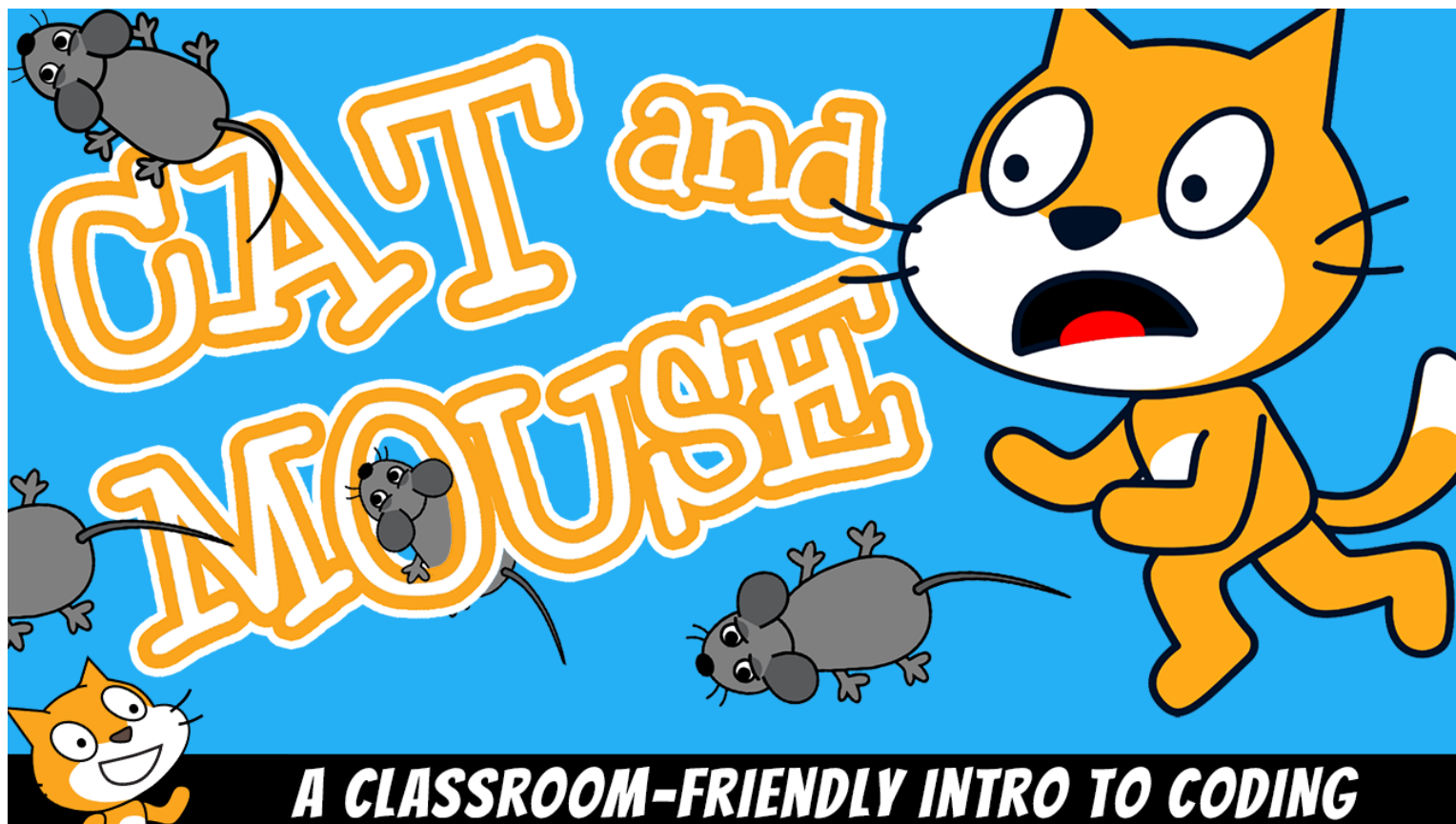




Cat & Mouse Coding Supplement

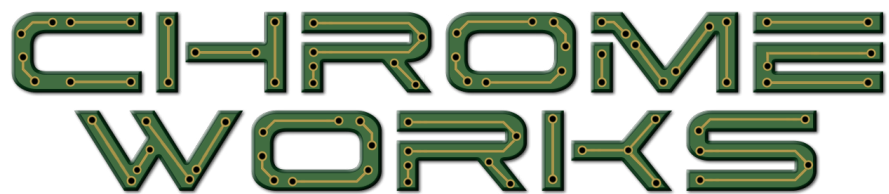
This file includes all the code that students will need in order to create the Cat & Mouse video game project described in our 10-part video series. Students are encouraged to put their own spin on the project via customizations, but should be able to demonstrate at the end of each of the 10 chapters that they've accomplished the learning goal set out in each segment.

Along with code block images, this document includes:

- Specific learning goals for each chapter that will allow teachers to quickly confirm that students are following instructions.
- Guiding questions that can be discussed prior to each new chapter
- Troubleshooting tips gleaned from prior lessons

This is a draft document for beta tester classrooms. Please don't share outside your organization.

Cat & Mouse Coding Supplement

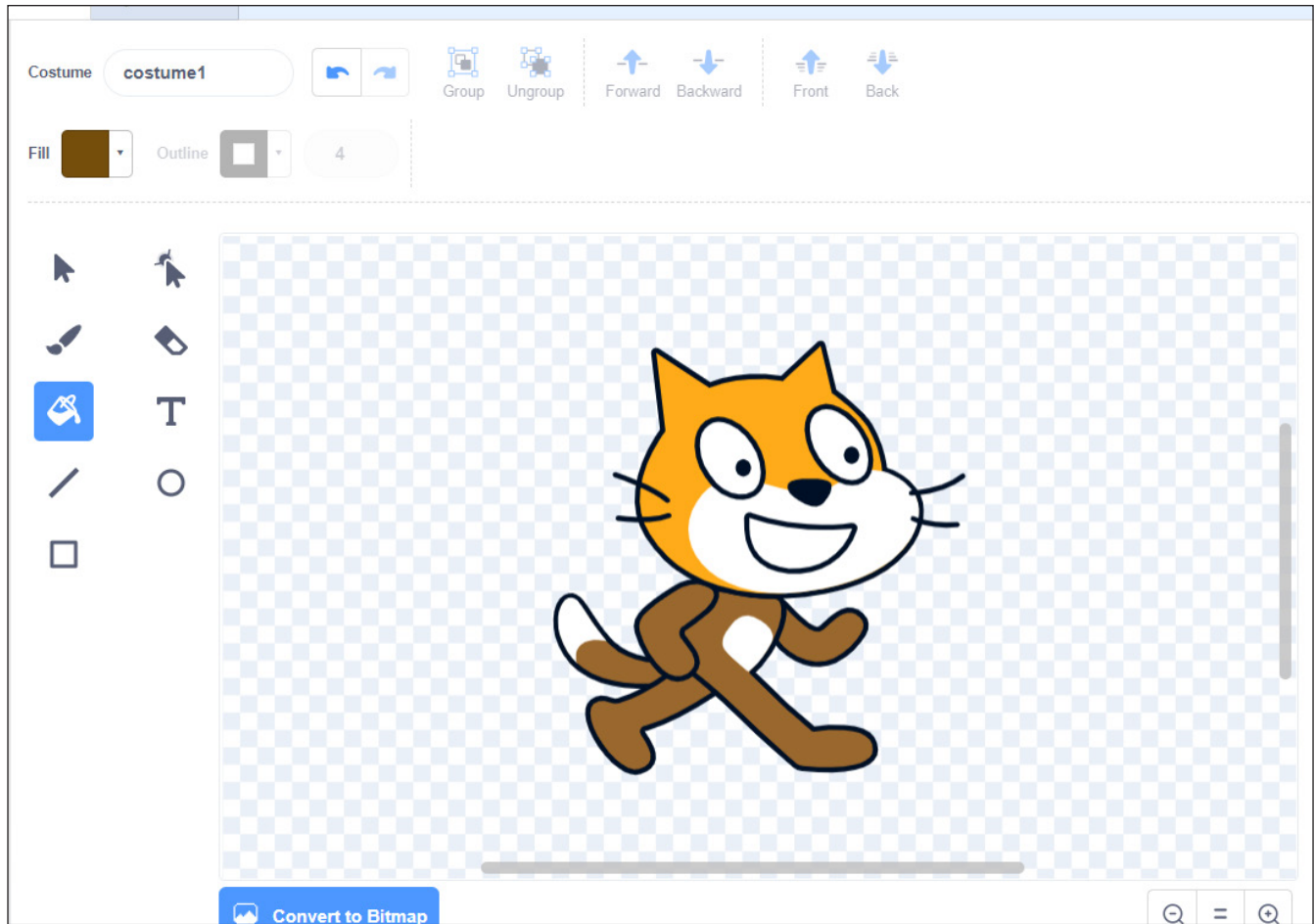


© 2020 by Chromeworks Tech Training

Founder and lead instructor
Learning Design Advisor

Andrew Tomec, OCT
Glenn Boustead, OCT

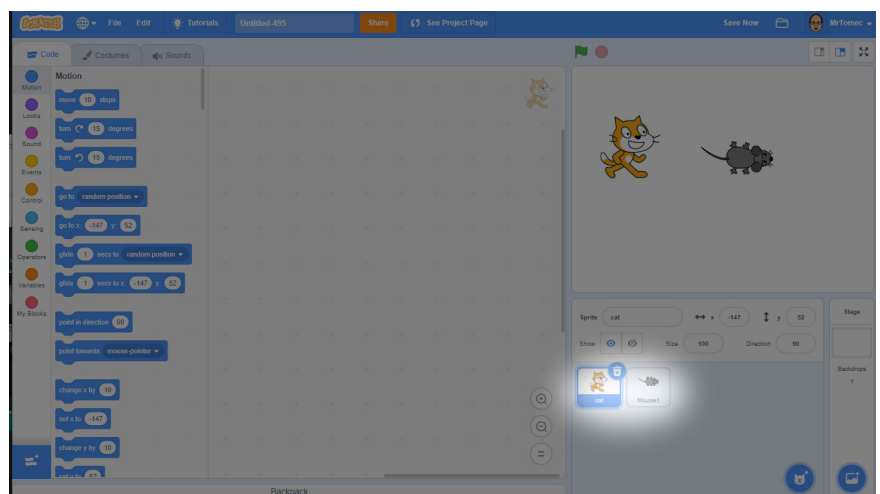
1

GOAL: Select and customize 2 sprites**CHECK
POINT**

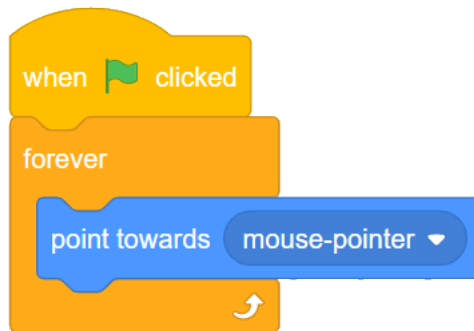
2 characters are
loaded in the
sprite tray



What do we need
to program our cat
character to do?



2

GOAL: Teach the cat to follow your cursor**Troubleshooting**

Sometimes kids will confuse the Point Towards block with this one.

point in direction 90

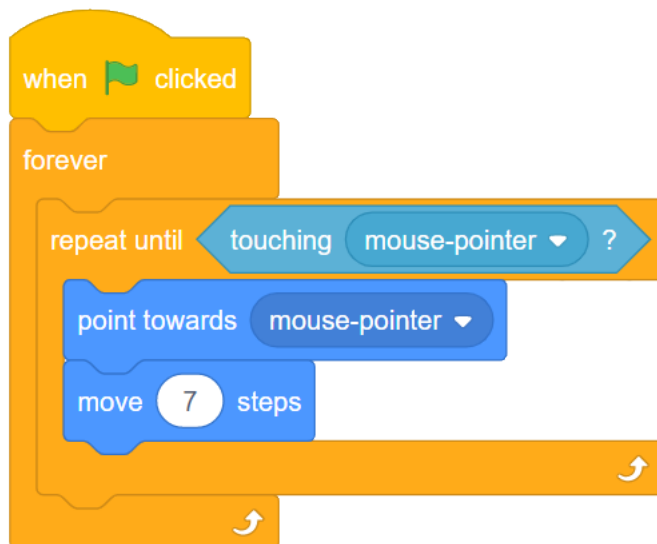
CHECK POINT

Cat spins to follow player's mouse cursor



What's the next thing we need to teach Scratch to do?

3

GOAL: Teach the cat to move**CHECK POINT**

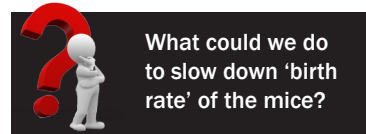
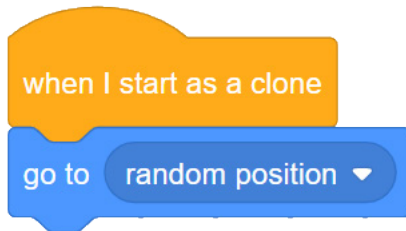
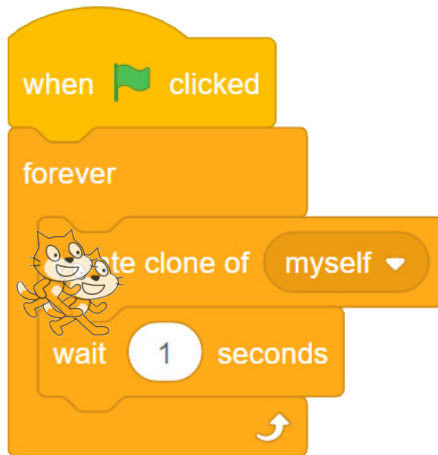
Cat moves where commanded and stops when it gets there



We've programmed our cat? What do we need our mice to do?

4

GOAL: Spawn a steady stream of new mice

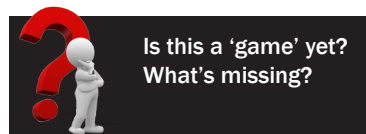
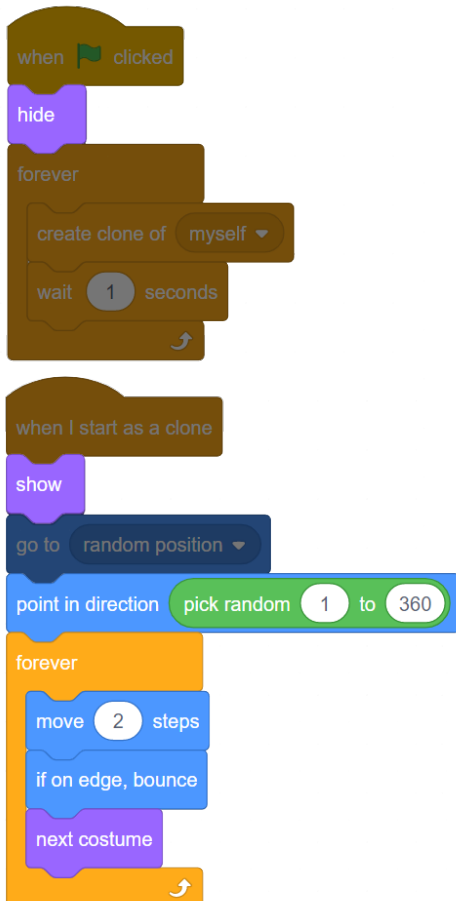


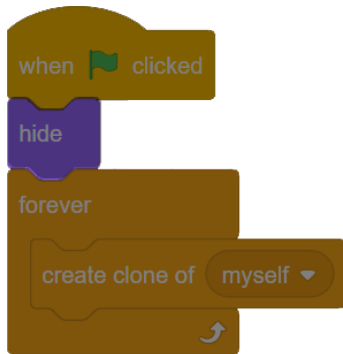
Troubleshooting

Make sure students are coding the mouse sprite. Each sprite has its own unique set of instructions, and placing commands in the wrong spot will cause unexpected results.

5

GOAL: Teach the mice to move realistically across the screen



**CHECK
POINT**

Mice vanish when
touching the cat



How do we track
our progress while
playing the game?

LEARNING GOAL: Keep score with variables



CHECK POINT

Score changes every time a mouse is eaten. Score resets between games

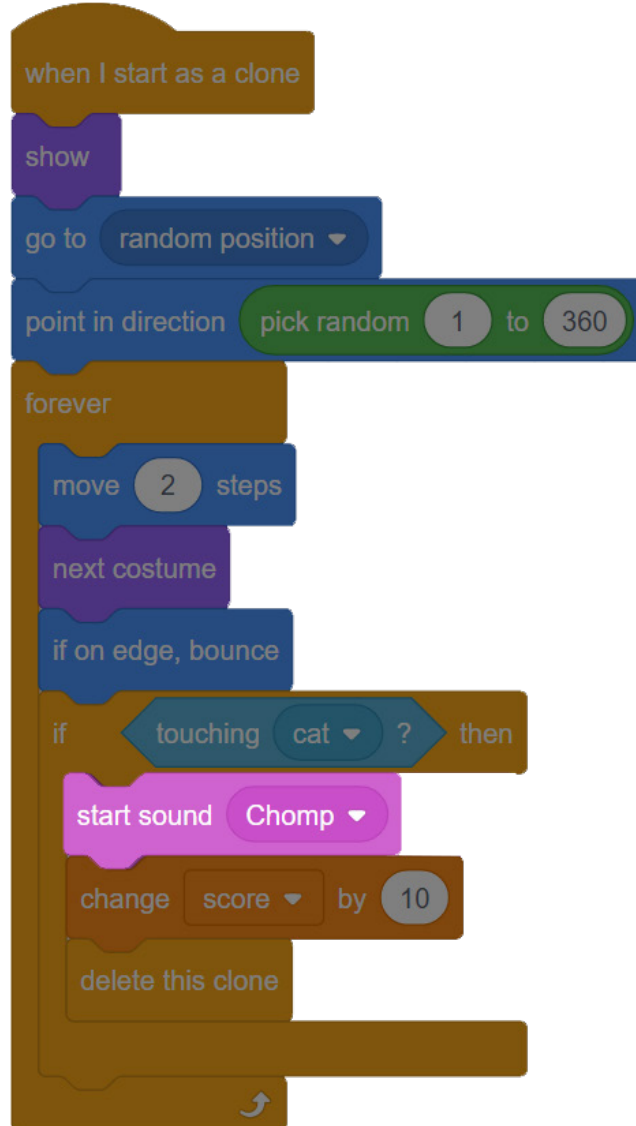


What are some appropriate spots to add sound effects?



Troubleshooting

Confirm that the variable you are setting is “score” and not the default variable, “my variable.”

**CHECK
POINT**

Sound effect plays when mice eaten. Background music plays constantly.

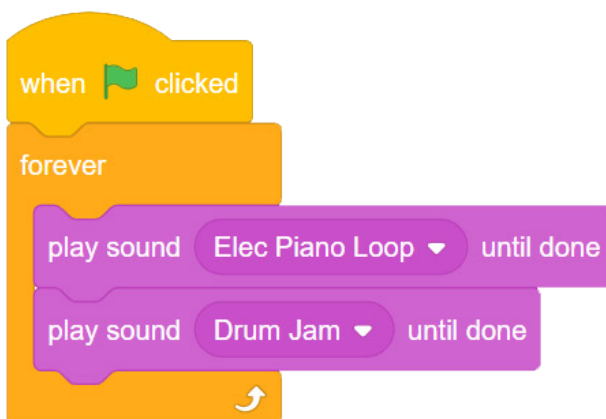


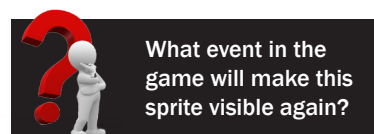
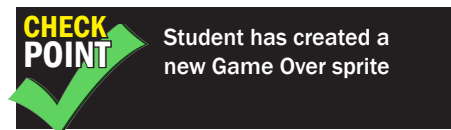
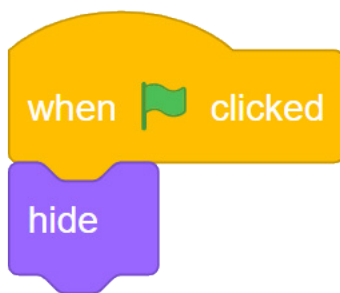
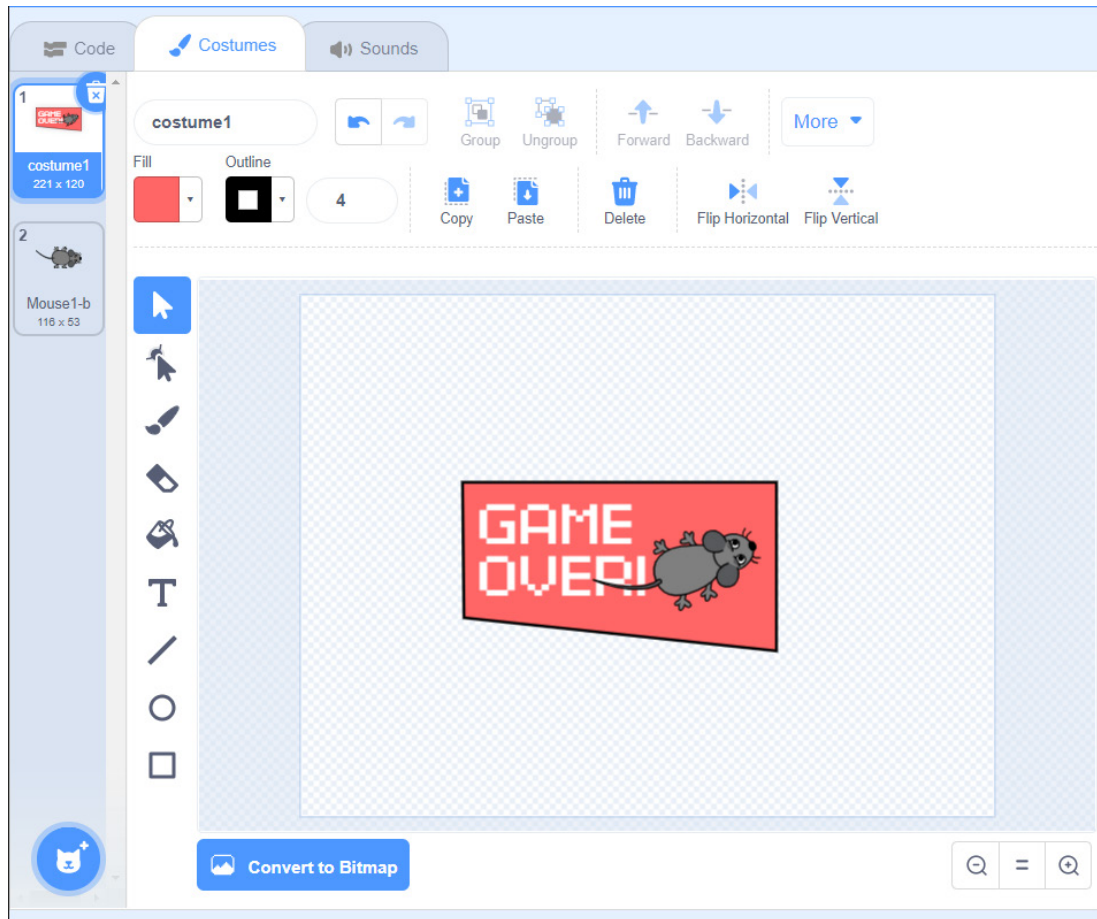
What are some ways we could end the game?

**Troubleshooting**

Start sound and Play Sound Until Done commands appear to do the same thing, but they are not interchangeable.

Sounds that have been loaded into a sprite are only available to that sprite. If a sound that you've loaded doesn't appear on the list, check your other sprites.

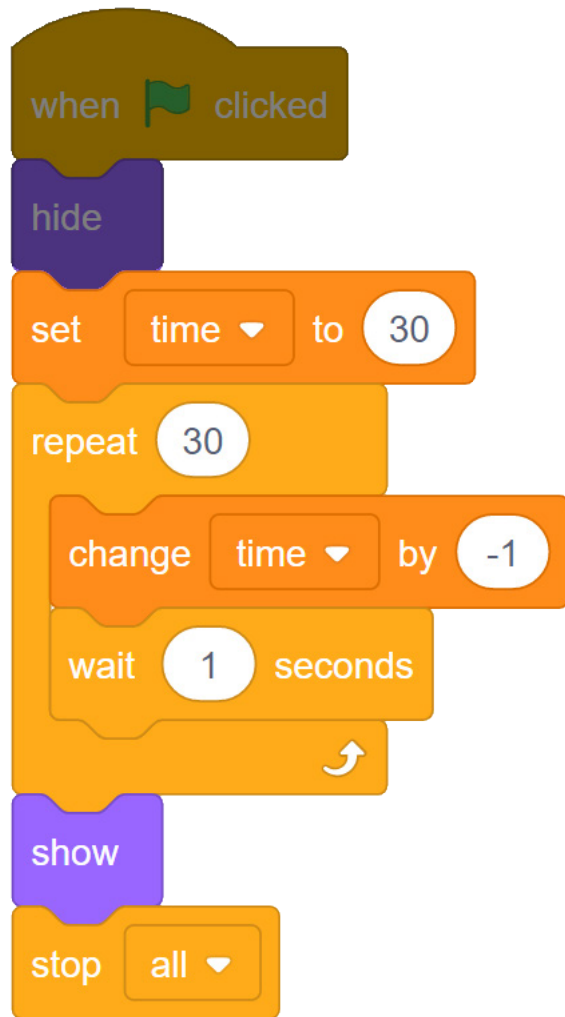




Troubleshooting

Students who've never used graphic design software will sometimes have trouble understanding that they have to switch to a different tool to modify their drawing. They'll draw a rectangle with the appropriate tool, and then forget to switch to the black arrow tool to modify it. If you see multiple overlapping boxes on their screen, it's probably this issue.

GOAL: End game after the timer runs out



Timer counts down and game ends when it reaches zero.



What is a remix? What are some of the ways you might remix this game