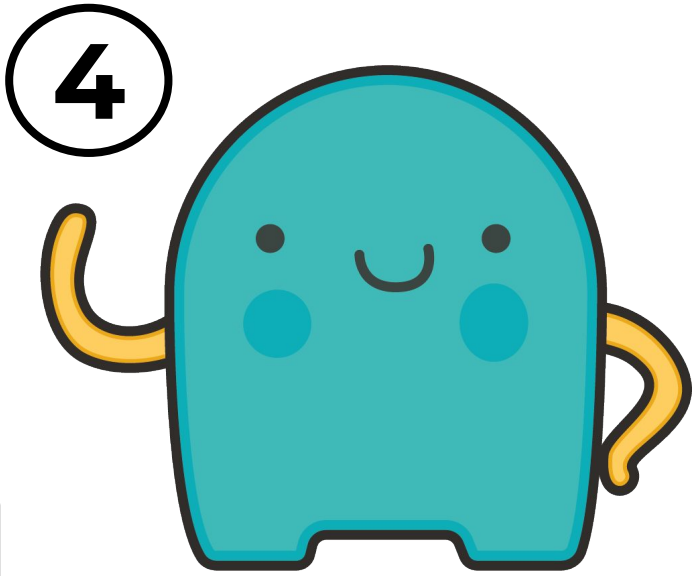
Starter Lesson 4:

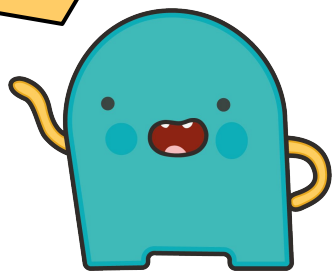
Storm Simulation

An Introduction to New Behaviors

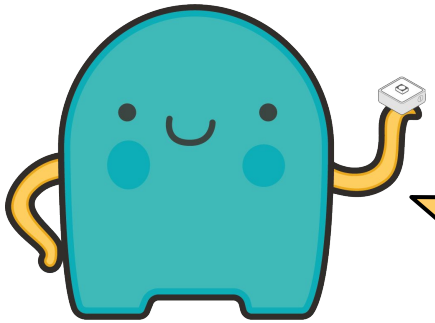


What are the key features of a storm?

How could SAM Space be used to simulate the effect of a storm?

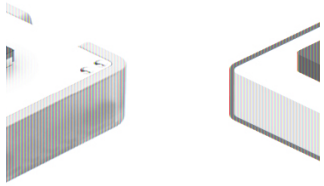


Warm-Up



Which parts of a storm could these blocks represent?

Sound Player



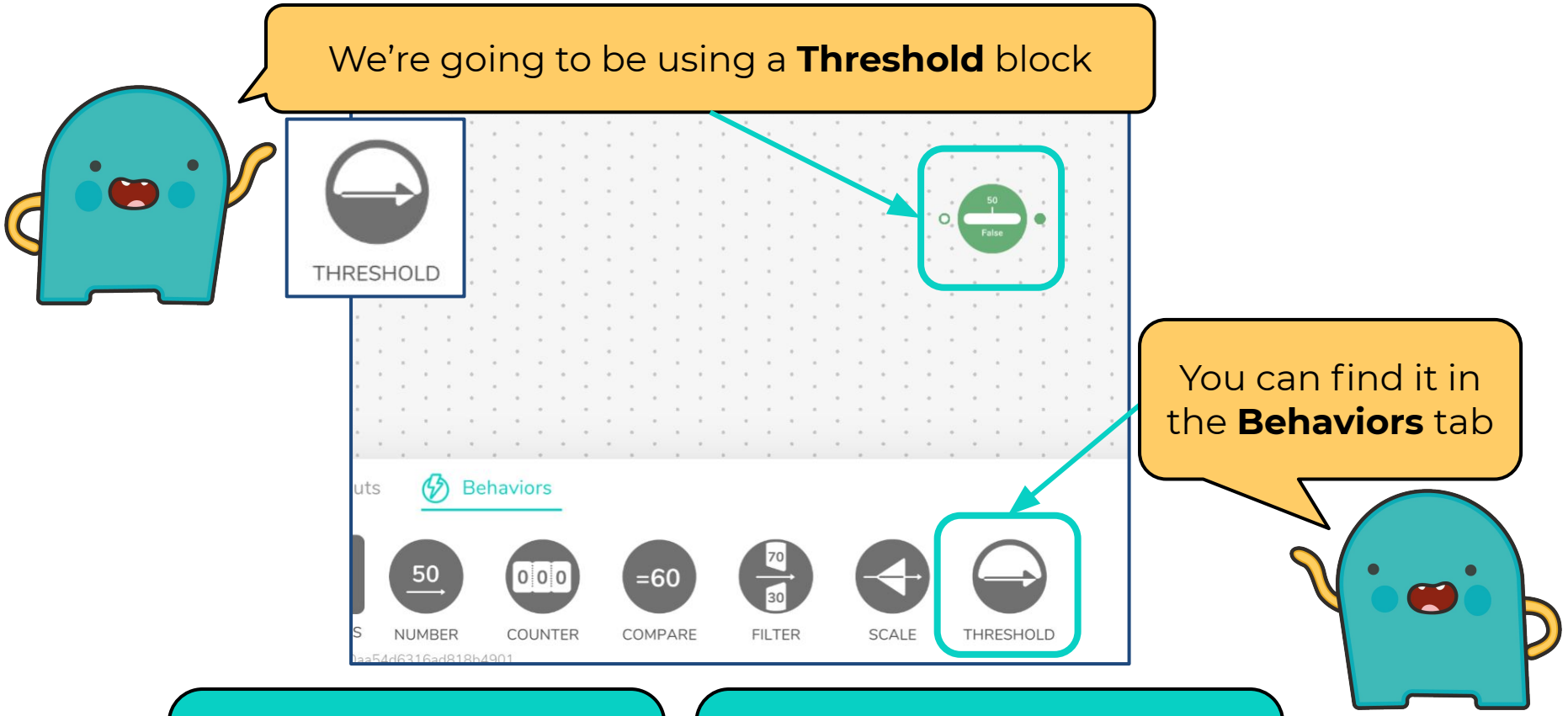
RGB LED

lightning

rain

wind

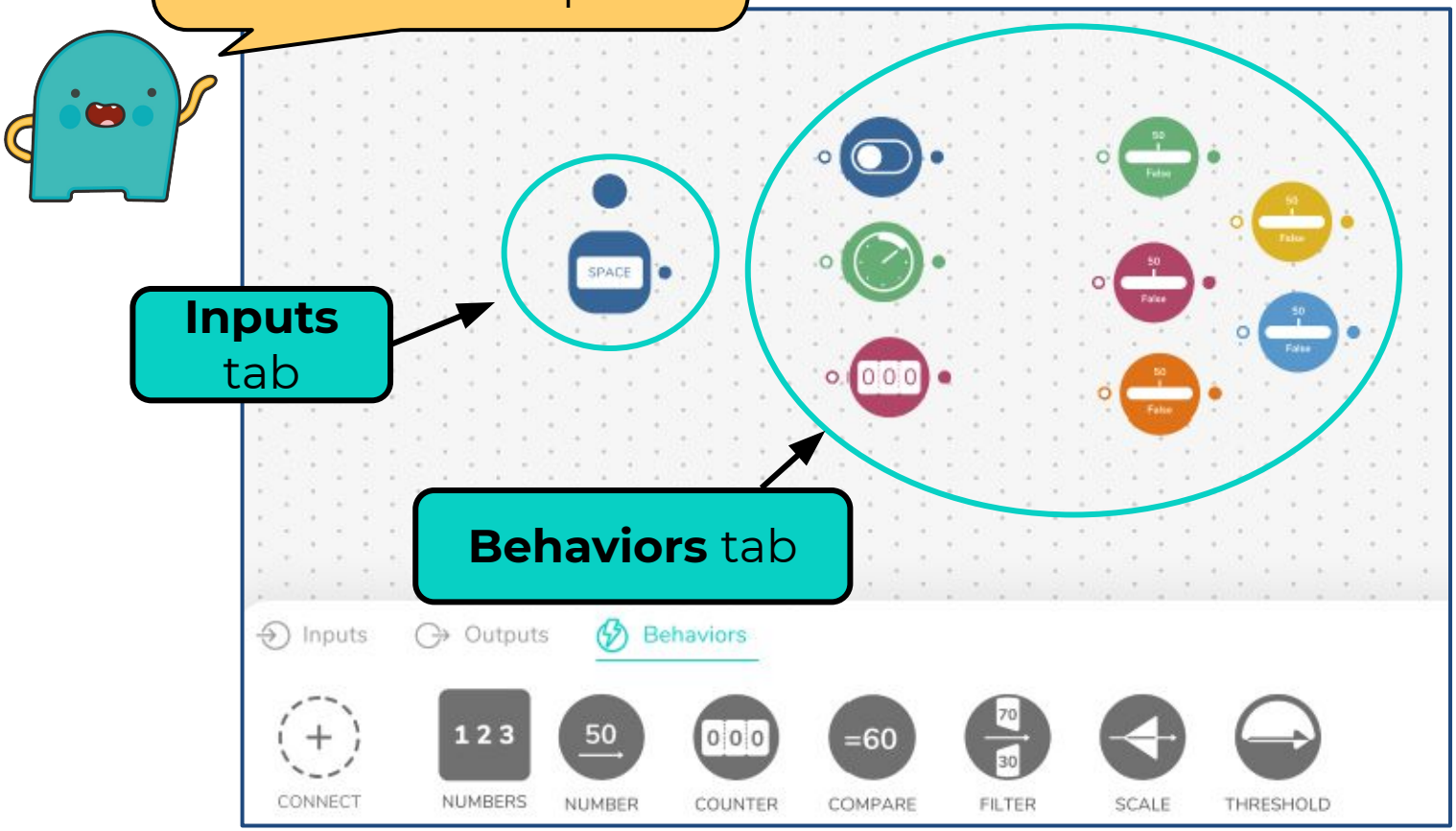
Create a system to represent the sound of a storm



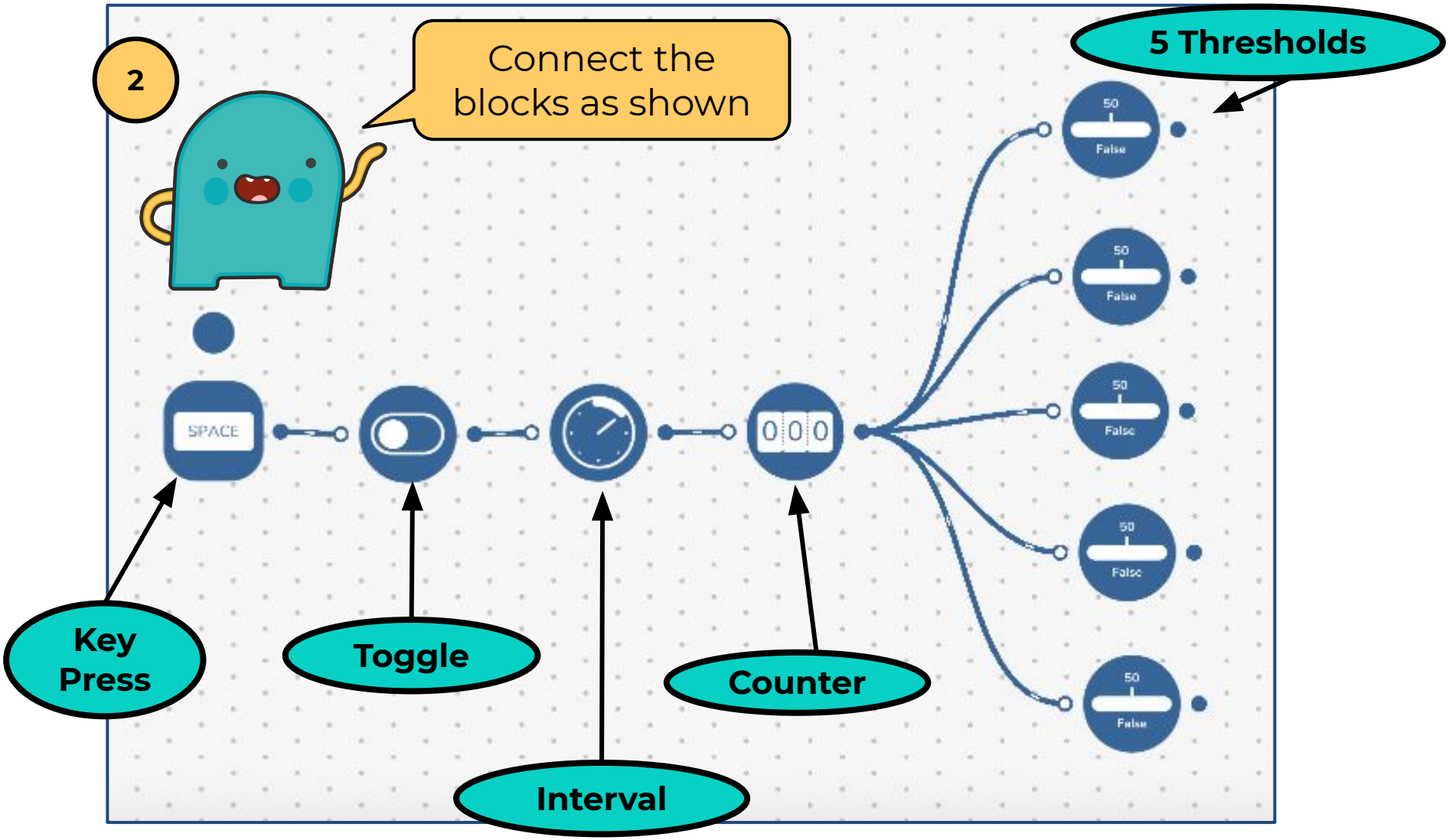
Create a system to represent the sound of a storm

1

Find each of these blocks and drag them onto the workspace:

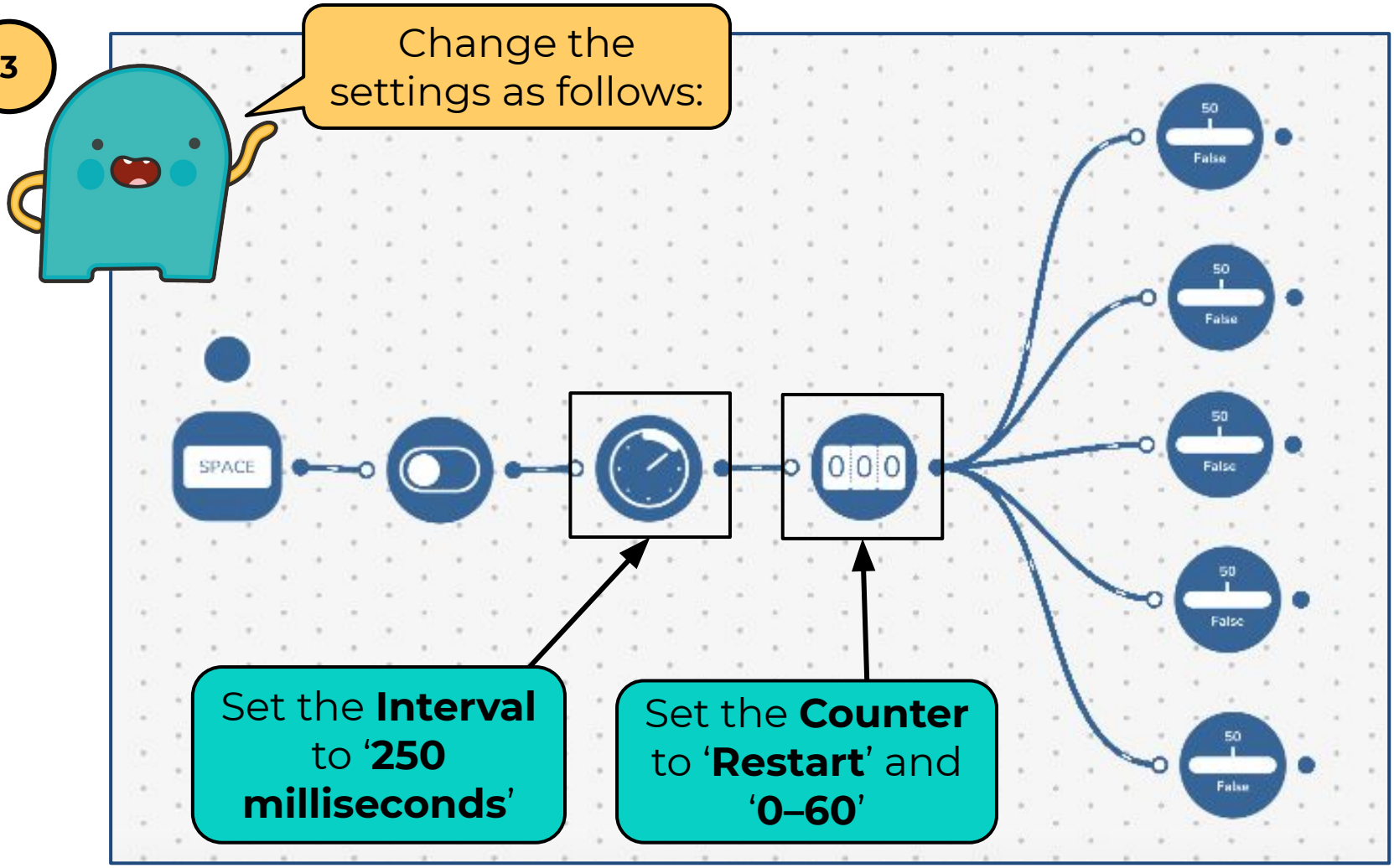


Create a system to represent the sound of a storm

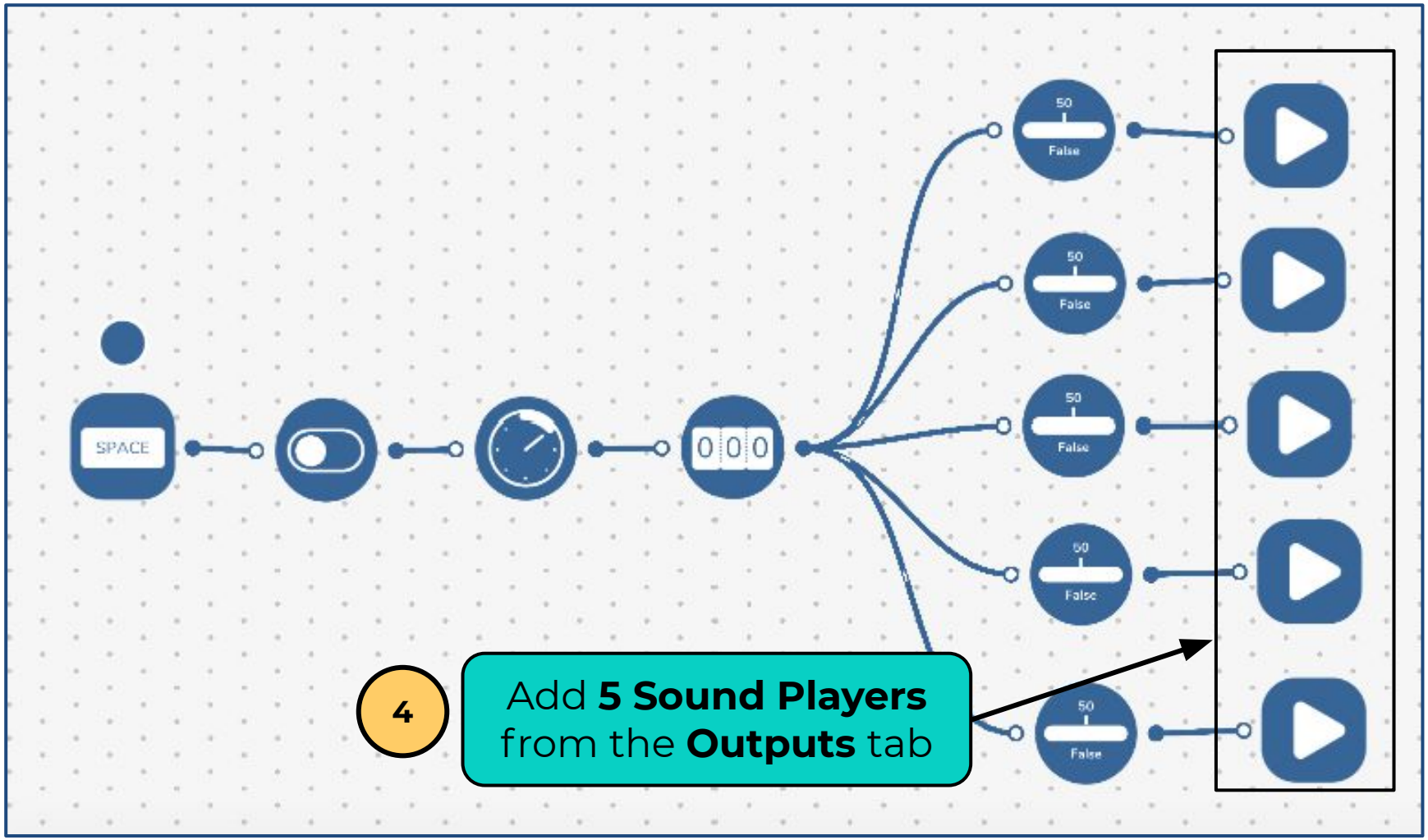


Create a system to represent the sound of a storm

3

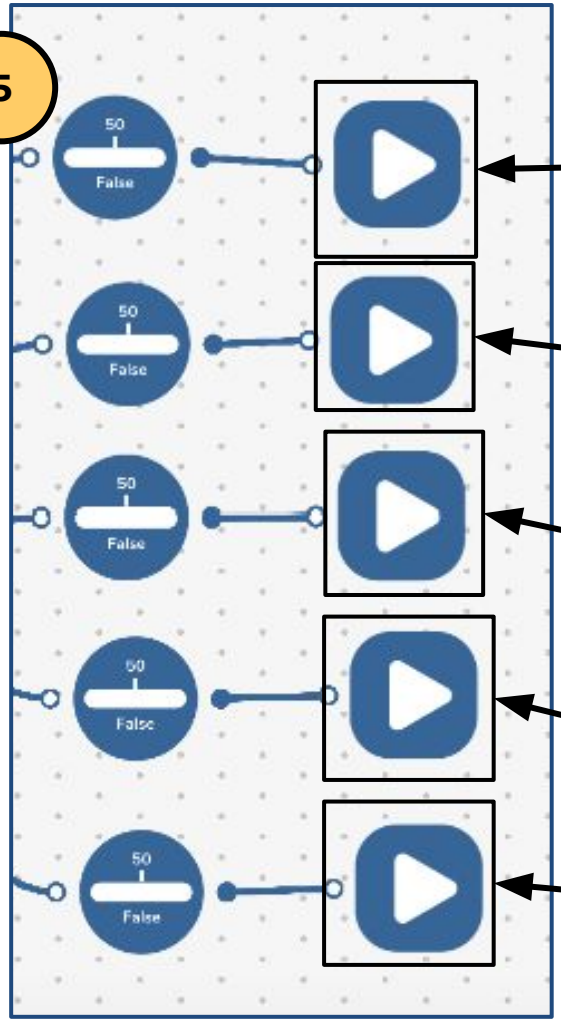


Create a system to represent the sound of a storm



Create a system to represent the sound of a storm

5



'**Rain** (Normal)'

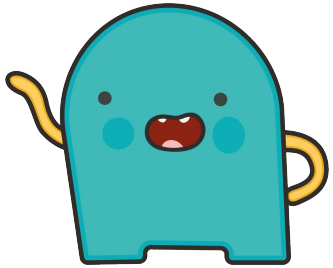
'**Rain** (Heavy)'

'**Wind** (Normal)'

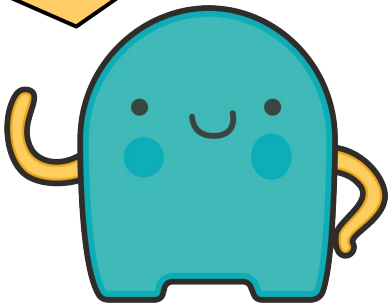
'**Wind** (Hurricane)'

'**Storm**'

In the settings of the **Sound Players**, set to ...

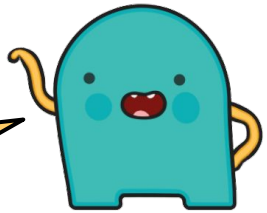


Test your system!

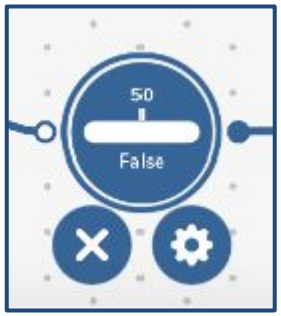


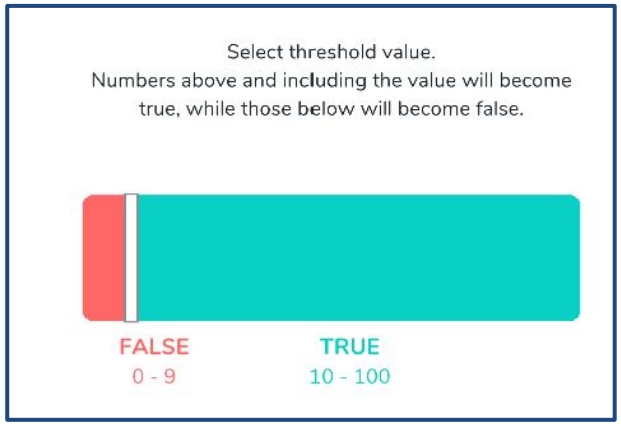
Debug It!

How do I stop all 5 Sound Players starting at the same time?



Set the ‘true’ values of the **Threshold** blocks as follows:





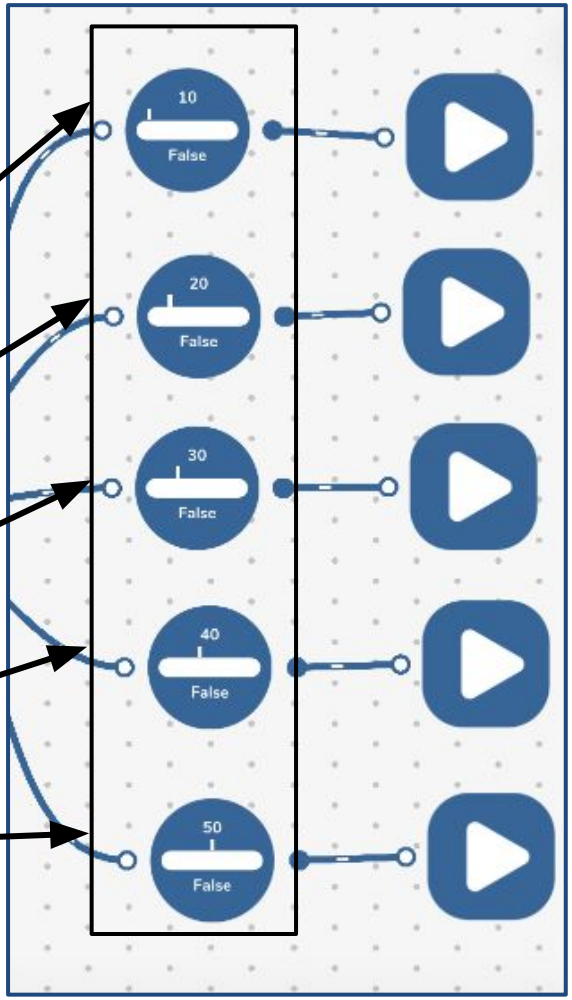
‘10–100’

‘20–100’

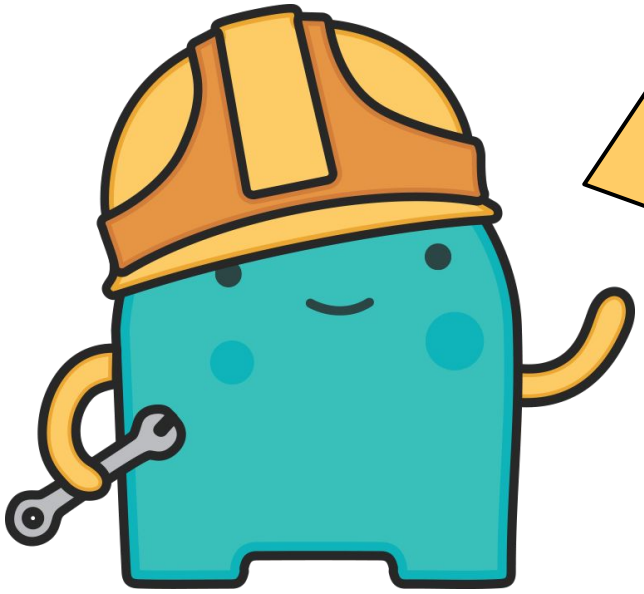
‘30–100’

‘40–100’

‘50–100’



Challenge:
Create a flash of lightning using an RGB LED

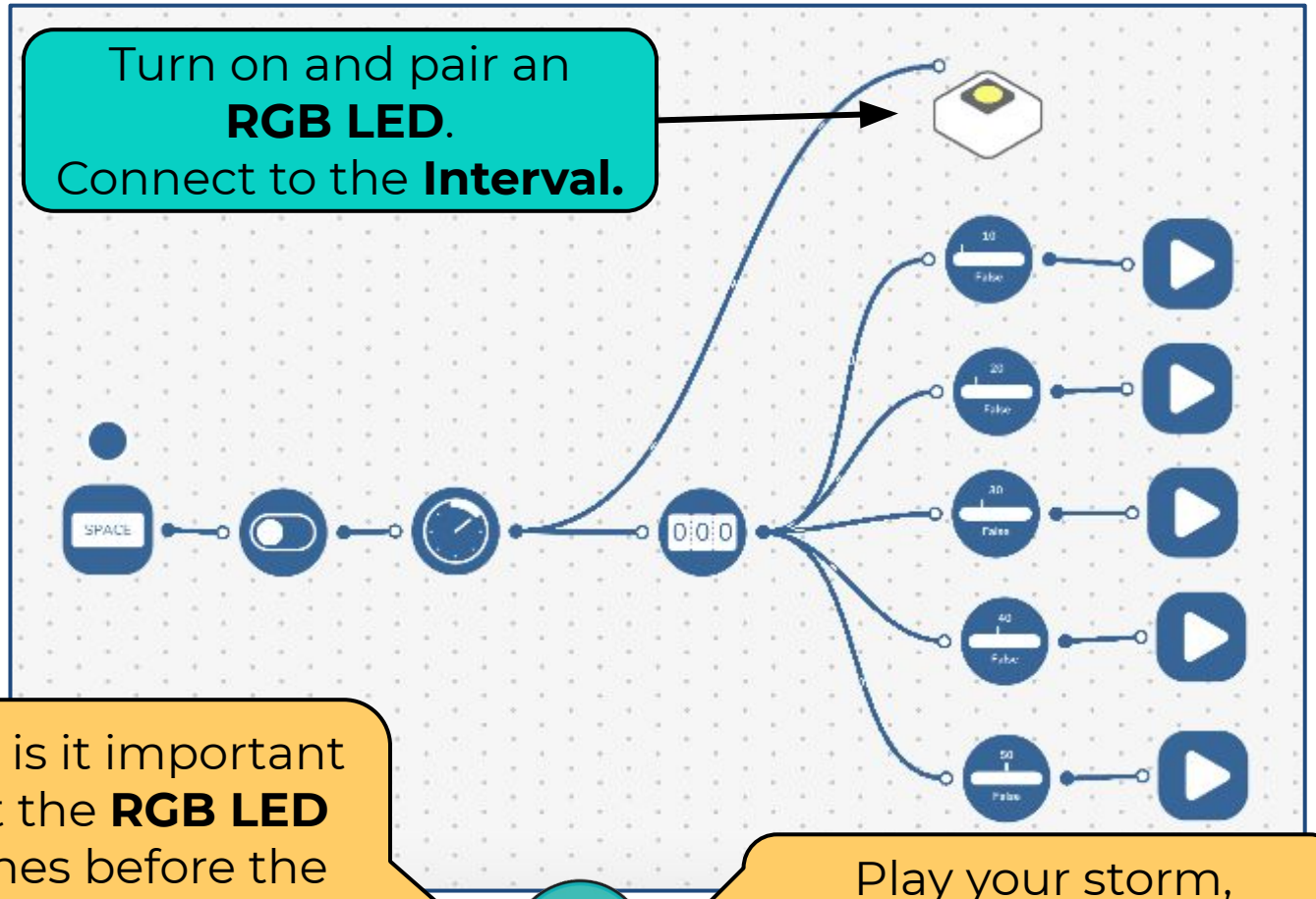


Think:

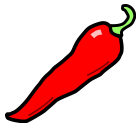
- What other blocks might you need?
- What behaviors will help create the “flash” effect of lightning?

Take some time to tinker on your own. Then, let’s come together to see what you created!

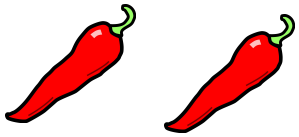
Create a flash of lightning using an RGB LED



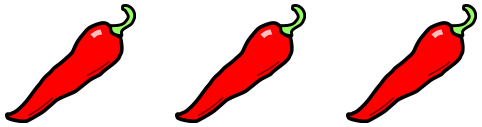
Choose an extension challenge!

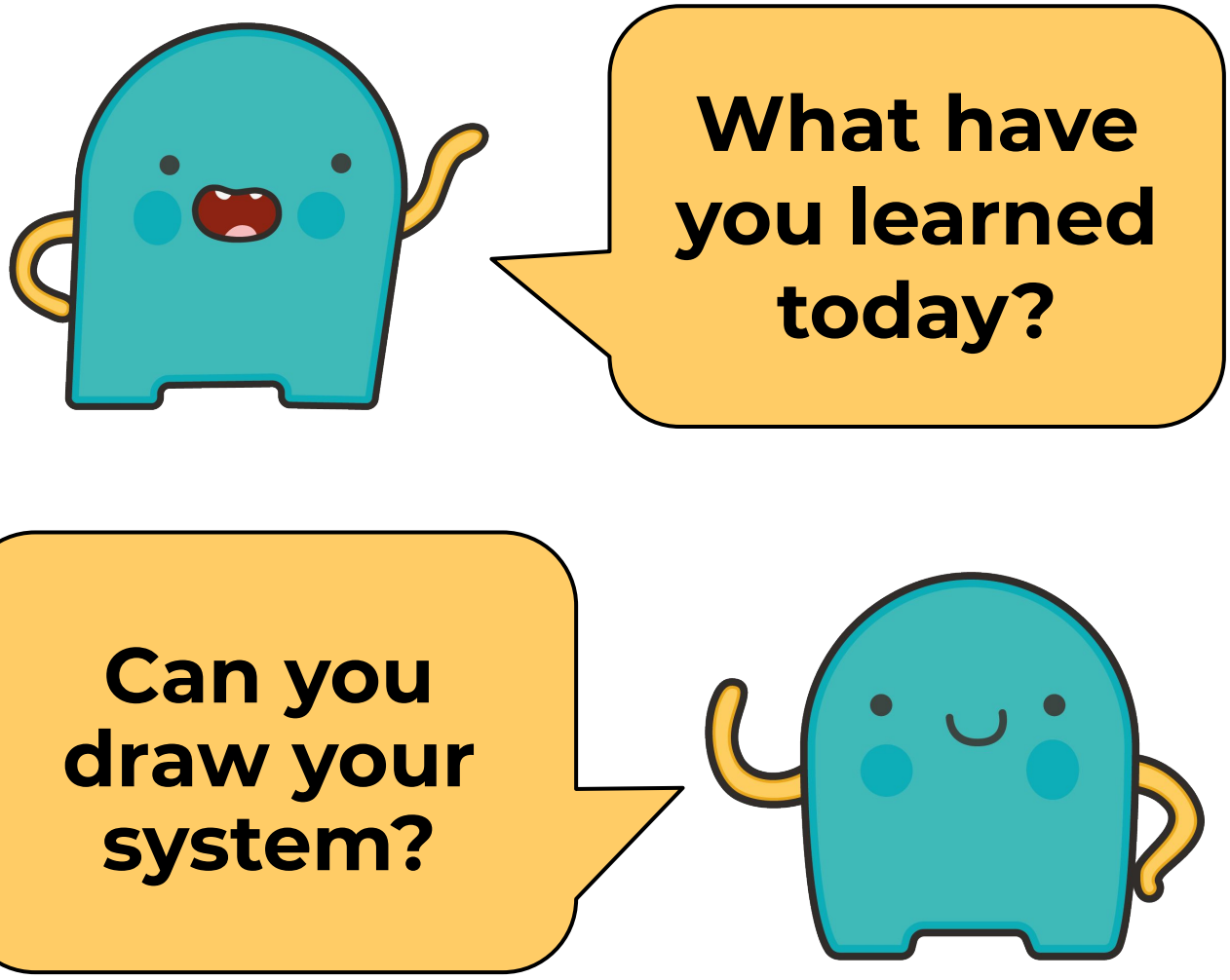


Experiment with the **RGB LED**. Can you make the light cycle through different colors?



Experiment with the settings of the **Counter** and **Interval** blocks. Can you make the storm last longer?



Experiment with a second **RGB LED** to the system. Can you make it flash a different color to represent the ending of the storm?

Exit Ticket