Activity 2—Riddle Me This!

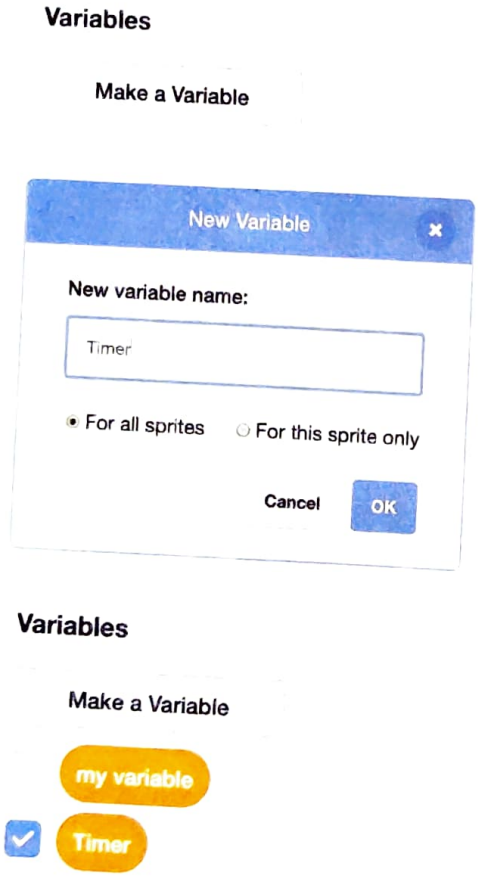
LEVEL UP!

Now that you've been properly introduced, Abby would love to tell you a riddle, but she doesn't have all day. Can you answer her riddle in under 10 seconds?

We can use a variable to make a timer that can count down the seconds. This time, you will be creating your own *unique* variable. How cool is that?

First, let's get rid of the code we already have and start fresh. Just drag all of Abby's code back to your code menu and release it to delete it.

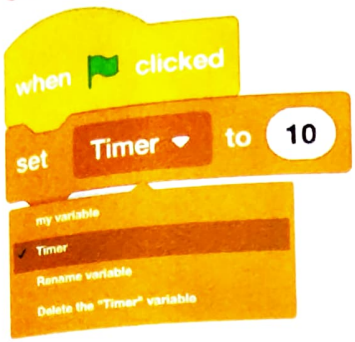
STEP 1



Go to the Variables section on your code menu and click on the *Make a Variable* button at the top of the list. In the pop-up box, type the name *Timer*. Then click OK. You will see that your new variable is now listed as an option in your variable code block list.

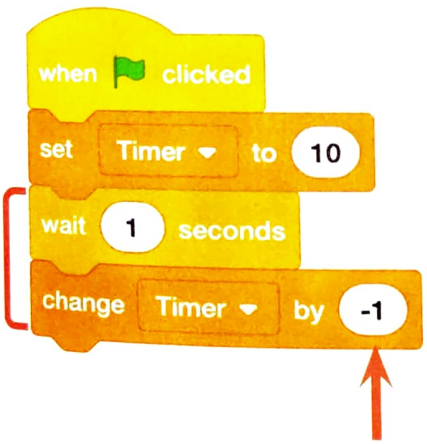
When you clicked on your variable code list, you may have noticed there is already something called *my variable* in the list. This is a general variable that we could have used. But it's usually a good idea to name any new variable that you create. This helps you stay organized, especially if you will be creating lots of variables. Also, in this case, you want the text for your variable (timer) to display on your game screen. It wouldn't make much sense if it said, "my variable" on the screen instead of "Timer," right?

STEP 2



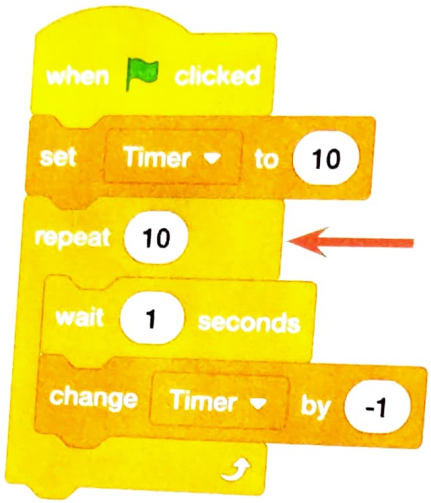
Next, we need to tell the program what value your variable should have when the program begins. To begin your script, drag in a *when flag clicked* event block and then add a *set my variable to (__)* variable block. You'll need to make some adjustments to this new code block. First, click the down arrow to select the "*Timer*" variable you just made. Then change the number from 0 to 10. This gives your timer variable a starting value of 10 seconds.

STEP 3



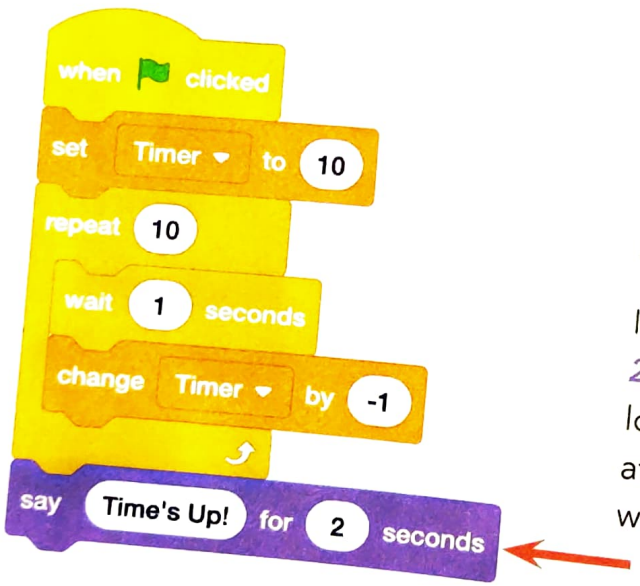
Now we have a timer, but how do we make it count down? First, add a *wait (__) seconds* control block. By default, the wait will have a 1 in the text box. That's perfect! A timer counts down after every second, right? Then add a *change my variable by (1)* variable block. You'll need to make some adjustments to this variable code block. First, click the down arrow to select Timer, the variable you created. Then change the number value from 1 to -1. Changing the timer by -1 means that the value of the variable will go down by one whole number. Now your timer should change from 10 to 9 after the one-second wait.

STEP 4



Now put a *repeat* control block just around the last two code blocks so that your timer will count down to zero. How many times should it repeat so that we end on zero? Ten!

STEP 5

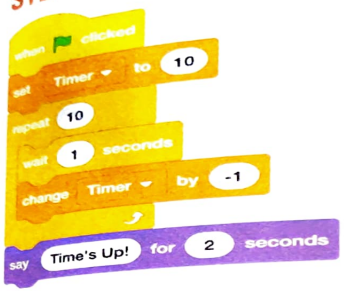


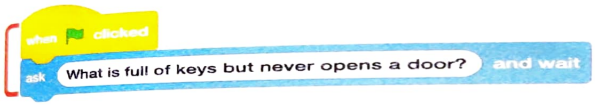
Add a *say (__) for 2 seconds* looks block to make Abby announce, "Time's up!" Make sure you place this code block *after* the repeat loop so the countdown is what's looping, not Abby's announcement.

If we had included the *say (__) for 2 seconds* code inside of the repeat loop, she would have said "Time's Up!" after every single second. We don't want that!

6

STEP 6: CODE COMPLETE!





Now we have our timer, but where is the riddle? You will need to use an *ask (___) and wait* sensing block. If you want the timer to count down at the same time that you're inputting your answer, the riddle needs to be asked in a separate script. So leave the script for your timer where it is. Go ahead and drag out a brand-new *when flag clicked* event block. Then add an *ask (___) and wait* sensing block.

Ready for the riddle? Type this into your *ask (___) and wait* sensing block: *What is full of keys but never opens a door?*

Click your flag and see if you can guess the riddle in under 10 seconds! Did you get it?

The answer is a *piano*. A piano is full of keys that you press to play the music, but they are not the kind of keys that can open up a door!

6

YOUR TURN!

Now that you've coded this activity, try challenging yourself to make the following changes:

- ☐ Add a buzzer sound when the timer hits zero!
- ☐ Give Abby a costume change after she asks her question.
- ☐ Try changing the timer to count *up* to 10 instead of down to zero.