## OBJECTIVES / SUMMARY

We will continue to work with sound in Scratch and learn about loops in the context of music. By the end of this unit, you will be able to work comfortably with the note, rest, and repeat blocks and utilize the repeat block to make your code more concise.

## LINKS

[Lesson Plan](https://docs.google.com/document/d/1rc_0OEH6MX0qOgAGdjvoDIOJiKtkr9G0rOeCNk2WNY0/edit)

[Presentation Slides](http://www.cs.hmc.edu/~cs5grad/MyCS/2012_Curriculum/scratch_offline/day_2/slides.pdf)

[Student Notes](http://www.cs.hmc.edu/~cs5grad/MyCS/2012_Curriculum/scratch_offline/day_2/notes.pdf)

[Worksheet](http://www.cs.hmc.edu/~cs5grad/MyCS/2012_Curriculum/scratch_offline/day_2/worksheet.pdf)

## NOTES AND REPEATS

Now we'll introduce you to three different blocks that will be useful for creating sound in Scratch!

### Play Note



The play note block plays a **musical** note. It has 2 **variables** that you can change:

1. The **note.**
2. How **long** the note plays (in beats).

### Rests



The rest block makes the script **pause**. It has one variable:

1. How long the pause **lasts** (in beats).

### Repeat



The repeat block tells the computer to do the same thing **over and over** again. It has one variable:

1. How many **times** to repeat the blocks inside the repeat block.

Other blocks can be played **inside** of the repeat block. Those blocks inside will be repeated as many times as you want.



Now that we're familiar with these three blocks, you can complete this [worksheet](http://www.cs.hmc.edu/~cs5grad/MyCS/2012_Curriculum/scratch_offline/day_2/worksheet.pdf).

Once you're done, try creating a song in Scratch using the play note, rest, and repeat blocks.

## WRAP-UP / REGROUP / REFLECT

What did you learn today?

Notes and pauses are at the core of making songs. Repeat blocks make it easier for us to write the code for those songs.