

TechnoCode Skill Summary

Applied Technology	<input checked="" type="checkbox"/>
design an animated scene of two friends having fun	
build an animated aquarium with fish that swim non-stop	
coordinate movements with music to make a sprite dance to a beat (optional)	
draw artwork using the Stage as a canvas (optional)	
create an original idea for a maze that kids will enjoy playing	
develop a game that uses the arrow keys to control game play (optional)	
compose music by inventing an instrument that plays sounds (optional)	
broadcast a story about a magical place	
construct an interactive diorama or simulation (optional)	
engineer a game that has the player touch targets to earn points before a time limit is reached	
invent a treasure hunt game with hidden items the player must find (optional)	
interact with the computer using variables to store answers (optional)	
curate an Activity Studio that includes a collection of activities for kids	
Computer Science	<input checked="" type="checkbox"/>
develop an understanding of the importance of programming in daily life	
compare how people play, learn, and work before the invention of technology	
comprehend the meaning of programming terminology	
identify the attributes of a programmer	
decompose or break down the steps to complete a common task into words	
recognize that a script is run from top to bottom and the sequence affects the action	
apply computational thinking to tackle problems	
analyze a script to determine the placement of coding blocks to sequence events	
consider the needs, wants, abilities, and perspectives of potential users of the program	
plan and organize ideas to develop a program	
seek and incorporate feedback at the design stage of program development	
recognize patterns to build looping sequences and conditions	
build scripts to produce an animations, games, art, music, stories, and simulations	
create a program that includes sequences, events, loops, and conditionals	
develop code that makes multiple things happen at the same time	
compare multiple scripts to determine which is the most appropriate for the task	
store and modify data using variables	
run a script or program	
compare coding blocks to determine their function and select an appropriate value to complete a task	
debug errors to find and fix a mistake in a script	
test and refine scripts	
edit blocks to improve a script and produce a unique outcome	
review and edit a project using a checklist	
incorporate feedback at the review stage of program development	
reflect upon program development using a coding journal to describe steps, explain choices, express feelings, and analyze learning	
select a person to test a program	
observe others while they interact with activities in the Activity Studio	
ask questions to seek the opinion of others about the activities in an Activity Studio	
recommend improvements to the Activity Studio based upon the perspective of others	

Coding with Scratch	<input checked="" type="checkbox"/>
<i>Manage Projects</i>	
create and save a project	
modify an existing project to add more features	
view a project page	
add instructions, notes and tag a project	
build a studio to curate a collection of Scratch projects	
open and close a project in a studio	
share a link to a studio	
remix a project (optional)	
mark a favorite project to view it easily later (optional)	
<i>Working with the Scratch Interface</i>	
label the parts of the Scratch window	
drag blocks from the Blocks palette onto the Scripts Area	
select program options using tools, tabs, menus, or a toolbar	
recognize that blocks are categorized by function	
stack blocks in a sequence to build a script that performs a task	
remove a stack of blocks from the Scripts Area	
undo an action	
store and retrieve a stack of blocks using the backpack	
duplicate a script or stack of blocks	
arrange scripts in the Scripts Area	
organize scripts in the Scripts Area using broadcasting to divide the blocks into chunks (optional)	
<i>Add Characters and Objects to the Stage</i>	
select a sprite from a Library	
position sprites on the stage using x and y coordinates	
delete a sprite from the sprite list	
view information about a sprite	
rename a sprite to make it easy to identify	
adjust the size properties	
view sprite costumes	
edit an existing sprite to customize the appearance using the Paint Editor	
create an original costume	
use multiple sprites in a Scratch project	
duplicate a sprite	
<i>Apply a Background to the Stage</i>	
select a backdrop from a Library or upload a saved image file that suits the action happening in a scene	
edit an existing backdrop to customize the appearance using the Paint Editor	
create a unique backdrop using paint tools	
rename a backdrop	
duplicate a backdrop	
<i>Sequence Sound with Action</i>	
select an audio clip from a Library	
sequence an audio clip to match the action on the stage	
play a sound while a script runs	
pause a script until the audio clip reaches the end	
increase or decrease the volume of a clip (optional)	
fade in or fade a clip (optional)	
reverse the direction of the clip (optional)	
silence part of a clip (optional)	

pick an instrumental sound (optional)	
set the beats for the instrument (optional)	
record an audio clip (optional)	
<i>Trigger a Script</i>	
begin a script with an event block	
trigger a script to run when the Go button is clicked	
trigger a script to run when a keyboard key is pressed	
trigger a script to run when a sprite is clicked	
trigger a script to run when there is a switch to a specific backdrop	
send a broadcast message to sprites	
trigger a script to run when a broadcasted message is received	
direct the timing of events using broadcasting	
<i>Cause Movement on the Stage</i>	
create motion sequences	
adjust the value in a block to control movement	
move a sprite forward or backward by a number of steps across the stage	
turn a sprite clockwise or counterclockwise by setting the angle of the rotation	
move a sprite to a random position, mouse pointer, or another sprite	
tell a sprite to go to a specific point on the stage	
smoothly glide a sprite over time across the stage	
set the direction a sprite faces by adjusting it down, up, left, and right using angles	
automatically change direction if a sprite touches the edge of the stage	
adjust the rotation style of a sprite to make it move left to right, all around, or not turn	
investigate stage x-axis and y-axis coordinates using the pen blocks (optional)	
build scripts to have a sprite draw objects (optional)	
<i>Modify the Appearance of Characters and Objects on the Stage</i>	
display a speech or think bubble for a limited time	
customize the text in a block to convey a message to the viewer	
select a specific costume of a sprite to make it look like a different character	
switch the costume applied to a sprite to display a change in appearance	
recognize animation can be created by sequencing static images with different poses	
animate a sprite by quickly changing to the next costume	
switch the backdrop to direct the timing of events	
grow or shrink a character by changing the size using a percentage	
set the exact size of a sprite using a percentage	
apply graphic effects to a sprite	
clear graphic effects from a sprite	
show or hide a sprite from view	
adjust object order of sprites on the stage (optional)	
flip a sprite horizontally or vertically (optional)	
<i>Control Action with Conditions</i>	
wait for an amount of time before the next action happens	
adjust the value in a block to control how many times an action will occur	
repeat a sequence to loop an action a specified number of times	
repeat a sequence until a condition is true	
loop a sequence forever	
trigger an action if a condition is true	
trigger an action if a condition is true, if not do a different action (optional)	

<i>Set Conditions with Sensors</i>	
perform an action when a sprite touches another sprite or a specified color	
<i>Work with Variables</i>	
create clearly named variables including <i>score</i> and <i>timer</i>	
change the <i>score</i> variable by a specific number of points	
change the <i>timer</i> variable each time one second passes	
set the value of a variable to reset the <i>score</i> and <i>timer</i> at the start of a new game	
perform an operation to determine when the <i>timer</i> variable equals the time limit	
store data from user input to personalize interaction (optional)	
<i>Manipulate Data using Operators</i>	
report when a variable's value equals a specific amount	
join a variable value with a string of text (optional)	

Graphic Design	<input checked="" type="checkbox"/>
draw shapes such as a rectangle or circle	
set the fill or line color of an object	
draw freehand using a pencil tool	
set the width of a line	
reshape points to bend or move a line segment	
magnify the canvas to zoom in or out	
draw a straight line	
select an object on the canvas	
add text to the canvas	
format the font of text	
size or rotate a text box	
adjust object order	
undo an action	
group multiple objects together	
copy a color	
copy and paste a selection (optional)	

Digital Citizenship (optional)	<input checked="" type="checkbox"/>
register for a web-based account to join the Scratch community	
recognize the purpose of usernames and passwords to access a web-based service	
keep login information private	
sign in and out of a web-based app appropriately	
share or unshare a Scratch project with the Scratch community	
view or play another Scratcher's project	
work respectfully and responsibly with others online	
recognize the accomplishments of a peer by posting on a Scratch project	
reply to comments posted to a shared project	
review a peer's project to provide feedback	
cite the source of digital media	
give credit to the peer that consulted on game design	
create an avatar for a profile picture	
update a profile to share details with others while maintaining privacy	
follow or unfollow a Scratcher	
control commenting on public profile	