

Kode

KLIX

Coding, Electronics and Fun!

Ideas Book Four



Counting time

Oscar's birthday games

Three beeps and you're out!

Possum builds a doorbell

Counting time

Oscar and the guys wanted to explore time. They knew his KodeKLIX had a clock inside, but they were not sure how they could work out how fast it ticked...

Baxter remembered that they had used the WAIT code before.

“What if we could count each tick for different wait times?”, he said.

“Great idea”, remarked Possum, “that should be easy. Let’s build this code in a loop.”

Do Build 1

“One WAIT is one second”, said Oscar, “but the ticking sound is happening too quickly for me to be sure how many ticks have occurred between each flash of the light”.

“We have to make the waiting time longer. Do you think we can do that by putting a number before the WAIT code?”, explained Possum.

“Let’s put the biggest number we have”, recommended Baxter, “since that will give us the longest wait”.

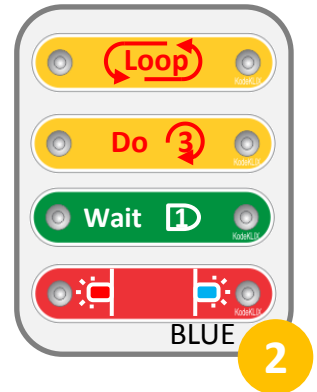
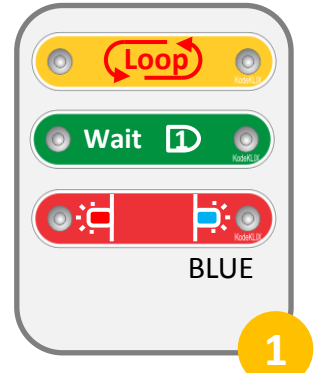
Do Build 2

How to count the ticking sounds...

Can you help the critters to do the math?

Tip: if the WAIT time was two seconds, then share the count equally. If the WAIT time was three seconds, share the count into three. Use tokens to help do the math.

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Oscar's birthday game

It was Oscar's birthday, and for his party he had invited all his school friends from near and far.

Oscar's favourite birthday game to play with so many friends was hide-and-seek. But to make it more fun, he wanted to play it with a twist.

"How about for each round we get a different amount of time to find a hiding spot, rather than always counting to 10," he thought.

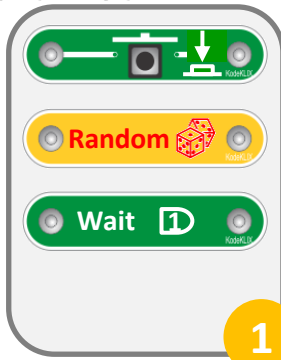
"What a great idea," agreed his friends. "How about we use your KodeKLIX® kit to build a random timer?" said Possum.

Oscar coded a sequence which paused the code for a random time once started.

Do Build 1

"That's unfair," said some of his friends when the timer was only 1 second long. "Can we make the time random, but no less than four?"

Do Build 2

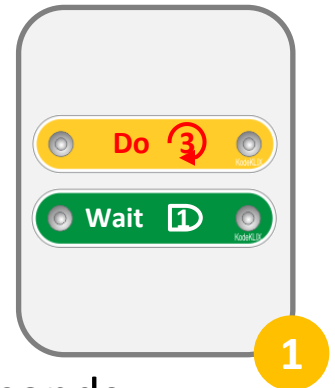


Three beeps and you're out!

Oscar had an idea for a new game. The game needed a timer. When three seconds had passed, he wanted the countdown to finish.

Knowing how the WAIT KLIX worked, he wondered if he could code his project with just adding a modifier.

Do Build 1



The code he created waited for 3 seconds once it started, and then when it finished played the fanfare tune.

But Oscar was a little disappointed. “Why are you not happy with your code?” asked Possum.

“Well I was hoping it could beep each time, like a counter, so you would know your time is coming up,” Oscar replied.

“Do you need to add a loop to repeat?” suggested Baxter. “But I am not sure how we would get out of the loop,” he added.

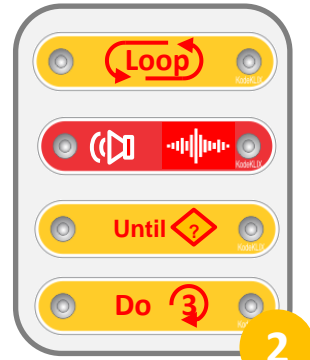


Just then, Oscar remembered the extra pieces his mum had given him!

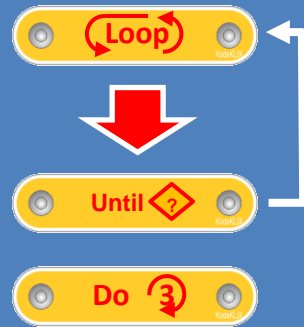
But... he had not used these yet, and didn't know how they might work without trying.

“Hang on guys, mum gave me some extra coding KLIX – how about we see what these do?” Oscar said to his friends.

One of the new coding KLIX was an UNTIL coding piece. The friends experimented, and found out that this stops a loop when the piece after the UNTIL is True. **Do Build 2**



Conditions are True or False. Putting a [3] after the UNTIL makes the code run three times. Experiment with other numbers or conditions, such as inputs.



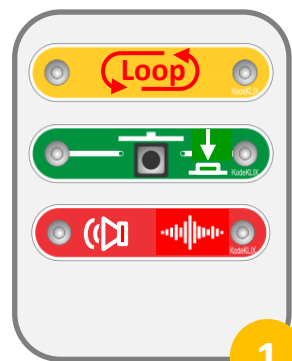
Possum builds a doorbell

Possum lives in a giant tree with her family. When the wind is howling at night, she can't hear if her friends are waiting outside! She thought about how she might solve this problem.

"I know," she thought, "I'll make a doorbell!"

She set out to do this with her very own coding set. She knew that she would need a button KLIX, a sound KLIX, and to put it in a loop.

Do Build 1



This worked fine, but she didn't think the sound was very doorbell-like. She thought of the pieces she and her friends were yet to use. One of the new KLIX was called SPECIAL.

She didn't know how to use the SPECIAL KLIX, so she asked her mum to read out the instructions to her.

Mama Possum explained that the SPECIAL KLIX can remember sequences of yellow number parts.

"To save your special sequence", Mama explained, "you need to first place the SPECIAL item before the sequence you want to remember", and showed possum the picture in the instruction book.



“When you press the play button the number sequence will be remembered”, she said.

Do the SAVE CODE step

“To play it back, just put the SPECIAL KLIX in your code where the sound would normally be”, Mama explained to Possum.

Do Build 2

Her doorbell is sounding much better. “Thank you Mama Possum for showing me that trick”, said Possum.

“What happens if I use a second SPECIAL?”, Possum asks Mama.

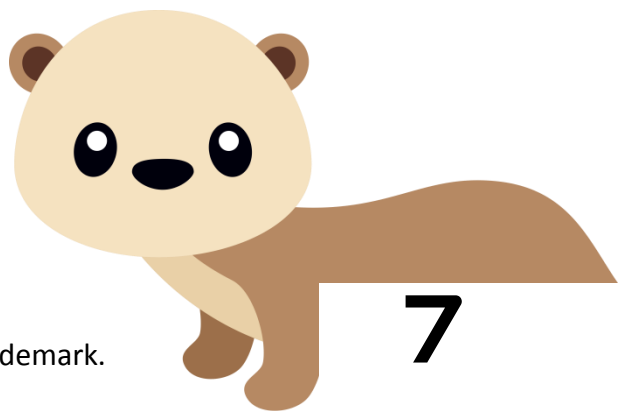
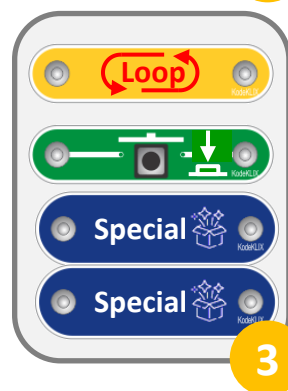
“Try it to find out”, replies Mama.

Do Build 3

Tip: the different yellow modifier KLIX are also notes on the musical scale, with the WAIT being a pause. Try SAVE CODE with different notes.

Music Scale

- Do 3 So
- Do 4 Fa
- Do 3 Me
- Do 2 Re
- Not 1 Do
- Wait 1





Want more stories?

Do you enjoy the adventures of Oscar and his friends Possum, Baxter and others?

Want to see what they get up to next?

How about you think about some adventures they can have and see if you can create some gadgets and code to help them have fun and discover answers to their questions.

Did you know with four coding steps and just 14 coding KLIX that there are over 25,000 coding possibilities! Have a play and see what fun and useful things you can create.

Decoration and construction ideas

Many of the projects and coding stories could be even more fun if you decorate the KodeKLIX® code block? Trying making the stories come to life by decorating a cardboard box to put over your KodeKLIX. Maybe you could make your box from play bricks such as Lego, Duplo... maybe it has wheels, or maybe it has wings. Let's see what your imagination can come up with!