Motion

move 10 steps

turn ↻ 15 degrees

turn ↺ 15 degrees

go to random position ▾

go to x: -87 y: -12

glide 1 secs to random position ▾

glide 1 secs to x: -87 y: -12

point in direction 90

point towards mouse-pointer ▾

change x by 10

set x to -87

change y by 10

set y to -12

if on edge, bounce
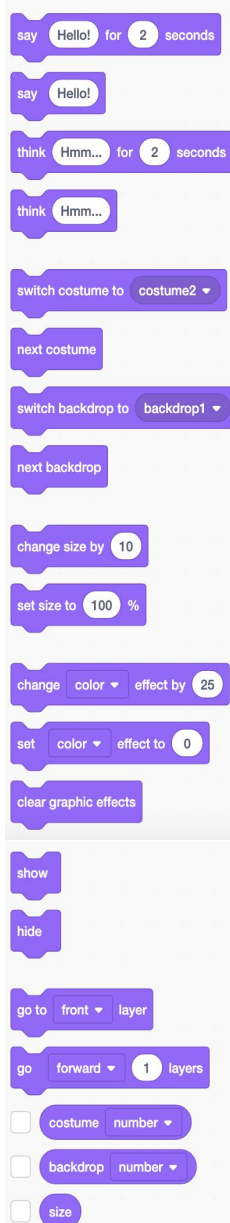
set rotation style left-right ▾

☐ x position

☐ y position

☐ direction

Scratch	Scratch Values	Go+	Go+ Values	Note
move N steps	N = distance	step N move N	N = distance	step configurable walking animation
turnRight N degrees	N = degree	turn X changeHeading N	X = degree | Left | Right | *TurningInfo	turn configurable turn animation turn *TurningInfo can make the sprite rotate with another sprite, similar to the effect of a tortoise carrying a monkey
turnLeft N degrees	N = degree	turn -N changeHeading -N		
go to O	O = random position | mouse-pointer | SpriteName	goto O	O = Random | Mouse | SpriteName | SpriteObj	
go to x: X, y: Y	X, Y = coordinate	setXYpos X, Y	X, Y = coordinate	
glide N secs to O	N = second O = random position | mouse-pointer | SpriteName	glide O, N	N = second O = Random | Mouse | SpriteName | SpriteObj	
glide N secs to x: X, y: Y	N = second X, Y = coordinate	glide X, Y, N	N = second X, Y = coordinate	
point in direction N	N = degree	turnTo N setHeading N	N = degree	turnTo configurable turn animation
point towards O	O = mouse-pointer | SpriteName	turnTo O	O = degree | Left | Right | Up | Down | Mouse | SpriteName | SpriteObj	turnTo configurable turn animation
change x by Dx	Dx = coordinate	changeXpos Dx	Dx = coordinate	
set x to X	X = coordinate	setXpos X	X = coordinate	
change y by Dy	Dy = coordinate	changeYpos Dy	Dy = coordinate	
set y to Y	Y = coordinate	setYpos Y	Y = coordinate	
-		changeXYpos Dx, Dy	Dx, Dy = coordinate	
if on edge, bounce		bounceOffEdge		
set rotation style S	S = left-right | don't rotate | all round	setRotationStyle S	S = LeftRight | None | Normal	Not implemented, only supports Normal
x position		xpos		
y position		ypos		
direction		heading		
-		costumeWidth		
-		costumeHeight		
-		bounds		

Looks

- say `Hello!` for `2` seconds
- say `Hello!`
- think `Hmm...` for `2` seconds
- think `Hmm...`
- switch costume to `costume2`
- next costume
- switch backdrop to `backdrop1`
- next backdrop
- change size by `10`
- set size to `100` %
- change `color` effect by `25`
- set `color` effect to `0`
- clear graphic effects
- show
- hide
- go to `front` layer
- go `forward` `1` layers
- costume `number`
- backdrop `number`
- size

Scratch	Scratch Values	Go+	Go+ Values	Note
say V for N seconds	V = text | number N = second	say V, N	V = text | number | ... N = second	
say V	V = text | number	say V	V = text | number | ...	
think V for N seconds	V = text | number N = second	think V, N	V = text | number | ... N = second	
think V	V = text | number	think V	V = text | number | ...	
switch costume to N	N = CostumeName | CostumeIndex	setCostume N	N = CostumeName | CostumeIndex | Next | Prev	
next costume		nextCostume		
-		prevCostume		
-		animate Name		Animate can play a frame-animation
switch backdrop to N	N = CostumeName | CostumeIndex | next backdrop | previous backdrop | random backdrop	startScene N startScene N, Wait	Wait = true | false N = CostumeName | CostumeIndex | Next | Prev	Random: * Scratch 3.0 added this parameter
next backdrop		nextScene nextScene Wait	Wait = true | false	
swich backdrop to N	N = previous backdrop	prevScene prevScene Wait	Wait = true | false	
-		Camera		Camera allow we create big scenes
change size by N %	N = scale percent	changeSize N/100.0		Scratch uses percentages
set size to N %	N = scale percent	setSize N/100.0		Scratch uses percentages
change G effect by N	N = percent G = color | fisheye | whirl | pixelate | mosaic | brightness | ghost	changeEffect G, N	G = ColorEffect | BrightnessEffect	
set G effect to N	N = percent G = color | fisheye | whirl | pixelate | mosaic | brightness | ghost	setEffect G, N	G = ColorEffect | BrightnessEffect	
clear graphic effects		clearGraphEffects		
show		show		
hide		hide		
go to front layer		gotoFront		
go to back layer		gotoBack		
go forward N layers	N = integer	goBackLayers N		
go backward N layers	N = integer	goBackLayers -N		
costume number		costumeIndex		
costume name		costumeName		
backdrop number		sceneIndex		
backdrop name		sceneName		
size		size * 100		Scratch uses percentages
-		visible		Whether the sprite is visible

Scratch	Scratch Values	Go+	Go+ Values	Note
play sound S until done	S = SoundName	play S, true	S = SoundObj	
start sound S	S = SoundName	play S	S = SoundObj	
stop all sounds		stopAllSounds		
change S effect by N	N = percent S = pitch | pan left/right	changeEffect S, N		Not implemented
set S effect to N	N = percent S = pitch | pan left/right	setEffect S, N		Not implemented
clear sound effects		clearSoundEffect		Not implemented
change volume by N %		changeVolume N		
set volume to N %		setVolume N		
volume		volume		
Music related		-		Not implemented

Scratch	Scratch Values	Go+	Go+ Values	Note
when flag clicked:		onStart =>		
when any key pressed:		onAnyKey key =>	key Key	
when K key pressed:		onKey K, => onKey [K1, K2, ...], => onKey [K1, K2, ...], key =>	key Key	
when this sprite clicked: when stage clicked:		onClick =>		
when backdrop switches to Name:		onScene name => onScene Name, =>	name string	
when loudness > N:		-		Not implemented
when timer > N:		-		Not implemented
when I receive Msg:		onMsg Msg, =>		
-		onMoving => onMoving mi =>	mi *MovingInfo	Triggered when the sprite is moving
-		onTurning => onTurning ti =>	ti *TurningInfo	Triggered when the sprite is turning
broadcast Msg		broadcast Msg		
broadcast Msg and wait		broadcast Msg, true		

Control

Scratch	Scratch Values	Go+	Go+ Values	Note
wait N seconds	N = second	wait N	N = second	

repeat N
  ...
end
		for range :N {
		  ...
		}		

forever
  ...
end
		for {
		  ...
		}		

if Cond then
  ...
end
		if Cond {
		  ...
		}		

if Cond then
  ...
else
  ...
end
		if Cond {
		  ...
		} else {
		  ...
		}		

wait until Cond		for !Cond {}		

repeat until Cond
  ...
end
		for !Cond {
		  ...
		}		

stop X	X = all | this script | other scripts in sprite	stop X	X = All | AllSprites | AllOtherScripts | ThisSprite | ThisScript OtherScriptsInSprite	The difference between the parameters All and AllSprites: 1) All contains the stage, 2) All will stop the current script (only All and ThisScript will stop the current script, others will not)
when I start as a clone		onCloned => onCloned param =>	param interface{}	
create clone of myself		clone clone Param		
create clone of Sprite		Sprite.clone Sprite.clone Param		
delete this clone		destroy		Note: For the sprite prototype (not cloned), destroy will fail
-		die		Configurable death animation; Will call setDying to set itself as dead, and execute the death animation (if any)
-		setDying		Setting the state of death is also effective for the sprite itself (this state is quite special, although it is still visible, it can also execute the death animation, but it has not been able to touch, similar to a ghost)
-		isCloned		Whether the sprite is cloned

Sensing

touching mouse-pointer ?
touching color ?
color is touching ?
distance to mouse-pointer

ask What's your name? and wait
answer

key space pressed?
mouse down?
mouse x
mouse y

set drag mode draggable

loudness
timer
reset timer

backdrop # of Stage
current year
days since 2000
username

Scratch	Scratch Values	Go+	Go+ Values	Note
touching O	O = mouse-pointer | edge | SpriteName	touching(O)	O = Mouse | Edge | EdgeLeft | EdgeRight | EdgeTop | EdgeBottom | SpriteName | SpriteObj	When the sprite detects that it has touched sprite O, the touched sprite O will trigger the onTouched event
-		onTouched => onTouched obj => onTouched N, => onTouched N, obj => onTouched [N1, N2, ...], => onTouched [N1, N2, ...], obj =>	N = name	N is the name of the sprite that met me, obj is the sprite object that met me
touchingColor Color	Color = color	touchingColor(Color)	Color = color	Not implemented
color C1 is touching C2?	C1, C2 = color	-		Not implemented
distance to O	O = mouse-pointer | SpriteName	distanceTo(O)	O = Random | Mouse | SpriteName | SpriteObj	The distance between the sprite and an object
ask Msg and wait	Msg = text | number	ask Msg	Msg = text | number | ...	Not implemented; Both Sprite and Stage have an ask function but with different functions (Sprite uses say Msg, while Stage displays the prompt information in the input dialog box)
answer		answer		Not implemented
key K pressed?	K = key	keyPressed(K)	K = key	
mouse down?		mousePressed		
mouse x		mouseX		
mouse y		mouseY		
-		mouseHitItem		The sprite hit by mouse
set drag mode X	X = draggable | not draggable	-		Not implemented
loudness		loudness		
timer		timer		Not implemented
reset timer		resetTimer		Not implemented
Prop of O	O = Stage | SpriteName Prop(Stage) = backdrop # | backdrop name | volume | VarName Prop(SpriteName) = x position | y position | direction | costume # | costume name | size | volume | VarName			For Go+, no special mechanism is needed to obtain these attributes.
current T	T = year | month | date | day of week | hour | minute | second			Just use the Go standard library
days since 2000				Just use the Go standard library
username		username		Not implemented

Variables

Make a Variable

my variable

set my variable ▾ to 0

change my variable ▾ by 1

show variable my variable ▾

hide variable my variable ▾

Make a List

list

add thing to list ▾

delete 1 of list ▾

delete all of list ▾

insert thing at 1 of list ▾

replace item 1 of list ▾ with thing

item 1 of list ▾

item # of thing in list ▾

length of list ▾

list ▾ contains thing ?

show list list ▾

hide list list ▾

Scratch	Scratch Values	Go+	Go+ Values	Note
set VarName to V		VarName = V		
change VarName by V		VarName += V		
show variable VarName		showVar VarName		
hide variable VarName		hideVar VarName		
ListName		ListName.string		List type
add V to ListName		ListName.append V		
delete Idx of ListName	Idx = index	ListName.delete Idx	Idx = index | All | Last | Random	
delete all of ListName		ListName.delete All		
insert V at Idx of ListName	Idx = index	ListName.insert Idx, V	Idx = index | Last | Random	
replace item Idx of ListName with V	Idx = index	ListName.set Idx, V	Idx = index | Last | Random	
item Idx of ListName	Idx = index	ListName.at(Idx)	Idx = index | Last | Random	
item # of V in ListName		-		Not implemented
length of ListName		ListName.len		
ListName contains V?		ListName.contains(V)		
show list ListName		showList ListName		
hide list ListName		hideList ListName		

Pen

Scratch	Scratch Values	Go+	Go+ Values	Note
erase all		eraseAll		This command in Scratch 2.0 is called clear
stamp		stamp		
pen down		penDown		
pen up		penUp		
set pen color to C		setPenColor C		
change pen Prop by N	Prop = color | saturation | brightness | transparency	-		Not implemented
set pen Prop to N	Prop = color | saturation | brightness | transparency	-		Not implemented
change pen size by N		changePenSize N		
set pen size to N		setPenSize N		