

LESSON 5

WHAT ARE TUNES MADE OF?

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I gave you this definition in **Book 1**:

Reminder: a **tune** is a sequence of single musical sounds that has a pleasing effect and a sense of completeness.

That definition was fine up till now. But I want to explore it in more depth at this point.

We're going to begin our exploration by starting with a very familiar tune.

Tune no. 1

Here is the beginning of the first tune you learned to play in **Book 1**, back in the days when you were a beginner. 'Mary Had a Little Lamb'. Play it again now:



Tune no.1

What does this tune consist of? A sequence of 7 notes (or pitches), right?

Well, yes and no . . .

Tune no. 2

Play this:

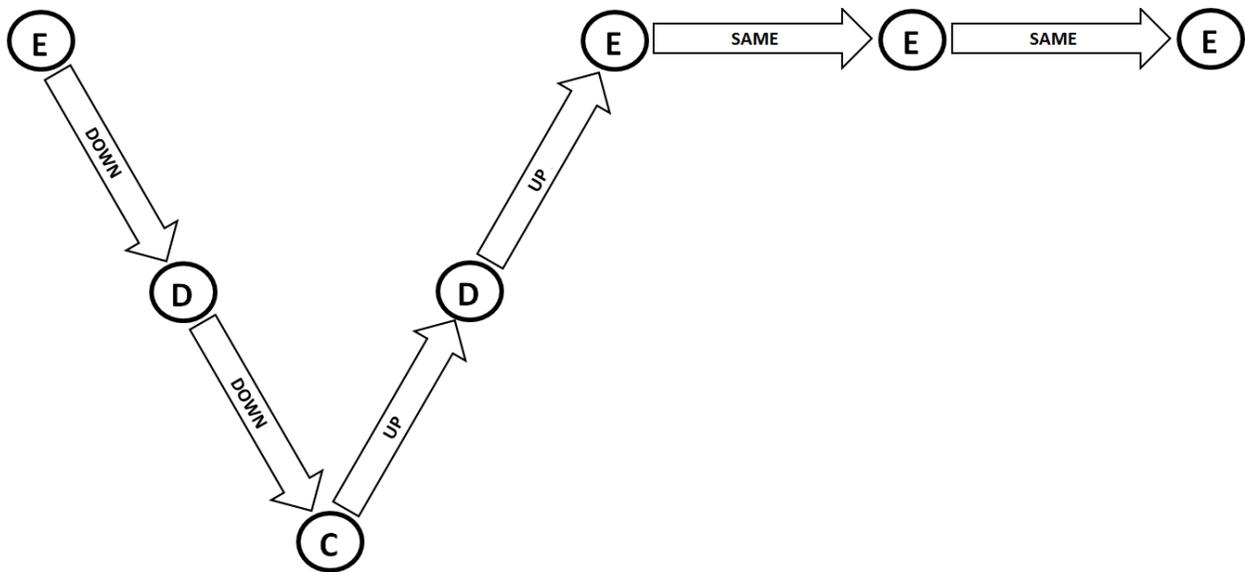


Tune no. 2

Surprise, surprise, it sounds like the same tune! *The notes are all different but it's the same tune.*

So what is it about the above two tunes that makes them the same tune?

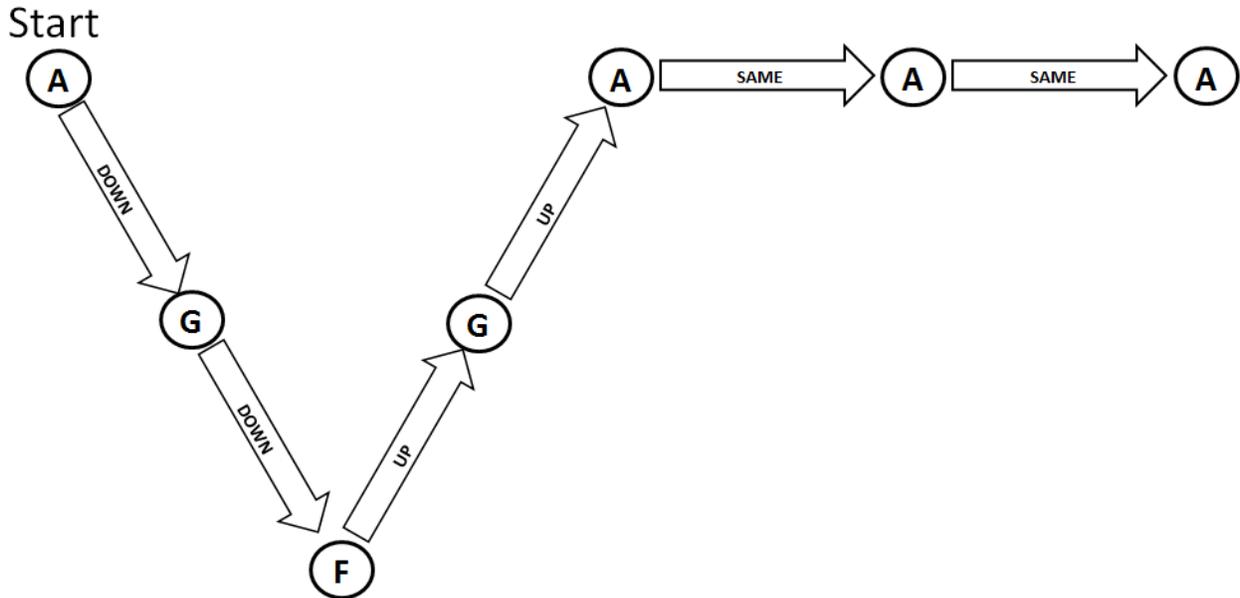
You may have seen the answer already. The first tune starts on E and then goes like this:



In other words, a sort of formula for the tune is:

- **Start-down-down-up-up-same-same.**

Tune no. 2 starts on a different note, A, but then it follows the same formula:



That's why tune no. 2 sounds the same as tune no. 1. They both follow this formula:

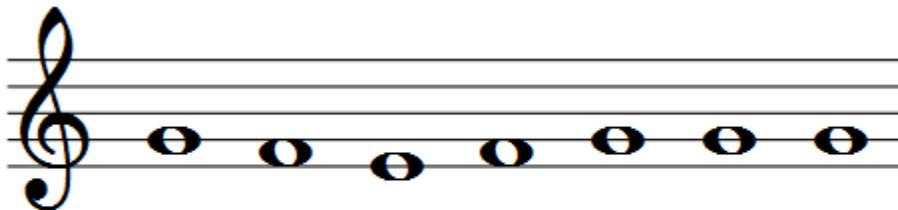
- **Start-down-down-up-up-same-same.**

So the essence of the tune is the *movements* it makes. The formula for the tune 'Mary' begins with these movements:

- **Start-down-down-up-up-same-same.**

Tune no. 3

Now play this:



Tune no. 3

Another surprise! It doesn't sound right, does it? This tune also follows the formula:

- **Start-down-down-up-up-same-same.**

but it doesn't sound like the same tune. Why not?

If you already have the answer, please go to the top of the class.

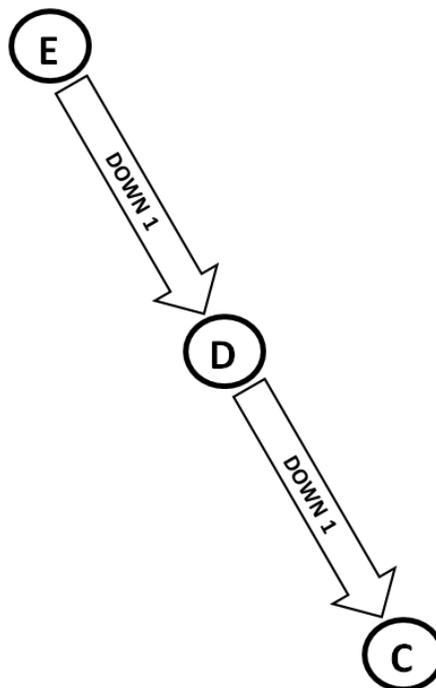
A tune is made of *intervals*

The answer is: *the intervals in tune no. 3 are different.*

Let's look at the first two intervals of each tune.

Tune no. 1:

This tune starts on E, goes down a whole tone to D, and then down another whole tone to C. I'm labelling the arrows with '1' to indicate a movement of a whole tone.



We know that E to D is a whole tone because there's a black note between E and D. The same applies to the interval from D to C.

We could express this by making the formula more specific. Instead of just:

- **Start-down-down**

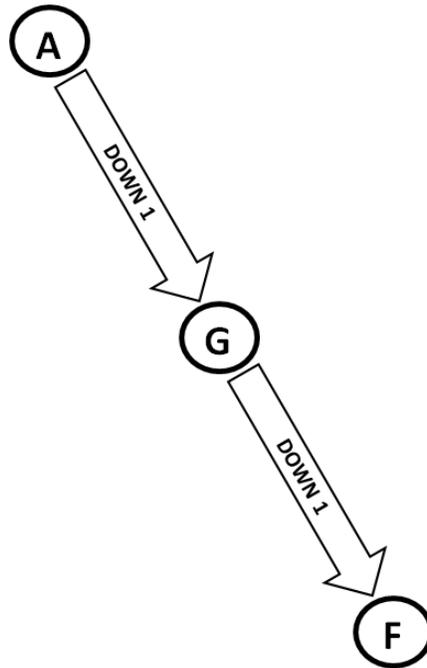
we can write it as:

- **Start – down 1 – down 1**

where 'down 1' means go down a whole tone.

Tune no. 2:

This tune starts on A, goes down a whole tone to G, and then down another whole tone to F.



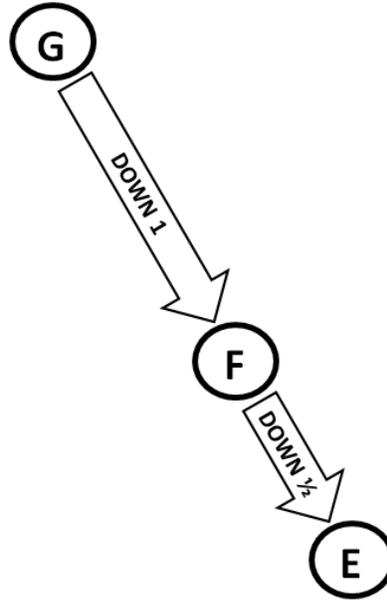
So it is following the same formula:

- **Start – down 1 – down 1**

and that's why it sounds like the same tune.

Tune no. 3:

And now we see why tune no. 3 sounds different. It goes down a whole tone from G to F, but then it only goes down a half tone from F to E. We know F to E is a half tone because there is no black note between F and E.



The formula for tune no. 1 and tune no. 2 is:

- **Start – down 1 – down 1**

But the formula for tune no. 3 is:

- **Start – down 1 – down 1/2**

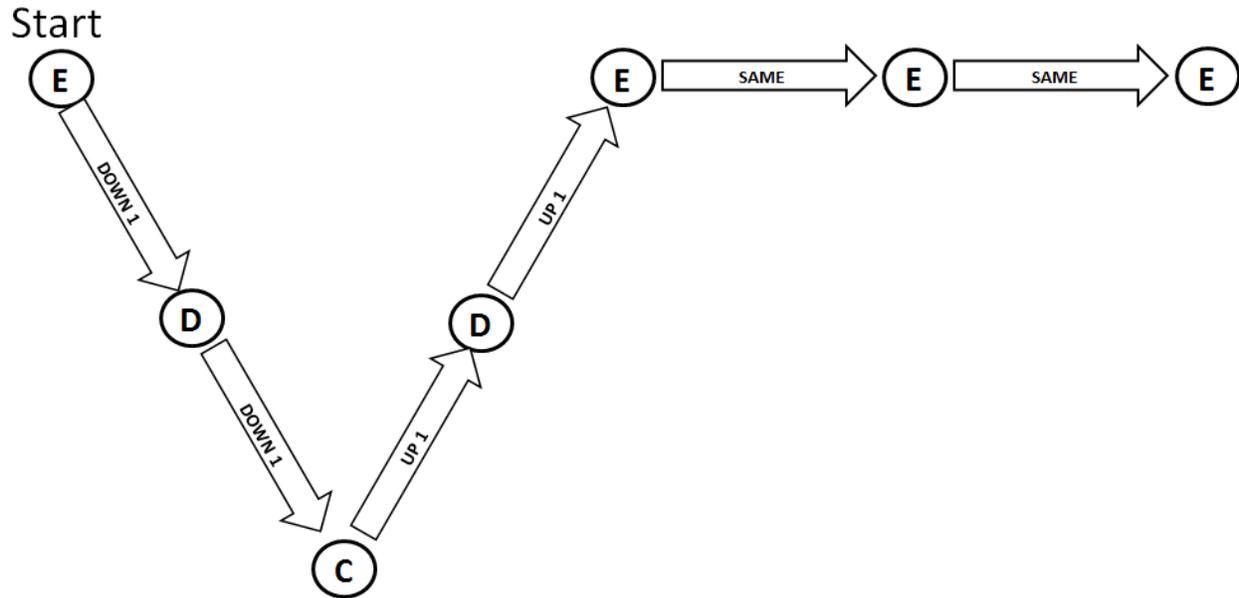
That's why tune no. 3 sounds different.

So a tune is not really made up of a sequence of *notes*.

A tune is essentially made up of a sequence of *intervals*.

Tune no. 3 – fixed!

Here again is our illustration of the beginning of Mary Had a Little Lamb. This time I'm labelling the arrows as 'DOWN 1' and 'UP 1' to indicate that they are whole-tone intervals:



So the beginning of 'Mary Had a Little Lamb' has this formula:

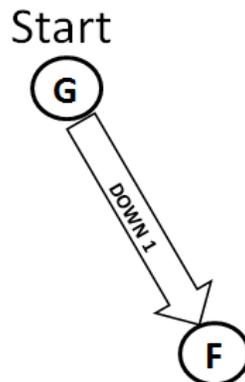
- **Start – down 1 – down 1 – up 1 – up 1 – same – same**

Now let's fix Tune no. 3. Do this:

1. Start: Play the starting note, G.

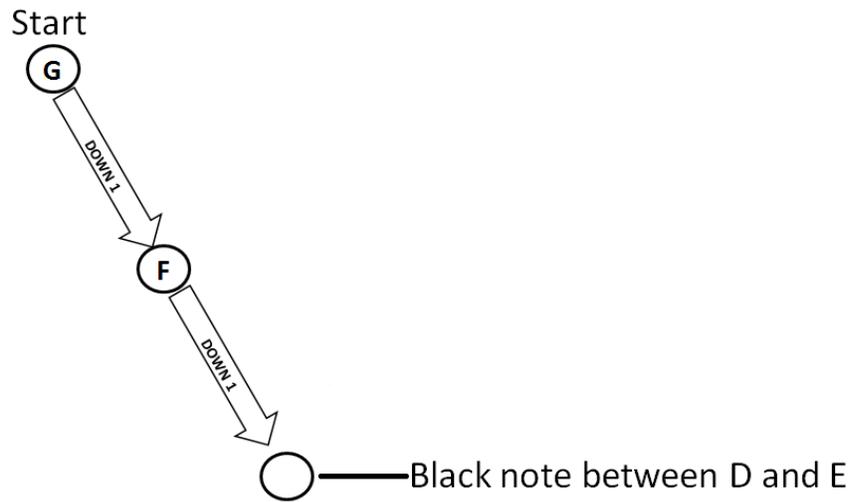


2. Down 1: The formula says 'down 1', so go down a whole tone, and play F.



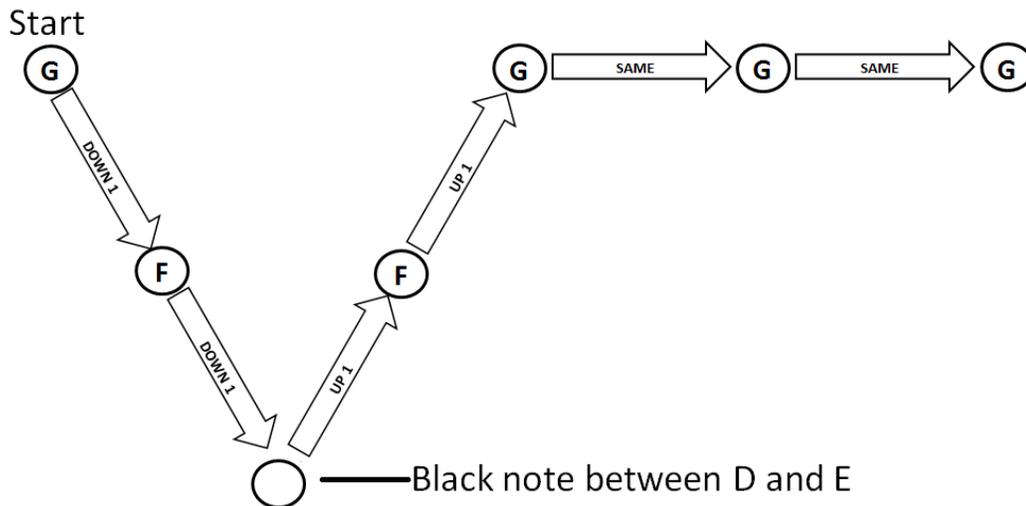
3. Down 1: The formula says 'down 1' again, so go down another whole tone. If you go down to E, you've only gone down a half tone, because

there is no black note between E and F. So you need to go down *another* half tone, which takes you to the black note between D and E. Play it.



4. Up 1: Go back up to F and play it.
5. Up 1: Go up to G and play it.
6. Same: Play G again.
7. Same: Play G once more.

Here is the whole sequence you just played:



Play that sequence of notes again, and repeat until you can do it easily:

- **G – F – {black note between D and E} – F – G – G – G**

How was that? Did it sound like 'Mary'? If you followed the formula, it should have sounded fine.

Incidentally, the experiment we just did with tunes 1, 2 and 3 showed clearly what musicians of long ago knew, that the intervals between the 'white notes' are not all the same size.

Practical

Build Your Skill

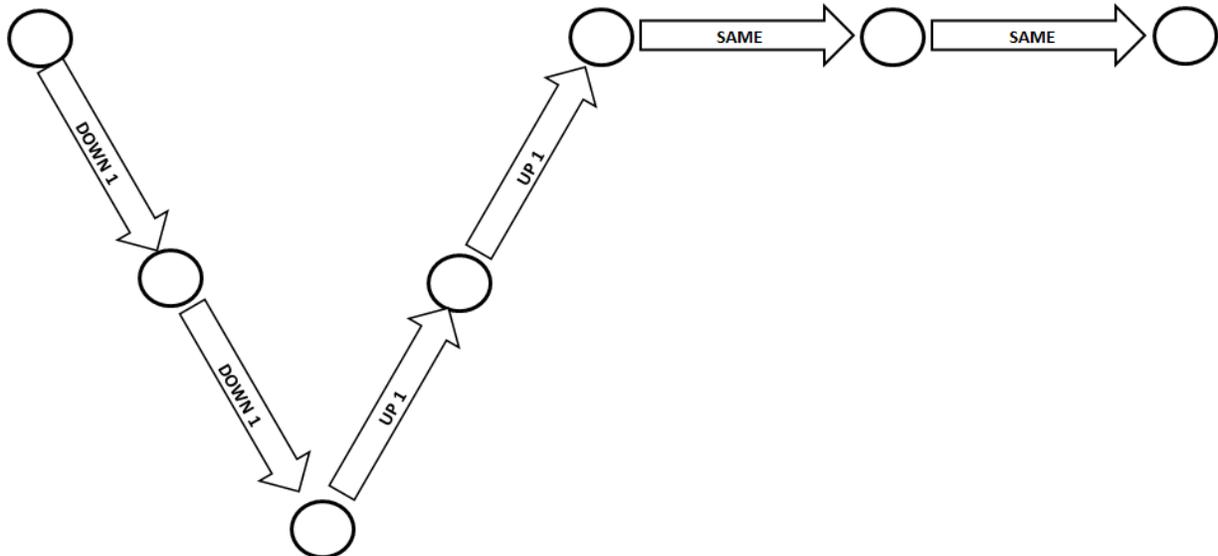
Exercise 1:

Play a tune starting on various notes

In this exercise, you're going to play the first few notes of the tune 'Mary Had a Little Lamb' by applying its formula:

- **start - down 1 - down 1 - up 1 - up 1 - same - same.**

Start



I'm going to have you start on various notes.

1. **STARTING ON B:** First we'll choose the note B as the starting note. Play it.
 - Work out note 2 for the tune 'Mary' by applying the formula shown above. The first interval is 'down 1', meaning down a whole tone, so play A.
 - The next interval is also 'down 1'. A whole tone below A is G, so play G.

- Next is 'up 1', so play A.
 - Then 'up 1' again, so play B.
 - Then 'same', so play B again.
 - Then 'same' again, so play B once more.
 - You just played 7 notes. Play them again and make sure they sound like the tune 'Mary'.
2. **STARTING ON D:** Now pick D as the starting note. Play it.
 - Work out the remaining 6 notes by applying the formula. When you get to note 3, you should find yourself playing the black note between A and B.
 3. **STARTING ON C:** This time you should find yourself playing two black notes.
 4. **STARTING ON THE BLACK NOTE BETWEEN A AND B:** Now pick the black note between A and B as the starting note, and use the formula to play the remaining 6 notes. This time you should find yourself playing the tune using only black notes.
 5. **STARTING ON OTHER NOTES:** Pick any white or black note as the starting note, play it, and play the remaining 6 notes of 'Mary' by applying the formula:
 - **Start - down 1 - down 1 - up 1 - up 1 - same - same**
 6. **PLAYING WITH LEFT HAND.** You may have done all the above with the right hand. Now do some more using your left hand, starting on a note below middle C.
 7. Continue doing this until you can easily and accurately play this 7-note tune starting on any note. To make it a fun game, you can ask a friend to play the starting note and then you play the remaining 6 notes. Each time, you and your friend should agree that the tune sounds right. If it doesn't, check that you applied the formula of the tune 'Mary' correctly.

Notice that the tune sounds right regardless of which note you start on. That proves that the 12 half tone intervals between C and high C are all the same. If they were different (some intervals bigger, some smaller), the tune would not sound right when you start on different notes.