

SIMPLE OBJECTS

circle (center, size, color)
cone (center, size, color)
cube (center, size, color)
cylinder (center, size, color)
line (from, to, color)
point (center, size, color)
polygon (count, center, size, color)
prism (count, center, size, color)
pyramid (count, center, size, color)
sphere (center, size, color)
square (center, size, color)

ADVANCED OBJECTS

construct (expression, size, color)
 A+B, A-B, A*B, (...)
convex (src, size, color)
group (object, object, ...)
 .add (object, object, ...)
model (filename, center, size)
 .save (filename, [object, object, ...])
surface (center, curve, count, size, color)
text3d (text, fontname, center, size, color)
tube (center, curve, radius, count, size, color)

spline (src, closed, interpolating)
 [[x,y,z], ... [x,y,z]]
spline (function, param1, param2)
 func (u, pl, p2)
splane (src, closed, interpolating)
 [[[x,y,z], ... [x,y,z]],
 :
 :
 [[x,y,z], ... [x,y,z]]]
splane (function, param1, param2)
 func (u, v, pl, p2)

SUICA

```
<script src="suica.js"></script>  
<suica> ... </suica>
```

background (color)
proactive ()
oxyz (size, color)
demo (distance, altitude, speed)
orbit (distance, altitude, speed)
lookAt (from, to, up)

perspective (near, far, fov)
orthographic (near, far)
fullWindow ()
fullScreen ()
stereo (distance)
anaglyph (distance)
vr ()

capture (filename, time, fps, format, skipframes)

LMS

scorm
 .api, .studentName, .score, .getValue (value)
 .setValue (name, value), .derandomize (seed)

EVENTS

onPointerEnter, **onPointerLeave**, **onPointerMove**,
onPointerDown, **onPointerUp**, **onClick**, **onTime**

obj.**addEventListener** (eventName, eventHandler)
obj.**removeEventListener** (eventName)
obj.eventName = eventHandler

function pointerEventHandler (event) { ... }
function timeEventHandler (time, dTime) { ... }

MISC

its
obj.**clone**
obj.**style** ({ name: value, ... })
allObjects ()

findPosition (event)
findObject (event)
findObjects (event)
objectPosition (local)
screenPosition (local, global)

radians (degrees)
degrees (radians)
random (from, to)
random (array)

DRAWINGS

drawing (width, height, color)
moveTo (x, y, x, y, ...)
lineTo (x, y, x, y, ...)
curveTo (m_x, m_y, x, y)
arc (x, y, radius, from, to, cw)
stroke (color, width, closed)
fill (color)
fillText (x, y, text, color, font)
 "bold 20px Courier"
clear (color)

PROPERTIES

center = [x, y, z]
size = width
size = [width, height, depth]
spin = spinH
spin = [spinH, spinV, spinT]
color = 'colorName'
color = 0xFFFFFFFF
color = [r,g,b] r,g,b∈[0.0,1.0]
color = **rgb** (r, g, b) r,g,b∈[0,255]
color = **hsl** (h, s, l) h∈[0,360], s,l∈[0,100]
image = drawing
image = **image** ('filename')
image = 'filename'
images = count
images = [count_x, count_y]
wireframe = true/false
count = count
count = [count, count]
threejs = THREE.Mesh
 .material = THREE.Material
 .geometry = THREE.BufferGeometry

Suica 2.0

for JavaScript

<https://boytchev.github.io/suica>

version 1

SIMPLE OBJECTS

<**circle** center size color ...>
<**cone** center size color ...>
<**cube** center size color ...>
<**cylinder** center size color ...>
<**line** from to color ...>
<**point** center size color ...>
<**polygon** count center size color ...>
<**prism** count center size color ...>
<**pyramid** count center size color ...>
<**sphere** center size color ...>
<**square** center size color ...>

ADVANCED OBJECTS

<**clone** src center size color ...>
<**construct** expression center size color>
 A+B, A-B, A*B, (...)
<**convex** src size color ...>
<**group** center size color ...> ... </group>
<**model** filename center size ...>
<**surface** center curve count size color ...>
<**text3d** text fontname center size color ...>
<**tube** center curve radius count size color ...>

<**spline** src closed/open
 interpolating/approximating>
 x,y,z; ... x,y,z
<**spline** src>
 functionName
<**splane** src closed/open
 interpolating/approximating>
 x,y,z; ... x,y,z
 : :
 x,y,z; ... x,y,z
<**splane** src>

SUICA

<script src="**suica.js**"></script>
<**suica** width height background orientation proactive
 perspective orthographic fullWindow fullScreen
 stereo anaglyph vr> ... </suica>

<**background** color>
<**proactive**>
<**oxyz** size color>
<**demo** distance altitude speed>
<**orbit** id distance altitude speed>
<**lookAt** from to up>

<**perspective** near far fov>
<**orthographic** near far>
<**fullWindow**>
<**fullScreen**>
<**stereo** distance>
<**anaglyph** distance>
<**vr**>

<**capture** filename time fps format skipframes>

EVENTS

onPointerEnter, onPointerLeave, onPointerMove,
onPointerDown, onPointerUp, onClick, onTime

<tag ... eventName="eventHandler">

function pointerEventHandler (event) { ... }
function timeEventHandler (time, dTime) { ... }

PROPERTIES

id = "string"
center = "x, y, z"
point = "x, y"
size = "width"
size = "width, height, depth"
spin = "spinH"
spin = "spinH, spinV, spinT"
color = "colorName"
color = "0xFFFFFFFF"
color = "r,g,b" r,g,b∈[0.0,1.0]
color = "rgb (r,g,b)" r,g,b∈[0,255]
color = "hsl (h,s,l)" h∈[0,360], s,l∈[0,100]
image = "drawing"
image = "filename"
images = "count"
images = "count_x, count_y"
wireframe = true/false
count = count
count = [count, count]
curve = "x,y,z; x,y,z; ..."
orientation = "xyz" / "xzy" / "yxz" / ...

DRAWINGS

<**drawing** size color>
<**moveTo** point>
<**lineTo** point>
<**curveTo** m point>
<**arc** point radius from to cw>
<**stroke** color width closed>
<**fill** color>
<**fillText** point text color font>
 "bold 20px Courier"
<**clear** color>

Suica 2.0

for HTML

<https://boytchev.github.io/suica>

version 1