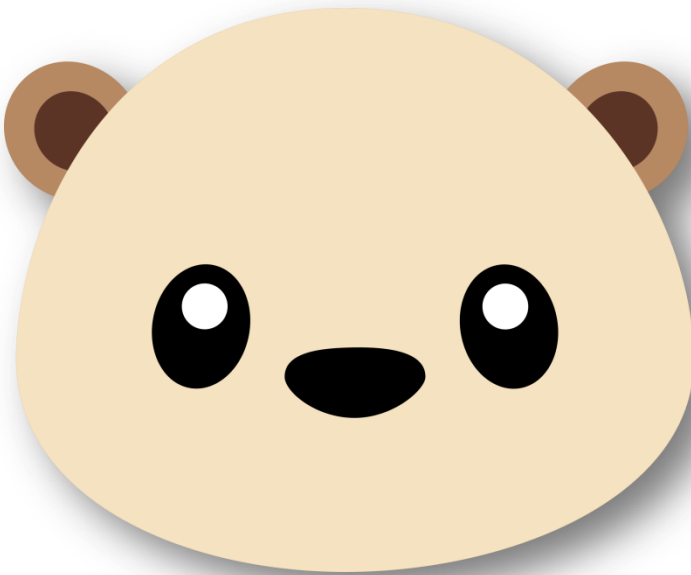


Kode

KLIX

Coding, Electronics and Fun!

Ideas Book One



Oscar gets a present

Oscar builds a torch

Up in the night sky

A fire engine in the forest

Oscar goes to the city

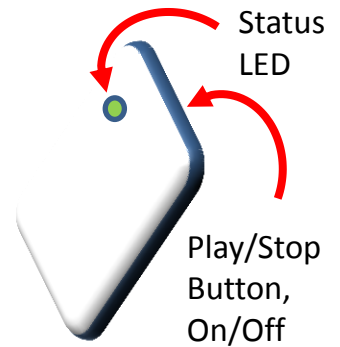
Oscar starts school

Oscar gets a present

Oscar is an otter. He's pretty smart, and thinks coding is cool, but he's never coded before.

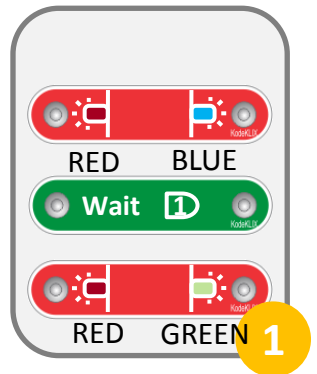
During the school holidays Oscar is given a gift for doing well at school – it's a KodeKLIX®.

“How does it work?”, he asks. Oscar's mum shows him how to code by snapping a few KLIX parts...



“You start the code by **Do Build 1** pressing the Play button”, mum says.

READY, SET, GO... When the code was running Oscar saw that the Status LED on the code block changed to **GREEN** and a ‘ticking’ sound started.



The lights on the red KLIX parts flashed; first the **blue** and then the **green**. When the code stops running, so does the ‘ticking’.

“It's ticking like a clock”, Oscar says to his mum.

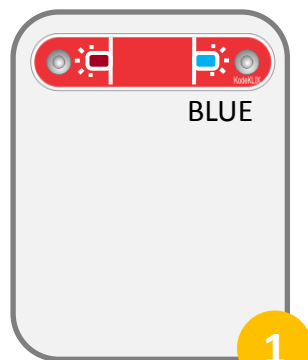
“That's right, ”, says mum,

“Computers have a clock inside them to help keep the beat. That is what you can hear.” Big computers tick their clock a lot faster.

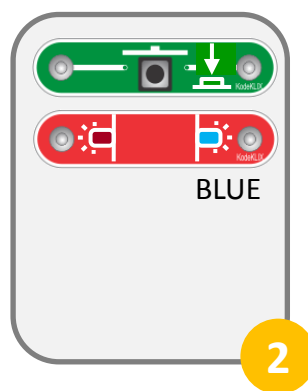


Oscar builds a torch

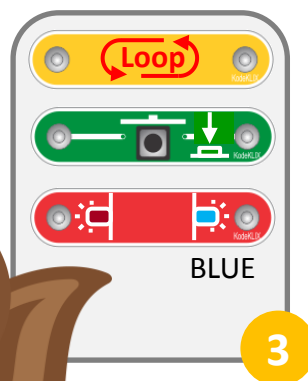
Oscar's den can be quite dark at night. Oscar thinks it would be a good idea to build and code a torch. **Do Build 1**



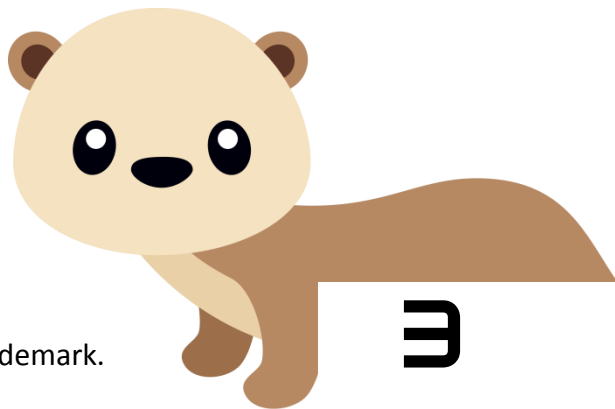
The torch works fine, but Oscar would like to control when it turns on. He decides to add a switch as input to his code. **Do Build 2**



Now his torch turns on when he pushes the button, but it doesn't stay on for as long as he wants it to. He has a think about how to make the code run in a loop, so it always checks for the button being pushed and keeps the light on for as long as he wants it. **Do Build 3**



Oscar's friend Possum says to him that she doesn't like the **blue** light because it hurts her eyes. She would like to change the code so the torch uses a **red** light which would be less bright for her. Can you help Possum change the code to show a **red** light instead of **blue**?

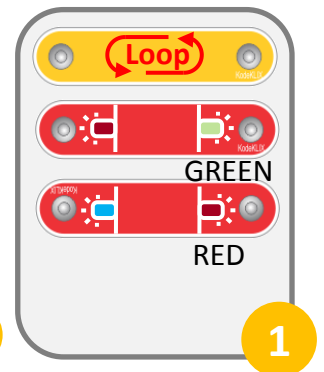


Up in the night sky

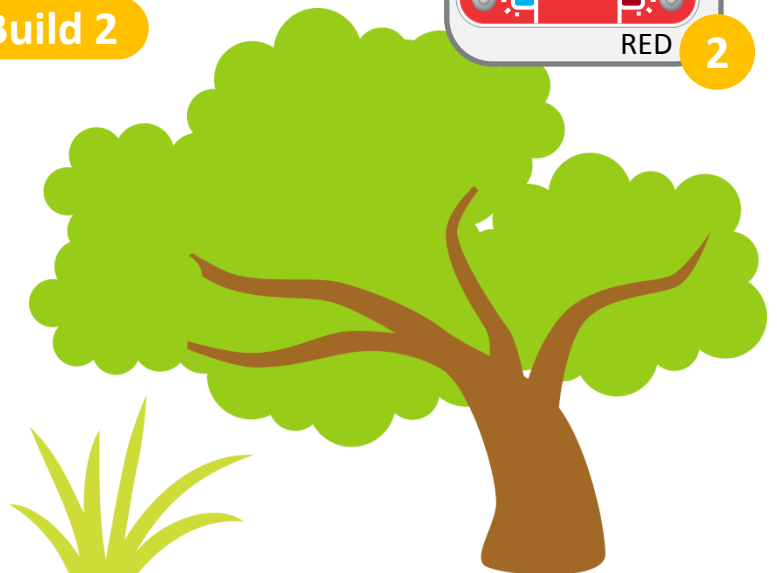
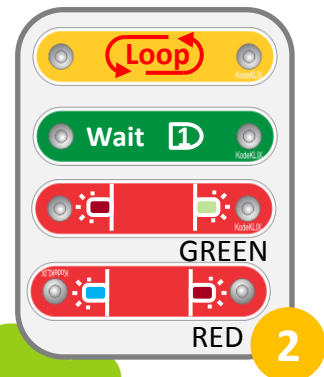
In the forest, the night sky is dark. At night, Oscar can see red and green twinkles in the sky. He asks his dad what the **red** and **green** twinkles are.

“They are the lights on the tips of the aeroplane wings”; Oscar’s dad explains to him. “The red one is on the left hand side and the green one is on the right hand side”.

Oscar designs the code for this with his KodeKLIX®. To work out which way the aeroplane was flying he put the **green** light on his right hand side and walks around. **Do Build 1**



Oscar notices that the flashing is not continuous; that there is a pause between the flashes. He wondered if by adding the WAIT KLIX he could space out the flashing. **Do Build 2**



A fire engine in the forest

Oscar lives in a river that passes through a forest.

During summer it gets very hot.

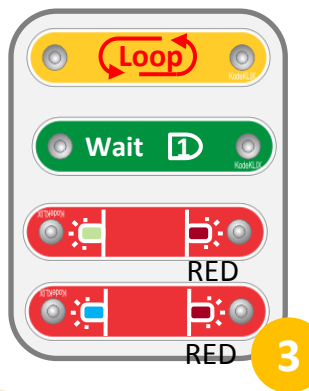
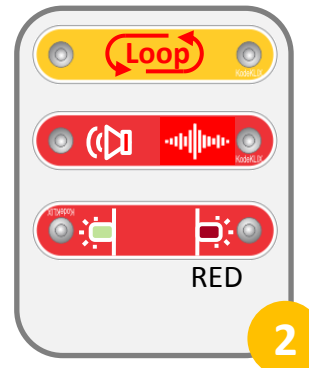
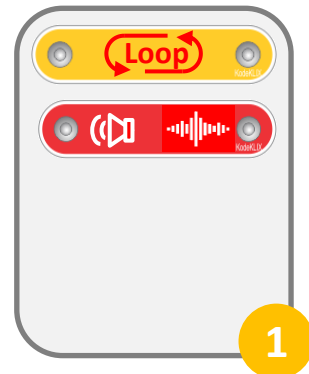
One day it was so hot that one of the trees caught fire. Oscar was scared.

He could hear the sound of a fire engine coming from far away. **Do Build 1**

As the fire engine came closer Oscar could also see the **red** light flashing. **Do Build 2**

When the fire engine stopped, it turned off the siren but left the lights flashing so all the animals could tell that it was there. **Do Build 3**

When the fire was out, the **red** lights were switched off. All the animals now felt safe, including Oscar.



Oscar goes to the city

One day, Oscar was visiting the city. He saw a truck come around a corner too fast and the boxes on the back fell off. What a mess! There were things all over the road! “Quick, someone call the police to help stop the traffic and keep the area safe”, Oscar thought.

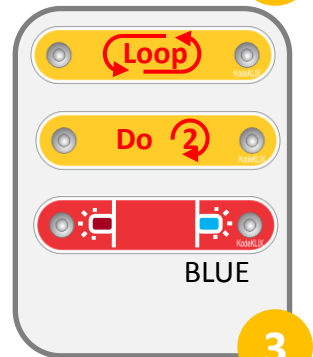
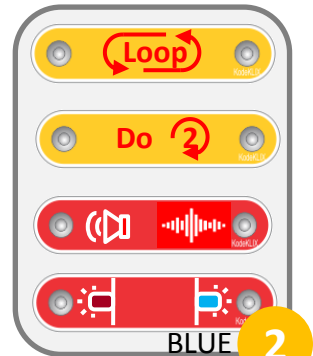
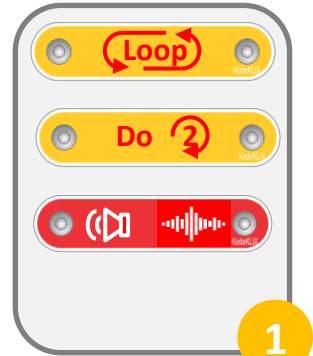
In the distance, Oscar can hear the police car coming. The sound of its siren was different to that of the fire engine. **Do Build 1**

As the police car came closer Oscar could see the **blue** light on police car. It was flashing slowly. **Do Build 2**

Once the police car stopped, it turned off the siren, and left the **blue** light flashing as a warning. But, to be sure it got everyone’s attention the police made the blue light flash faster by modifying its code. **Do Build 3**

Oscar wondered how fast the **blue**

light could be made to flash. Help Oscar change the code to make the light flash even faster.



Use a different modifier, or try putting more than one modifier before the BLUE LED. Modifiers that follow each other are summed together, so [1] followed by [2] is the same as [3].

Oscar starts school

Holidays are over, and Oscar needs to start school. His school is near his home, but he does have to cross a big road. Luckily, there is a crossing with some lights to make it safe.

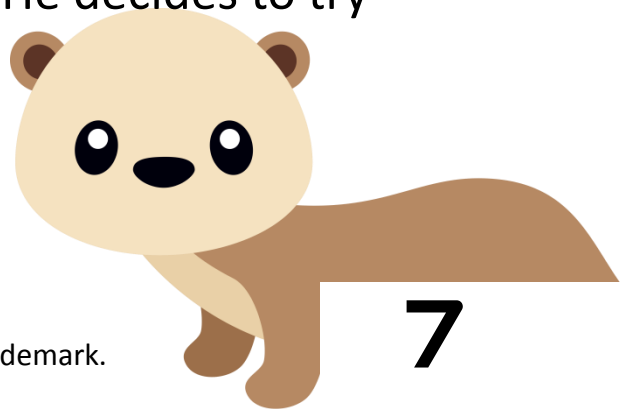
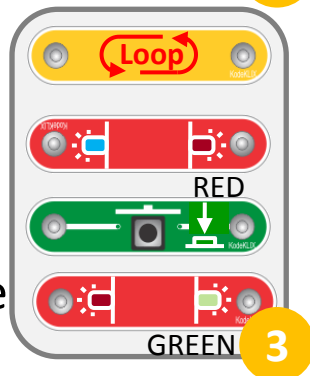
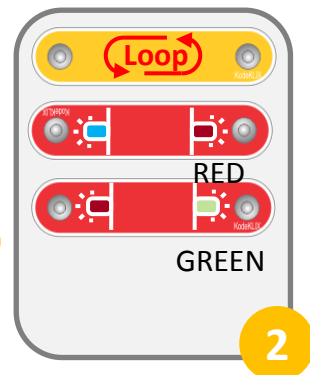
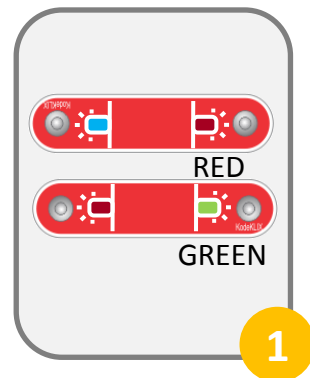
When Oscar gets to the crossing, the light is **red**. He sees that there is a button. Pushing the button changes the light to **green**. After a little wait, it changes back to red.

Oscar is keen to understand how this works, so when he gets to school he sets out to build it using what he has learnt about coding so far. **Do Build 1**

To make the pattern repeat, Oscar knows he has to put the code into a loop. **Do Build 2**

The two lights now toggle between **red** and **green**, but Oscar still needs to add the button. He decides the code must show the **red** light whilst it waits for the button to be pressed. He decides to try adding the button after the **red**. **Do Build 3**

Does Oscar's code work like he expected?





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!