Special Effects

Introduction:

In this project you will create some special effect sounds that can be used in a film or a computer game.

Step 1: Suspense

Let's start by creating a sound to show that danger is approaching.

Activity Checklist

- [ ] To create the first special effect you should add the `:ambi_choir` sample to am empty buffer.

```
#suspense
sample :ambi_choir
```

- [ ] You can change the **rate** at which a sample is played. A `rate` of `1` is the sample's normal speed, and using a `rate` of less than 1 will slow the sample down.

```
#suspense
sample :ambi_choir, rate: 0.3
```

- [ ] Press 'Run' to hear your sample played slowly. How does the sample sound?
- [ ] A `rate` higher than 1 speeds the sample up.

```
#suspense
sample :ambi_choir, rate: 3
```

- [ ] Test your sample again. How does it sound now?
- [ ] You can repeat the sample a few times by putting it in a loop. You'll also need to add a `sleep` after playing the sample.

```
#suspense
4.times do
  sample :ambi_choir, rate: 3
  sleep 0.5
end
```

Save your project

Step 2: Stormy night

Activity Checklist

- [ ] Choose an empty buffer to create the next special effect.
- [ ] To begin, add the `:ambi_swoosh` sample.

```
#stormy night
sample :ambi_swoosh
```

- [ ] Press 'Run' to test your sample and see how it sounds.
- [ ] If you slow the sample down, you'll hear that it sounds like a storm.

```
#stormy night
sample :ambi_swoosh, rate: 0.3
```

- [ ] You could also add a `:misc_crow` sample, that is played at the same time.

```
#stormy night
sample :ambi_swoosh, rate: 0.3
sample :misc_crow
```

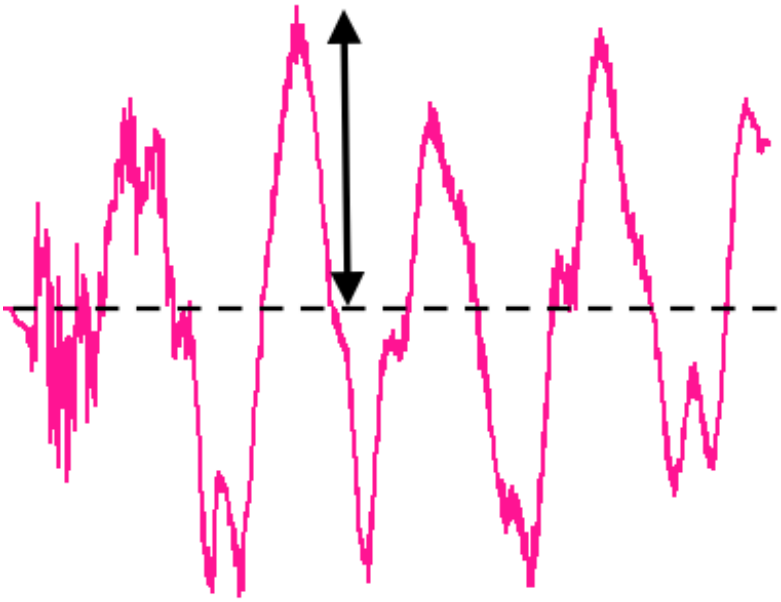
- [ ] Put the `:misc_crow` sample in a loop, so it is played 4 times with a 1 beat `sleep` each time it is played.

```
#stormy night
sample :ambi_swoosh, rate: 0.3
4.times do
  sample :misc_crow
  sleep 1
end
```

- [ ] Instead of sleeping for 1 beat each time, you can use `rrand` to which will give you a random number between the 2 values in brackets.

```
#stormy night
sample :ambi_swoosh, rate: 0.3
4.times do
  sample :misc_crow
  sleep rrand(0.5, 2)
end
```

- [ ] The **amplitude** of a sound is the size of the sound wave. Changing the amplitude of a sound wave changes its **volume**.



You can use `amp` to make a sample play at a different volume. A number less than 1 will play a sample quieter.

```
#stormy night
sample :ambi_swoosh, rate: 0.3
4.times do
  sample :misc_crow, amp: 0.2
  sleep rrand(0.5, 2)
end
```

Save your project

Step 3: Haunted bells

Activity Checklist

- [ ] Choose an empty buffer to create the next special effect.
- [ ] Start by adding the `:perc_bell` sample.

```
#haunted bells
sample :perc_bell
```

- [ ] Press ‘Run’ to play the sample and see how it sounds.
- [ ] Change the `rate` of the sample to see how it sounds played at different speeds.

```
#haunted bells
sample :perc_bell, rate: 2
```

- [ ] Change the `rate` to `-1`. What does this do to the sample?

```
#haunted bells
sample :perc_bell, rate: -1
```

- [ ] You can use `rrand` to play the sample at a random rate.

```
#haunted bells
sample :perc_bell, rate: rrand(-1.5, 1.5)
```

- [ ] Add the sample to a loop that repeats**forever**. You can also `sleep` for a random time after the sample is played.

```
#haunted bells
loop do
  sample :perc_bell, rate: rrand(-1.5, 1.5)
  sleep rrand(0.1, 2)
end
```

Save your project

Challenge: Create your own special effects

Can you use samples to create your own special effects? Here are some examples to help you:

```
#bounce
sample :elec_twip, rate: 0.1
```

```
#alarm
5.times do
  sample :elec_beep, rate: 0.4
  sleep 0.5
end
```

Remember that you can **record** your effects and use them in a film or game that you're developing!