

## Guidance

### [3D WebGL Fox]

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1. You will download a folder named WebGL\_3D\_Fox
2. Open lab4.html
3. The 3D output will look like the video at <https://u.osu.edu/pu.127/webgl/> (0:11-0:31)



You can choose how to draw the shapes: points, lines, faces.

You can choose what shape you want to draw: cube, tetrahedron, cylinder without caps, cone, sphere, head, head fox.

You can change the background color.

#### **For shader mode:**

U/u to change phong shade or toon shade (u to toon, shift+u to phong)

#### **For phong shade:**

A/a to only ambient component

B/b to only diffuse component

W/w to ambient + diffuse + specular

#### **For the light:**

G/g/H/h/J/j to move the light position

//Old features from 2D FOX

#### **For the object:**

S/s to change scale of whole object.

R to rotate whole object.

X/x/Y/y to whole object movement

r to rotate first part of tail.

e to rotate second part of tail. (Have a range, if limit, change direction)

q to rotate head and neck. (Head rotate little bit larger)

K/k to rotate left hand (have range, if limit, cannot move)

L/l to rotate right hand (have range, if limit, cannot move)

O/o to rotate left arm.

P/p to rotate right arm.

You can use mouse to rotate.

**For the camera:**

V/v/D/d/N/n to camera movement.

M/m to camera tilt.

C/c to change camera up/down.

T/t to change camera left/right.

**\*For all uppercase X, means shift + x**