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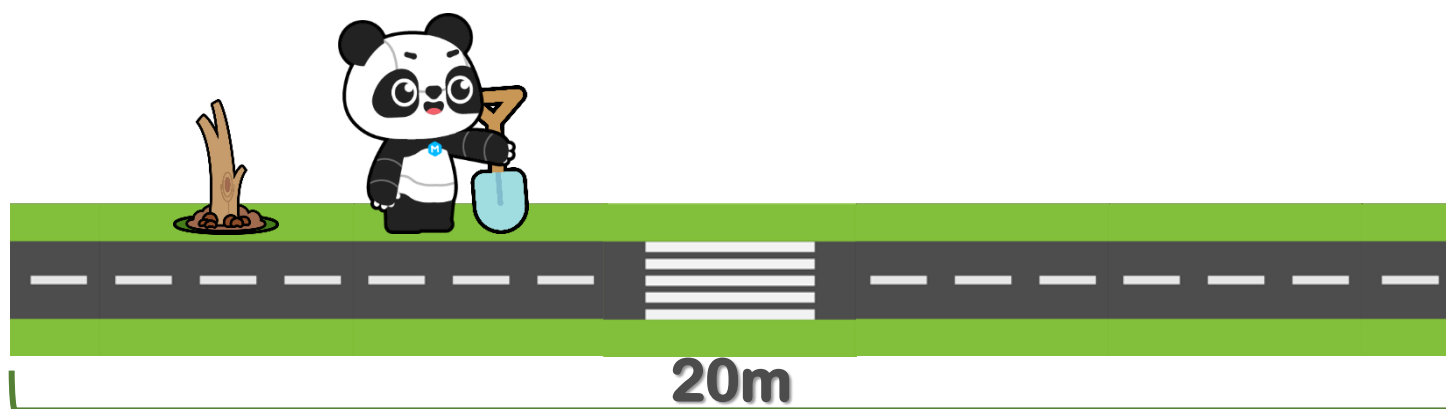
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Lesson 7 *Frère Jacques*

Activity Sheet

Context

Do you enjoy listening to music? Would you like to try to compose a song by yourself? In this learning activity, you will have an opportunity to explore composition by using a new kind of coding block – the Sound blocks. You can use or even record your voice clips to generate different kinds of sound effects. You will compose the song *Frère Jacques* by using looping algorithms as well.



Task 7-1 Analyze the Song

How many loop bodies can you find?

Frè - re Jac - ques, Frè - re Jac - ques, dor - mez vous? Dor - mez vous?

Sonnez les ma - ti - nes! Sonnez les ma - ti - nes! Din, dan, don. Din, dan, don.

French Lyrics	English Translation	Sample Notes (in Key of C, Octaves 4 and 3)
Frère Jac-ques,	Are you sleep-ing,	C ₄ D ₄ E ₄ C ₄
Frère Jac-ques,	Are you sleep-ing,	C ₄ D ₄ E ₄ C ₄
Dor-mez-vous?	Bro-ther John?	E ₄ F ₄ G ₄
Dor-mez-vous?	Bro-ther John?	E ₄ F ₄ G ₄
Son-nez les ma-ti-nes.	Mor-ning bells are ring-ing.	G ₄ A ₄ G ₄ F ₄ E ₄ C ₄
Son-nez les ma-ti-nes.	Mor-ning bells are ring-ing.	G ₄ A ₄ G ₄ F ₄ E ₄ C ₄
Din, dan, don.	Ding, dong, ding.	C ₄ G ₃ C ₄
Din, dan, don.	Ding, dong, ding.	C ₄ G ₃ C ₄

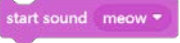
	French lyrics	English translation	Sample Notes (in key of C, octaves 4 & 3)
4x			
2x	Frère Jac-ques,	Are you sleep-ing,	C ₄ D ₄ E ₄ C ₄
2x	Frère Jac-ques,	Are you sleep-ing,	C ₄ D ₄ E ₄ C ₄
2x	Dor-mez-vous?	Bro-ther John?	E ₄ F ₄ G ₄
2x	Dor-mez-vous?	Bro-ther John?	E ₄ F ₄ G ₄
2x	Son-nez les ma-ti-nes.	Mor-ning bells are ring-ing.	G ₄ A ₄ G ₄ F ₄ E ₄ C ₄
2x	Son-nez les ma-ti-nes.	Mor-ning bells are ring-ing.	G ₄ A ₄ G ₄ F ₄ E ₄ C ₄
2x	Din, dan, don.	Ding, dong, ding.	C ₄ G ₃ C ₄
2x	Din, dan, don.	Ding, dong, ding.	C ₄ G ₃ C ₄

Task 7-2 Code the Song

With reference to the above table, try to use appropriate Sound blocks to program the song.

Don't worry! Even if you have never heard of *Frère Jacques*, or you don't know composition, you should be able to use the above information to program mBot to "sing" *Frère Jacques*!

Follow the instructions as follows:

- Add the "Bell" sprite (other kinds of sprites you think it suits the context of your project);
- Use the Sound blocks  and select any sound effects of musical instruments you like;
- Import sound effects from Sound Library into Sound blocks and assemble them to compose the song.

Key Concepts from this Learning Activity

Terms	What it means
Loop*	A sequence of instructions that is repeated, either for a definite number of times, until a condition is reached, or forever – depending on which loop the programmer chooses to use.
Nested Loop*	The placement of one loop inside another.

* New term