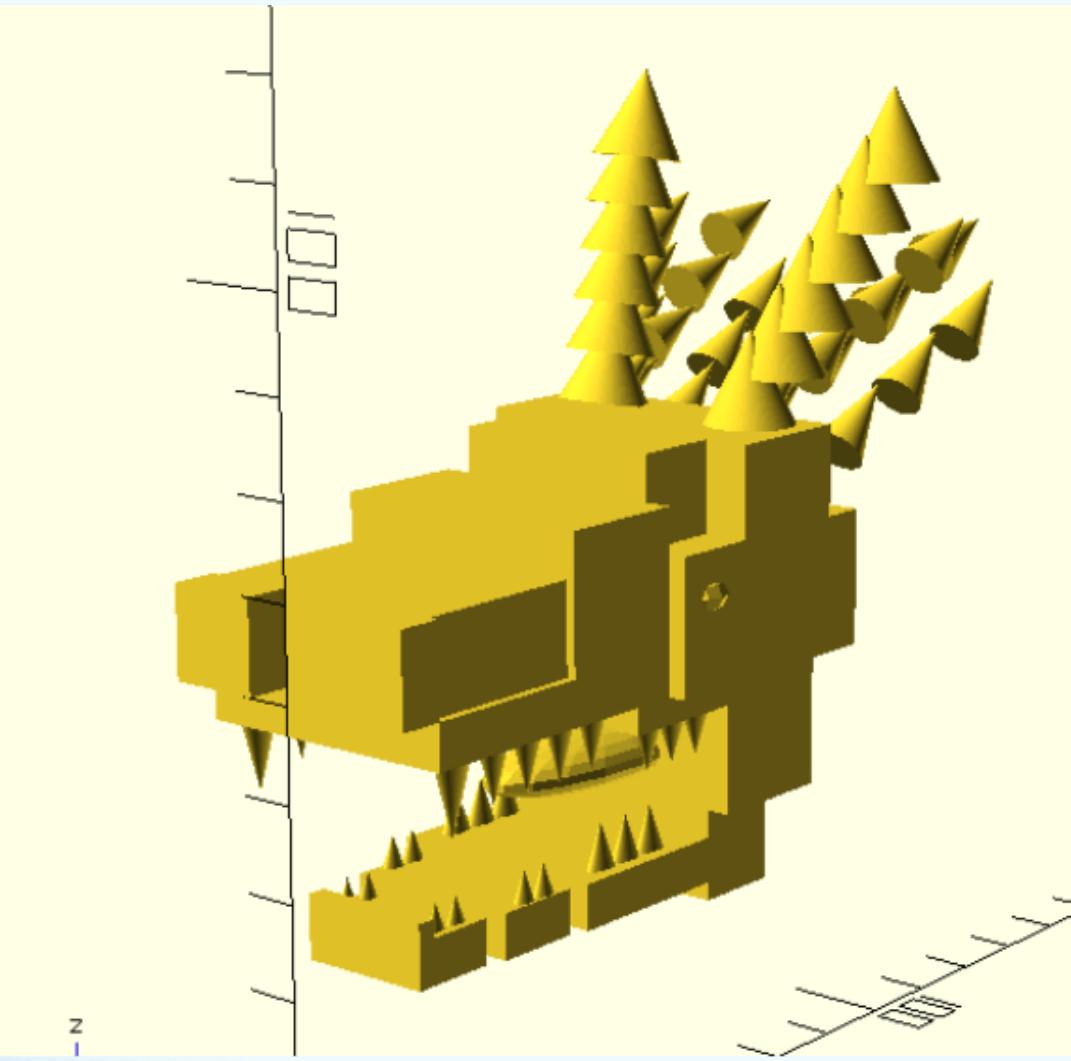
Chinese Dragon

- Dragon is a symbol of auspiciousness, authority, and sanctity.
- Dragon have a long-standing tradition in Chinese history, being worshipped, revered.
- Dragon can always be found in Chinese traditional festivals and celebrations.

MODELING



Modeling-head



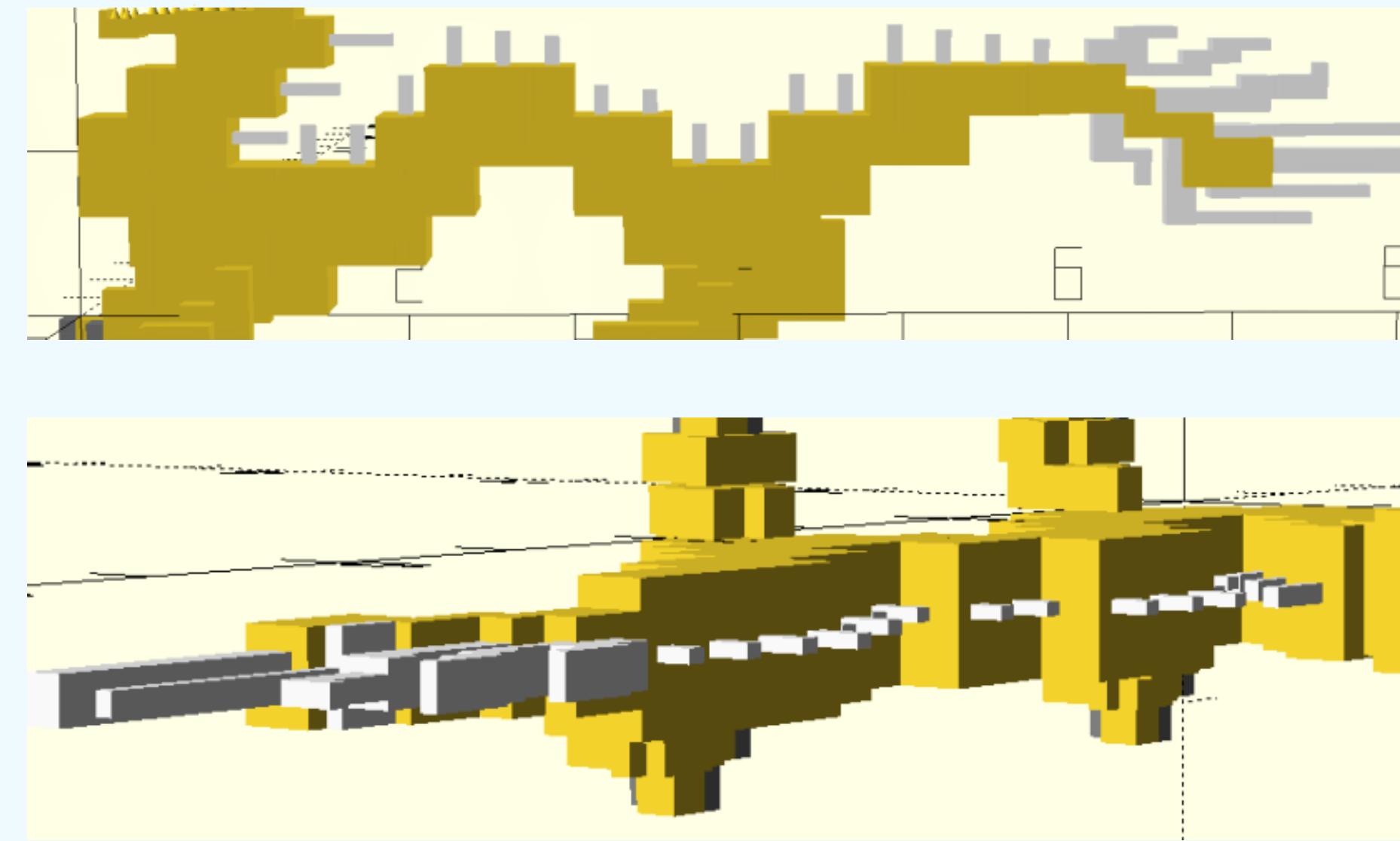
```
module dragon_horn_segment() {
    difference() {
        translate([-10, 60, 80])
        rotate([-10, 0, 0])
        cylinder(h = 10, r1 = 5, r2 = 0, $fn = 100);
    }
}

module dragon_horn() {
    for (i = [0:5]) {
        translate([-i* 1.5, i* 3, i * 5])
        dragon_horn_segment();
    }
}

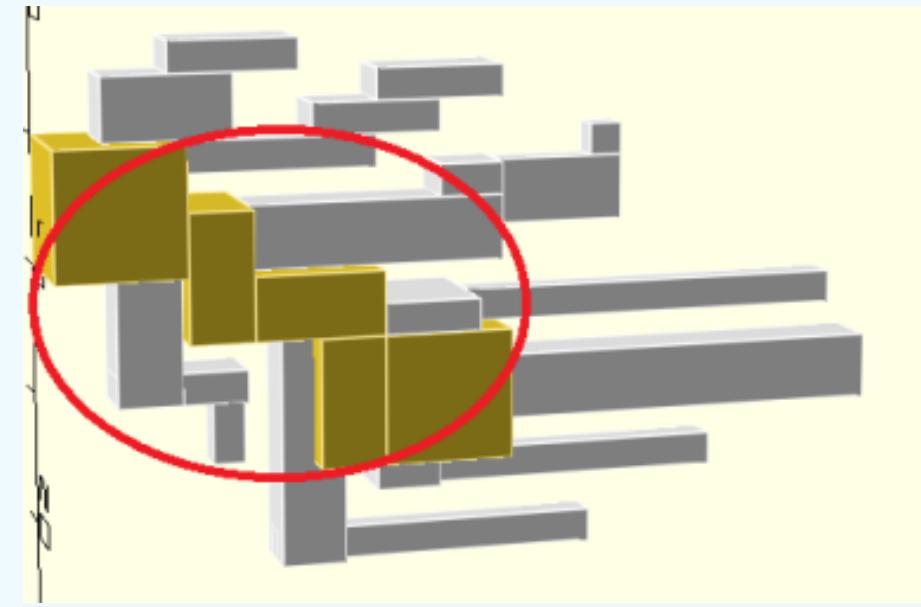
dragon_horn();
```

Modeling-body

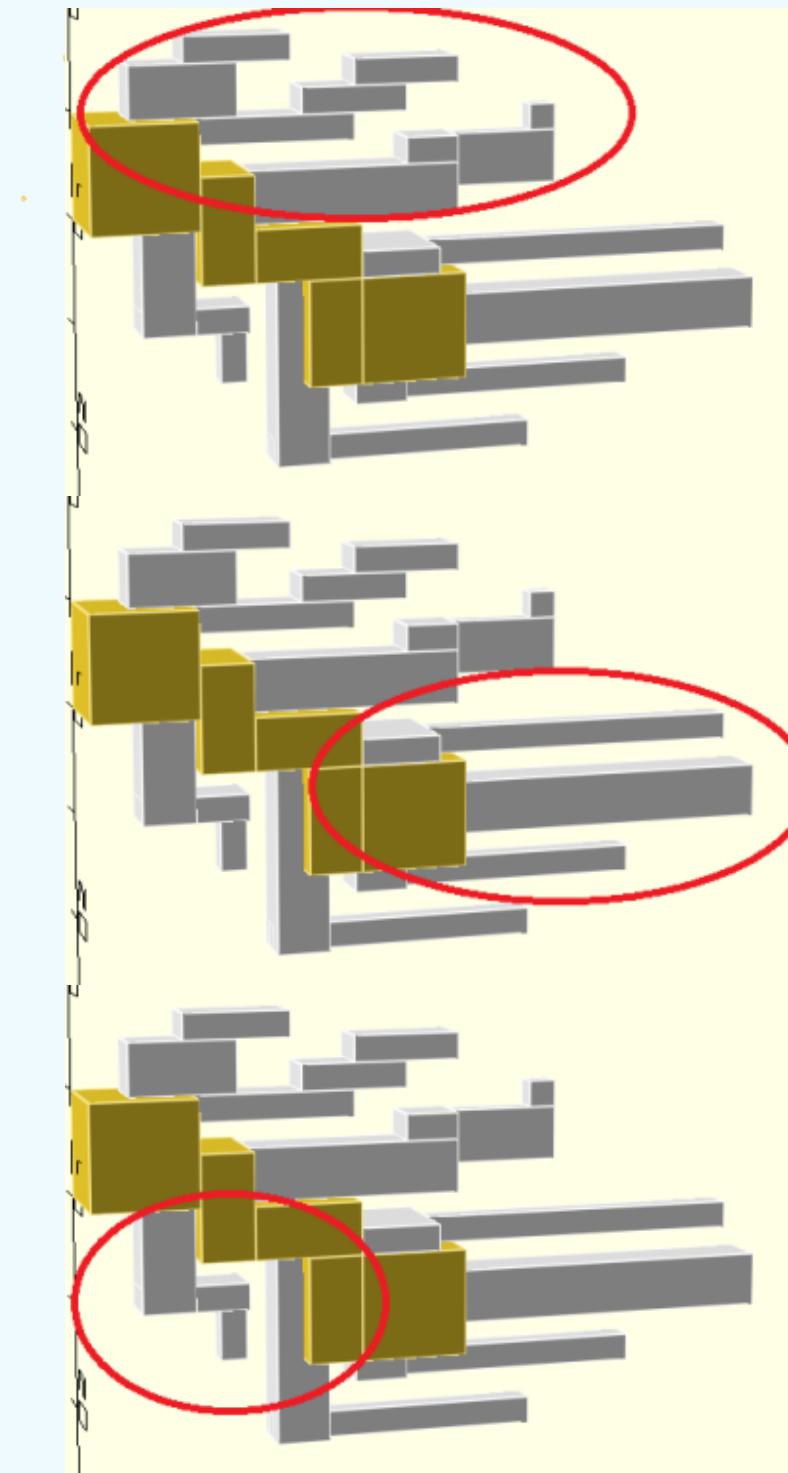
```
translate([10,0,40])  
cube([30,20,10]);  
  
translate([0,0,30])  
cube([30,20,10]);  
  
translate([0,0,20])  
cube([80,20,10]);  
  
translate([10,0,10])  
cube([60,20,10]);  
  
translate([20,0,0])  
cube([30,20,10]);
```



Modeling-tail

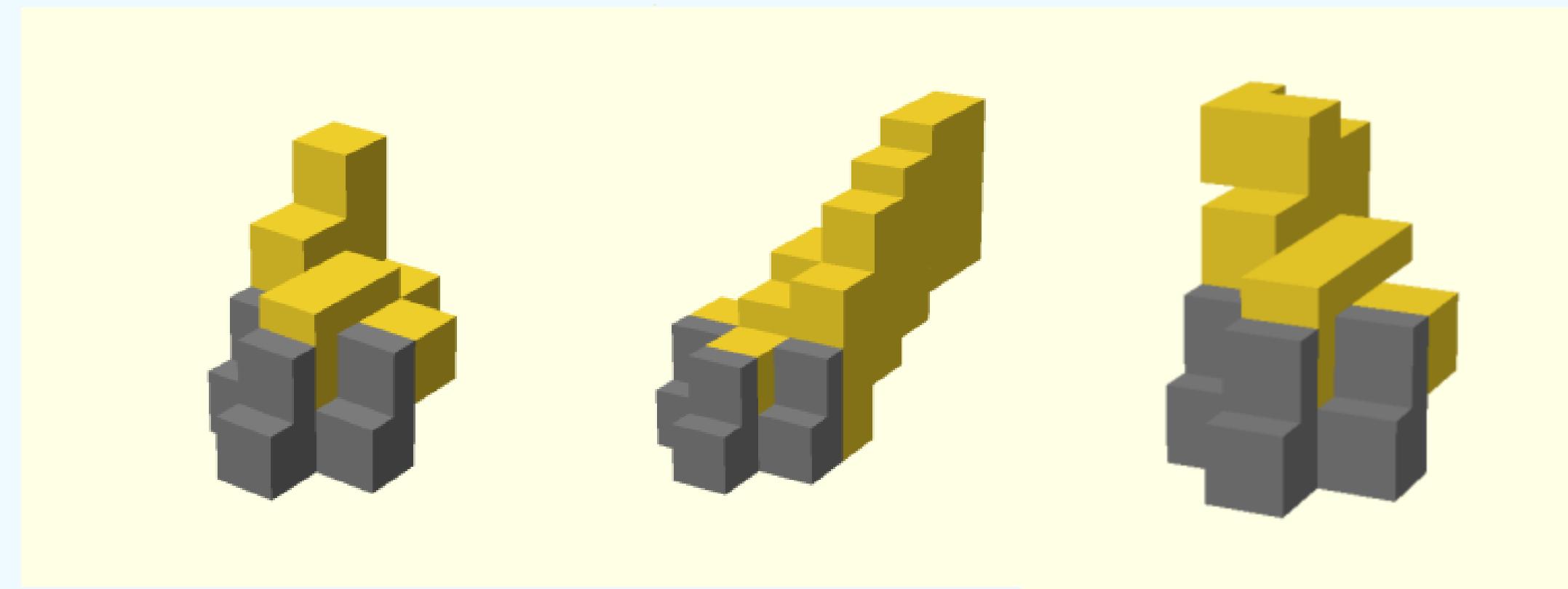


```
1 translate([0,0,40]) cube([10,10,  
    10]);  
2 translate([0,10,35]) cube([10,5,  
    10]);  
3 translate([0,15,35]) cube([10,10  
    ,5]);  
4 translate([0,20,25]) cube([10,5,  
    10]);  
5 translate([0,25,25]) cube([10,10  
    ,10]);  
6
```



```
6  
7 color([1,1,1)){  
8     translate([2.5,35,27.5]) cube  
    ([5,30,5]);  
9     translate([2.5,25,22.5])  
    cube([5,5,2.5]);  
10    translate([3.5,27.5,22.5])  
    cube([2.5,25,2.5]);  
11    translate([0,25,35]) cube([  
    10,7.5,2.5]);  
12    translate([3.5,32.5,35])  
    cube([2.5,30,2.5]);
```

Modeling-claw

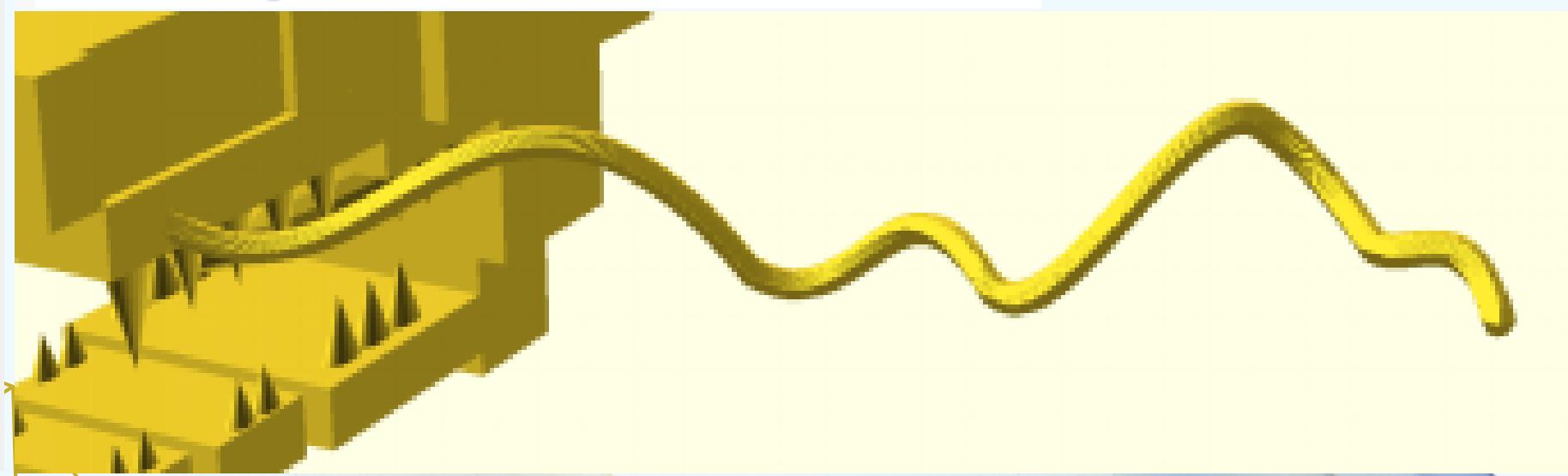


```
1 //feet1
2 translate([40,-10,-30]) {
3   cube([10,10,30]);
4 }
5
6 translate([30,-10,-20]) {
7   cube([10,10,10]);
8 }
9
10 translate([20,-20,-40]) {
11   cube([20,10,25]);
12 }
13
14 translate([40,-20,-30]) {
15   cube([10,10,10]);
16 }
17
18 translate([30,-30,-30]) {
19   cube([10,10,10]);
20 }
```

Modeling-beard

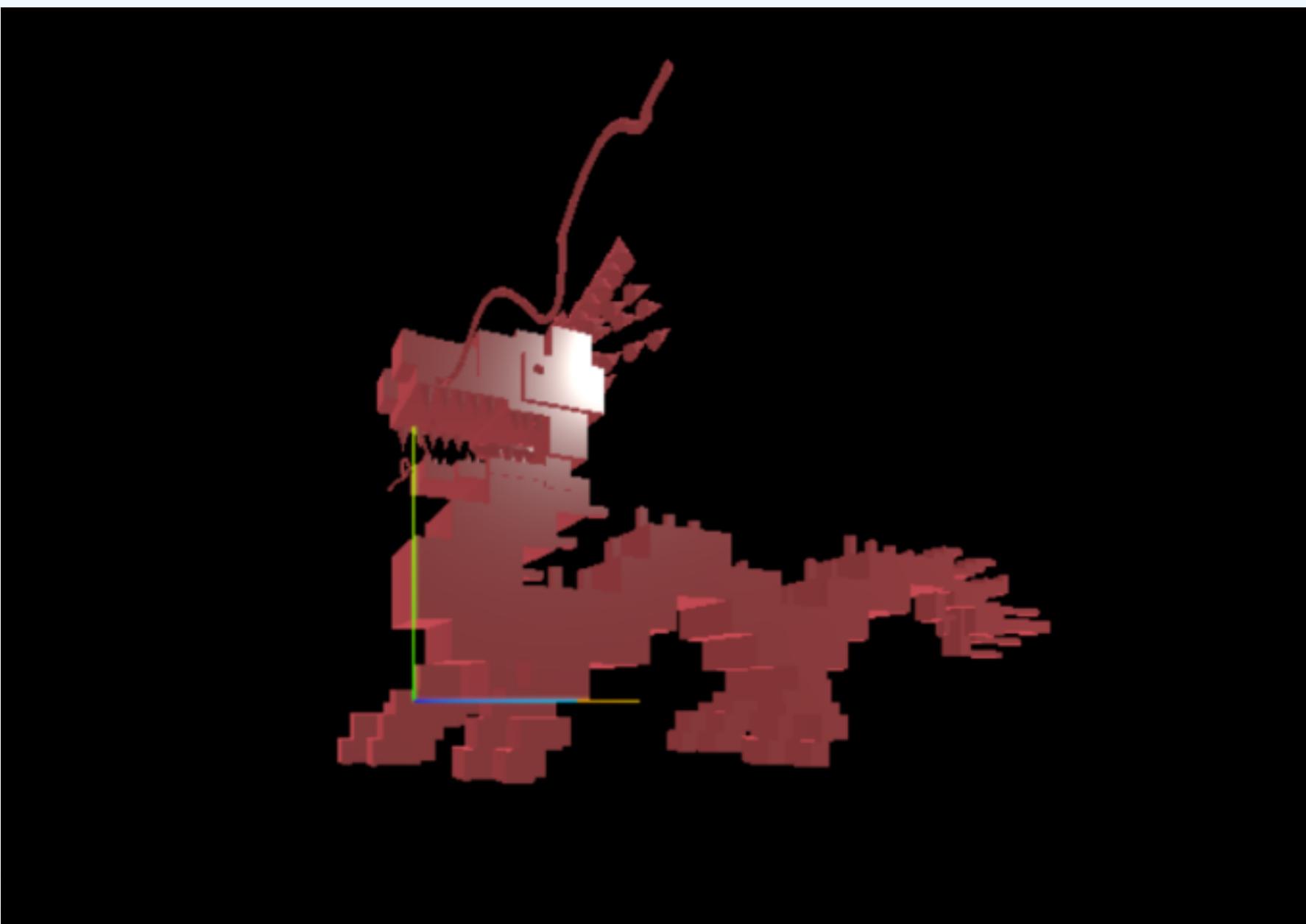
```
//whisker1  
// curve1  
p0 = [0, 0, 0]; // 起点  
p1 = [10, 20, -30]; // 控制点1  
p2 = [30, 0, 20]; // 控制点2  
p3 = [40, 20, -10]; // 第一段曲线的终点  
  
// curve2  
p4 = [45, 25, -15]; //  
    第二段曲线的起始过渡控制点  
p5 = [50, 20, 0]; // 第二段曲线的控制点  
p6 = [58, 15, -5]; // 第二段曲线的终点  
  
// curve3  
p7 = [63, 12, -10]; //  
    第三段曲线的起始过渡控制点  
p8 = [70, 15, 10]; // 第三段曲线的控制点  
p9 = [73, 20, 51]; // 第三段曲线的终点  
  
// curve4  
p10 = [75, 22, 3];  
    //第四段曲线的起始过渡控制点  
p11 = [78, 20, 1]; //第四段曲线的控制点  
p12 = [80, 18, 0]; //第四段曲线的终点  
  
// curve5  
p13 = [82, 16, -1];  
    //第五段曲线的起始过渡控制点  
p14 = [85, 19, 3]; //第五段曲线的控制点  
p15 = [88, 15, -21]; //第五段曲线的终点  
  
n = 300; // 点的数量
```

```
function bezier(p0, p1, p2, p3, t) =  
  (1 - t)^3 * p0 + 3 * (1 - t)^2 * t  
  * p1 + 3 * (1 - t) * t^2 * p2 + t  
  ^3 * p3;  
  
for (i = [0 : 1/n : 1])  
  translate(bezier(p0, p1, p2, p3, i  
  ) + [10, 5, 65])  
    sphere(1);  
  
for (i = [0 : 1/n : 1])  
  translate(bezier(p3, p4, p5, p6, i  
  ) + [10, 5, 65])  
    sphere(1);
```



RENDERING

Rendering



Texture



ANIMATION

Animation-rotation

```
const envTexture = new THREE.CubeTextureLoader().load([
  'img/px_50.png',
  'img/nx_50.png',
  'img/py_50.png',
  'img/ny_50.png',
  'img/pz_50.png',
  'img/nz_50.png'
]);
envTexture.mapping = THREE.CubeReflectionMapping;
```

```
const loader = new THREE.STLLoader();
loader.load(
  'models/dragon.stl',
  function (geometry) {
    const mesh = new THREE.Mesh(geometry, material)
    scene.add(mesh)
  },
);
```

Animation-perspective

```
const camera = new THREE.PerspectiveCamera(  
    110,  
    window.innerWidth / window.innerHeight,  
    0.1,  
    10000  
);  
camera.position.z = 3;
```

CONTRIBUTION

Contribution

| | |
|---------------------|---|
| Modeling | Yuanhao ZHENG - tail Chengwu SHE - head Haoran JIA - body Lu GE -claw, beard |
| Rendering&Animation | Yuanhao ZHENG Haoran JIA |
| Report&PPT | Chengwu SHE Lu GE |



A background featuring a large, abstract blue and white wash with irregular edges. Scattered throughout are numerous small, gold-colored circles of varying sizes, some with intricate, organic patterns resembling leaves or petals. Two prominent, semi-transparent gold geometric shapes are positioned on the left and right sides. The left shape is a complex, multi-sided polygon with several internal lines creating smaller triangles. The right shape is a more open, triangular structure with some internal lines. The overall composition is elegant and modern.

THANK YOU