


How to make

The Force™ Coding Kit motion sensor



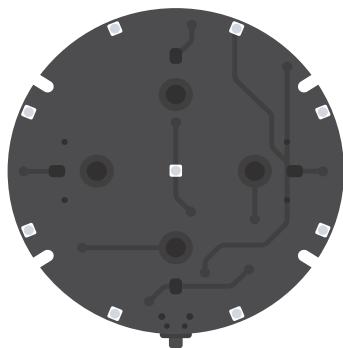
You don't know the
power of the dark side





I want to learn the ways of the Force

Take out the pieces



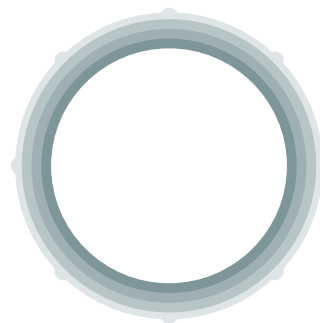
PCB + Sensors

014S 3V1A8A7N



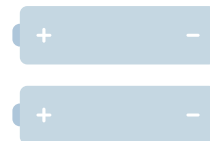
Power

014S 3V1A8A7N



Light ring

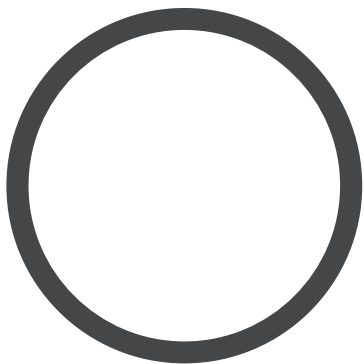
3V1A8A7N 71A7N



Batteries

3V1A8A7N 71A7N

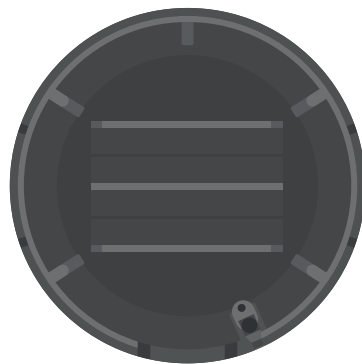




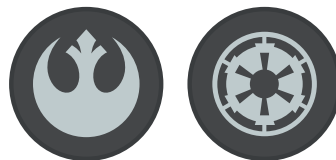
Top case



kano.me/app/starwars

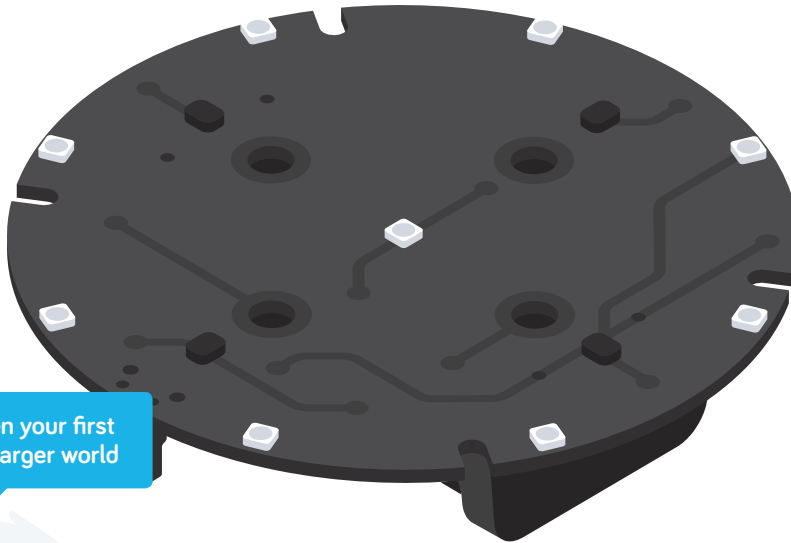


Bottom case



Icons
1 1/2 1/4 1/8 1/16 1/32 1/64 1/128 1/256 1/512 1/1024 1/2048 1/4096 1/8192 1/16384 1/32768 1/65536 1/131072 1/262144 1/524288 1/1048576 1/2097152 1/4194304 1/8388608 1/16777216 1/33554432 1/67108864 1/134217728 1/268435456 1/536870912 1/1073741824 1/2147483648 1/4294967296 1/8589934592 1/17179869184 1/34359738368 1/68719476736 1/137438953472 1/274877906944 1/549755813888 1/1099511627776 1/2199023255552 1/4398046511104 1/8796093022208 1/17592186044416 1/35184372088832 1/70368744177664 1/140737488355328 1/281474976710656 1/562949953421312 1/1125899906842624 1/2251799813685248 1/4503599627370496 1/9007199254740992 1/18014398509481984 1/36028797018963968 1/72057594037927936 1/144115188075855872 1/288230376151711744 1/576460752303423488 1/1152921504606846976 1/2305843009213693952 1/4611686018427387904 1/9223372036854775808 1/18446744073709551616 1/36893488147419103232 1/73786976294838206464 1/147573952589676412928 1/295147905179352825856 1/590295810358705651712 1/1180591620717411303424 1/2361183241434822606848 1/4722366482869645213696 1/9444732965739290427392 1/18889465931478580854784 1/37778931862957161709568 1/75557863725914323419136 1/151115727451828646838272 1/302231454903657293676544 1/604462909807314587353088 1/1208925819614629174706176 1/2417851639229258349412352 1/4835703278458516698824704 1/9671406556917033397649408 1/19342813113834066795298816 1/38685626227668133590597632 1/77371252455336267181195264 1/154742504910672534362390528 1/309485009821345068724781056 1/618970019642690137449562112 1/1237940039285380274899124224 1/2475880078570760549798248448 1/4951760157141521099596496896 1/9903520314283042199192993792 1/19807040628566084398385987584 1/39614081257132168796771975168 1/79228162514264337593543950336 1/158456325028528675187087900672 1/316912650057057350374175801344 1/633825300114114700748351602688 1/1267650600228229401496703205376 1/2535301200456458802993406410752 1/5070602400912917605986812821504 1/10141204801825835211973625643008 1/20282409603651670423947251286016 1/40564819207303340847894502572032 1/81129638414606681695789005144064 1/162259276829213363391578010288128 1/324518553658426726783156020576256 1/649037107316853453566312041152512 1/1298074214633706907132624082305024 1/2596148429267413814265248164610048 1/5192296858534827628530496329220096 1/10384593717069655257060992658440192 1/20769187434139310514121985316880384 1/41538374868278621028243970633760768 1/83076749736557242056487941267521536 1/166153499473114484112975882535043072 1/332306998946228968225951765070086144 1/664613997892457936451903530140172288 1/1329227995784915872903807060280344576 1/2658455991569831745807614120560689152 1/5316911983139663491615228241121378304 1/10633823966279326983230456482242756608 1/21267647932558653966460912964485513216 1/42535295865117307932921825928971026432 1/85070591730234615865843651857942052864 1/170141183460469231731687303715884105728 1/340282366920938463463374607431768211456 1/680564733841876926926749214863536422912 1/1361129467683753853853498429727072845824 1/2722258935367507707706996859454145691648 1/5444517870735015415413993718908291383296 1/10889035741470030830827987437816582766592 1/21778071482940061661655974875633165533184 1/43556142965880123323311949751266331066368 1/87112285931760246646623899502532662132736 1/174224571863520493293247799005065324265472 1/348449143727040986586495598010130648530944 1/696898287454081973172991196020261297061888 1/1393796574908163946345982392040522594123776 1/2787593149816327892691964784081045188247552 1/5575186299632655785383929568162090376495104 1/11150372599265311570767859136324180752990208 1/22300745198530623141535718272648361505980416 1/44601490397061246283071436545296723011960832 1/89202980794122492566142873090593446023921664 1/178405961588244985132285746181186892047843328 1/356811923176489970264571492362373784095686656 1/713623846352979940529142984724747568191373312 1/1427247692705959881058285969449495136382746624 1/2854495385411919762116571938898990272765493248 1/5708990770823839524233143877797980545530986496 1/11417981541647679048466287755595961091061972992 1/2283

Let's begin. Pick up this piece

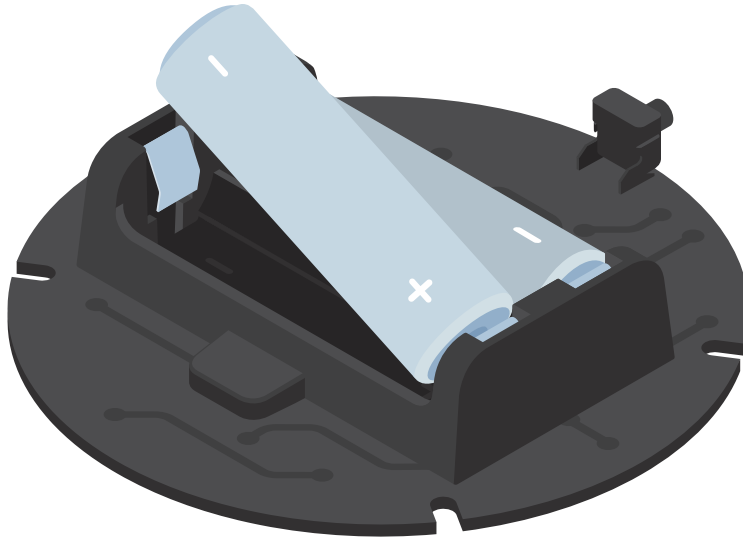


You've taken your first
step into a larger world



It's called a Printed Circuit Board or PCB

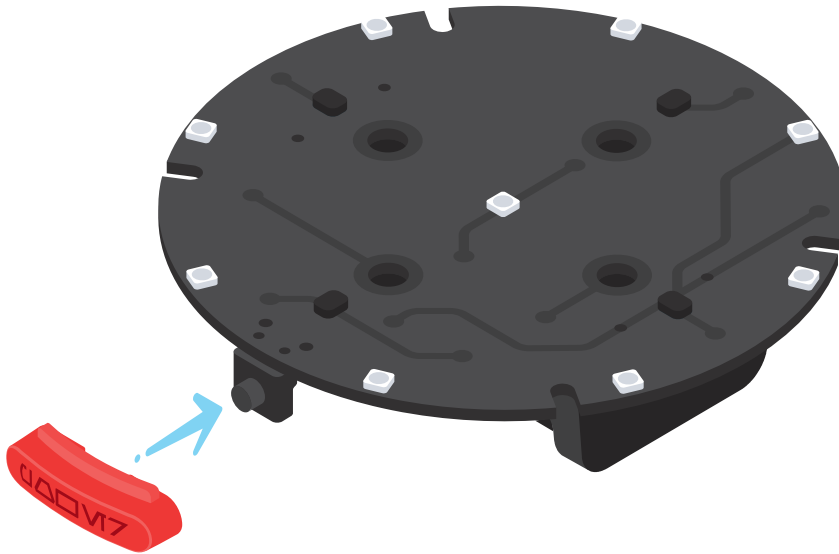
Turn over the PCB and slot in both batteries



Make sure they are the right way round

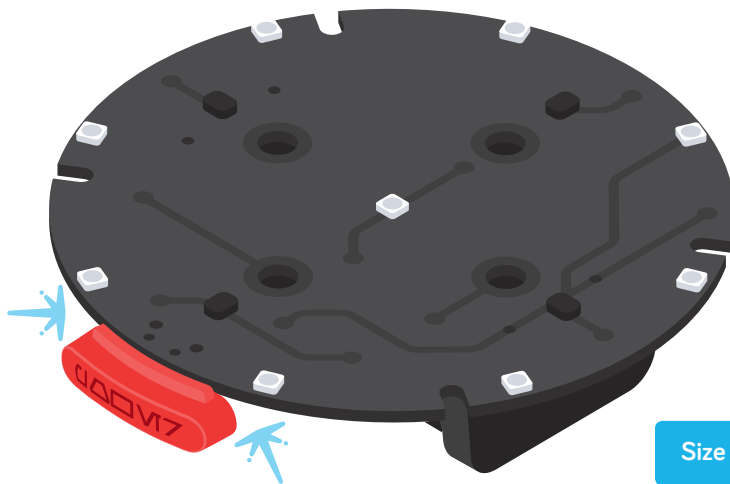


Time to add some control



Push the power button onto the PCB

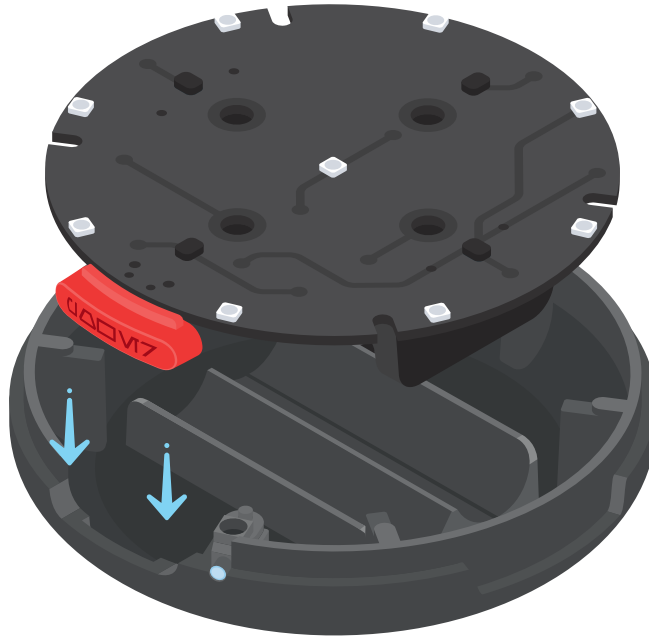
Make sure it is snug



Size matters not

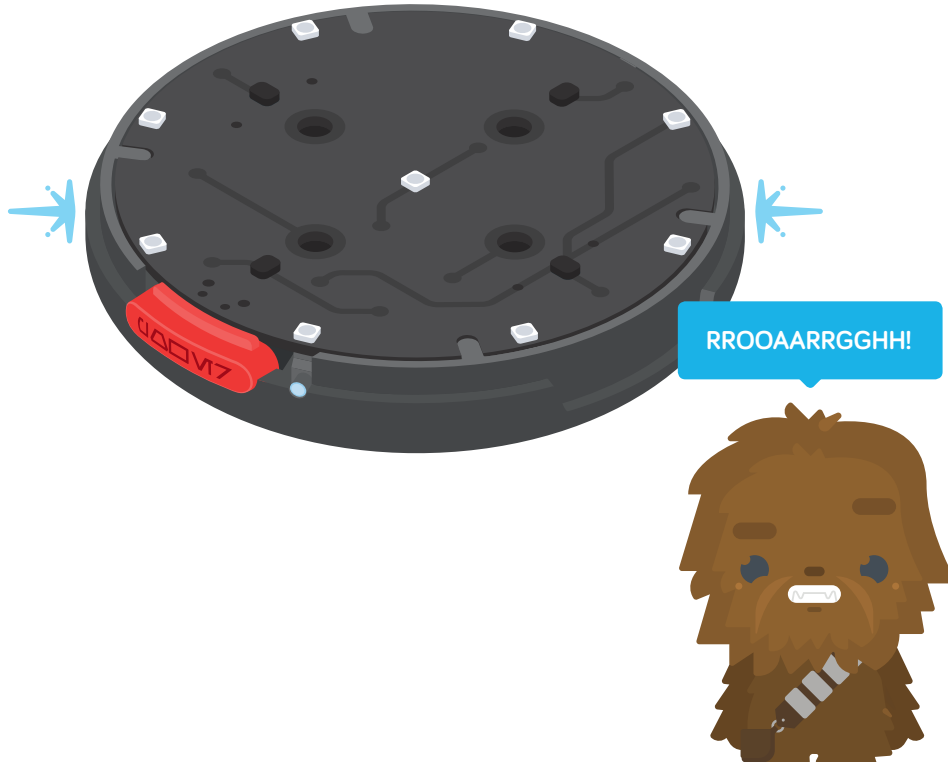


Now place the PCB into the bottom case

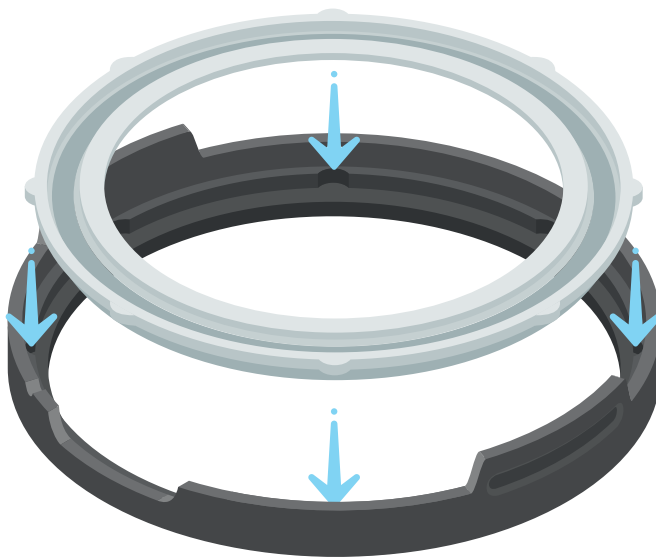


Line up the button with the groove in the base

Gently push the PCB into the base



Take the top case



and push the light ring into it

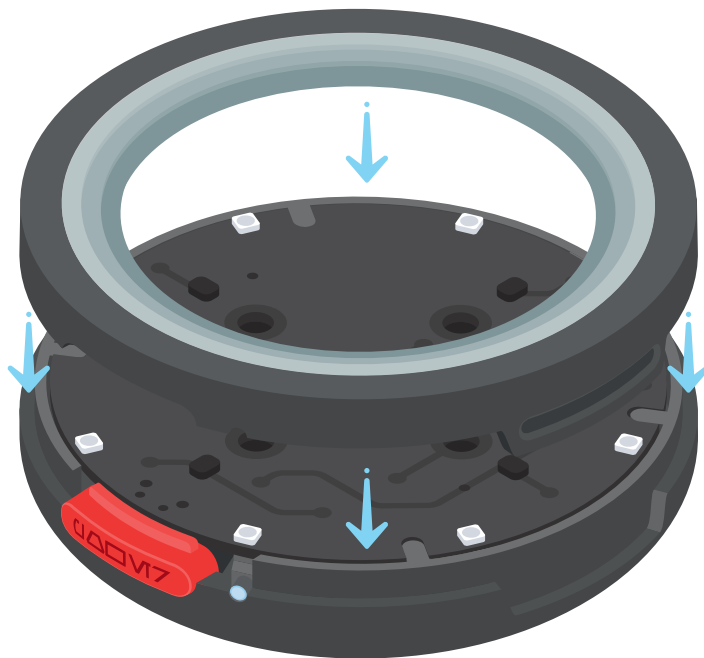
Make sure it's pushed in all the way



I feel it again.
The pull to the light side

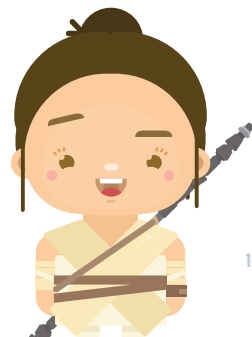
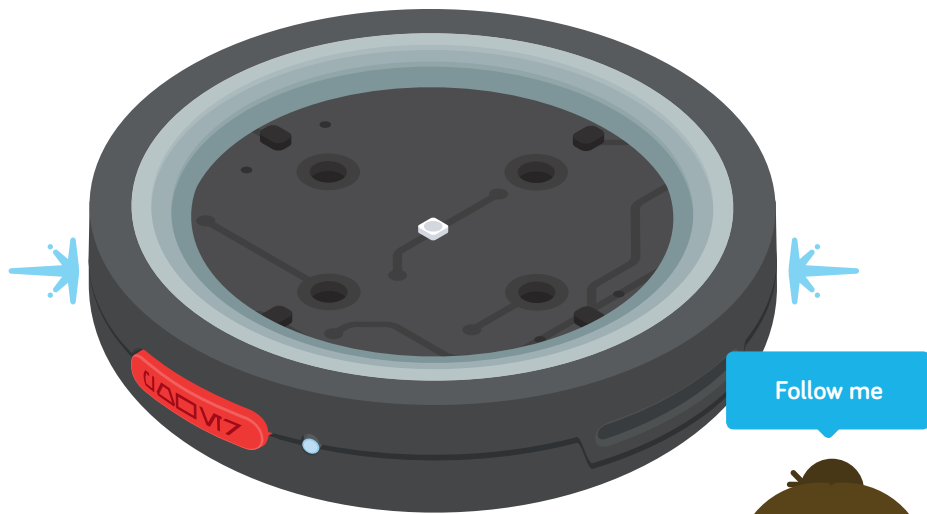


Take the top case with the light ring



Push it onto the bottom case

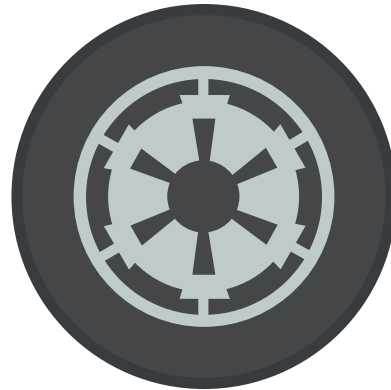
Until it clicks



Choose an icon

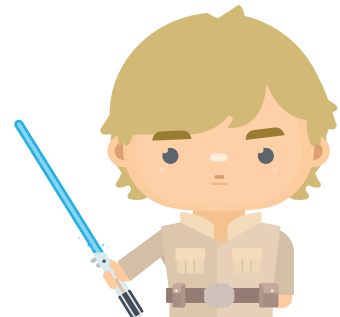


Rebel
7M3VN

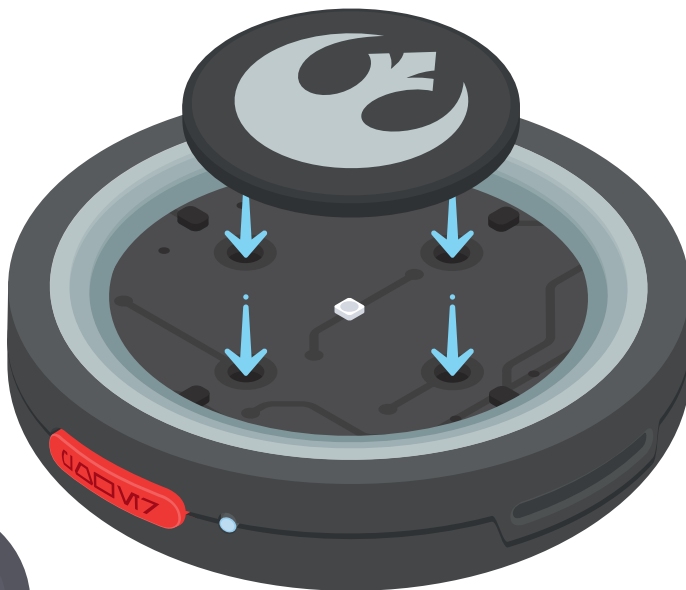


Galactic Empire
WKNK1414 V1ZU17V1

Are you light side or dark side?



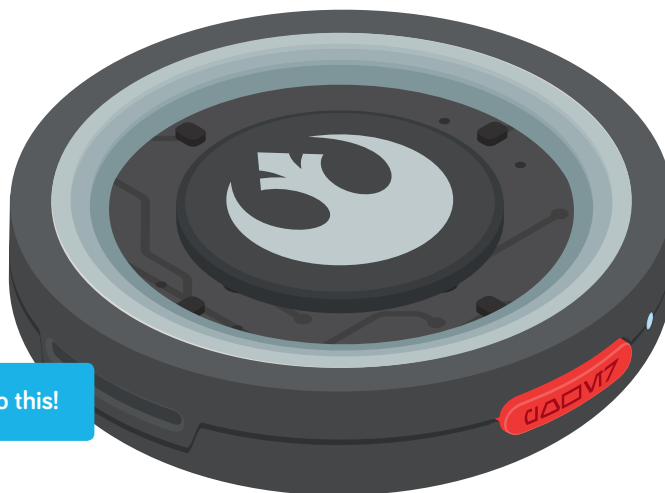
Place it on top



Push the pegs into the holes



To turn it on...

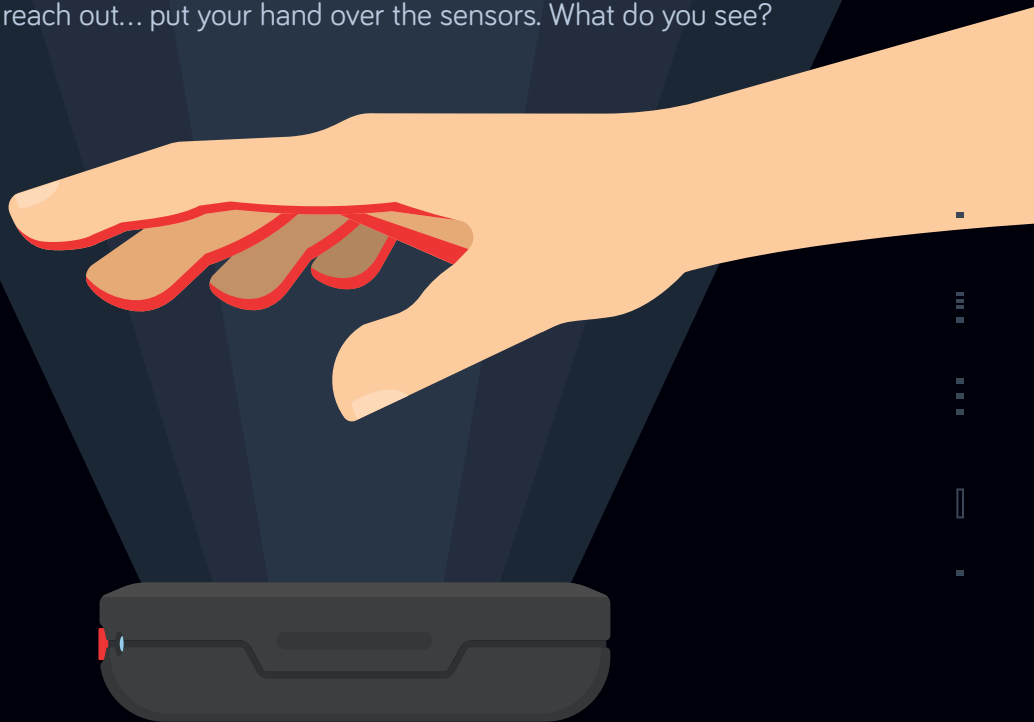


We're gonna do this!



press the power button

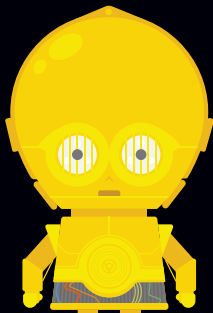
Now, reach out... put your hand over the sensors. What do you see?



The PCB tells the lights to brighten as your hand gets closer to the sensors

The PCB also turns your movements into 1s and 0s – binary code

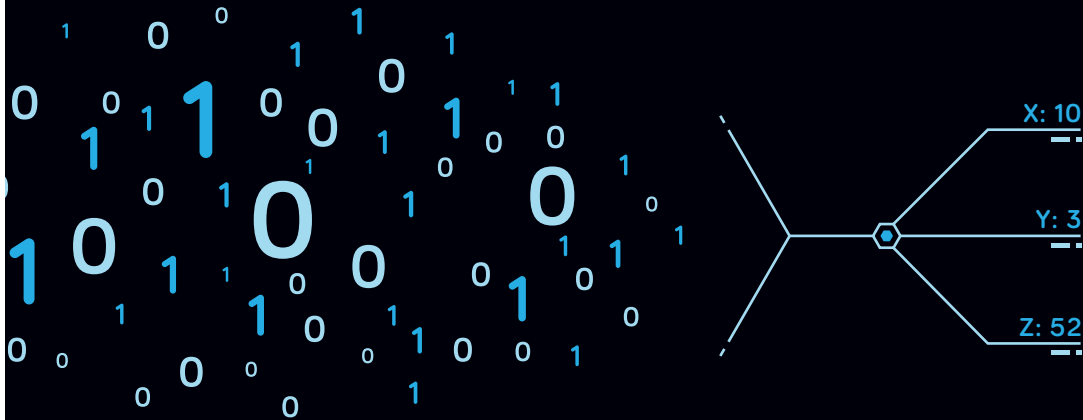
I am fluent in over six million forms of communication



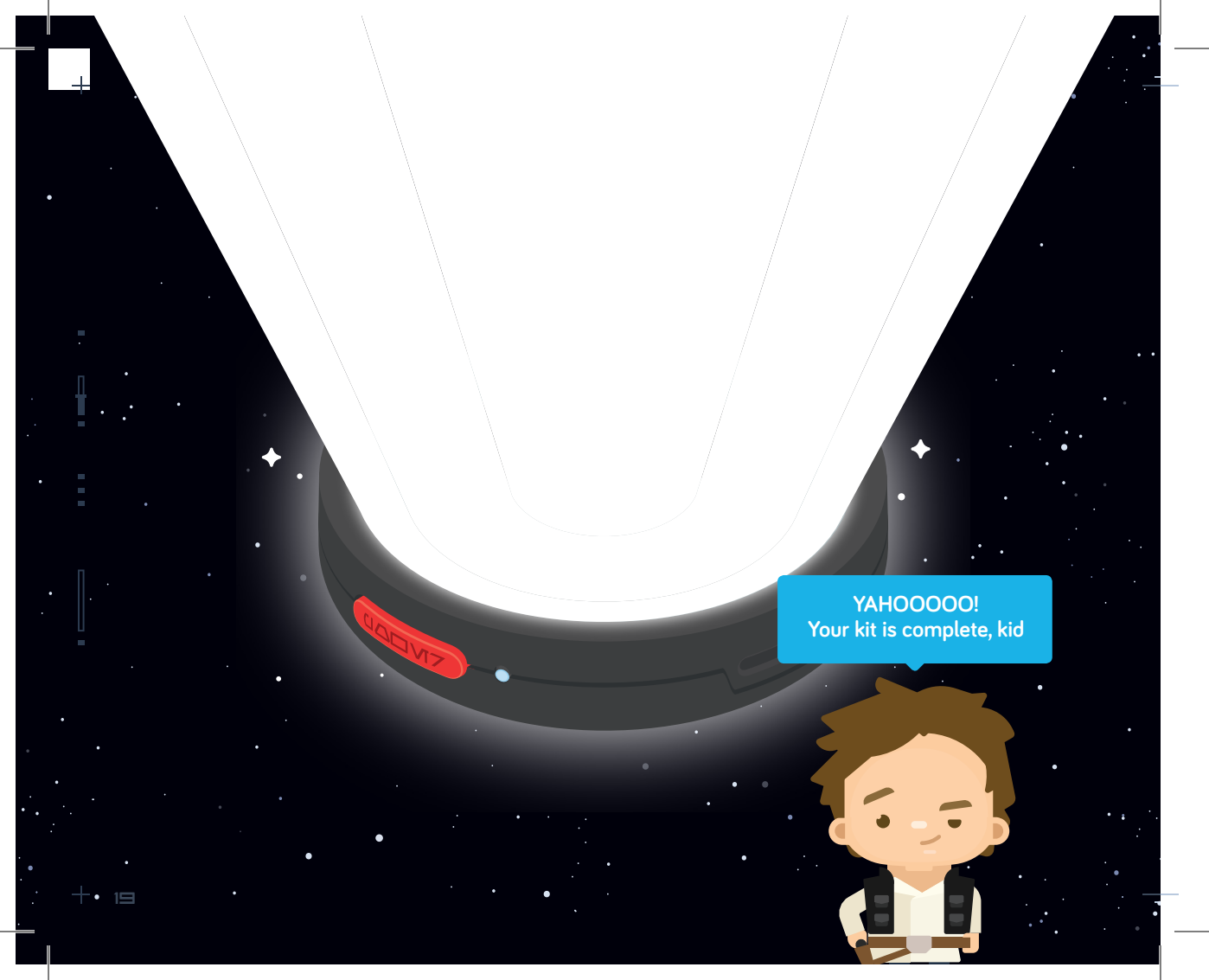
A simple language your computer can understand



It beams those 1s and 0s to your computer



letting you make things move on a screen



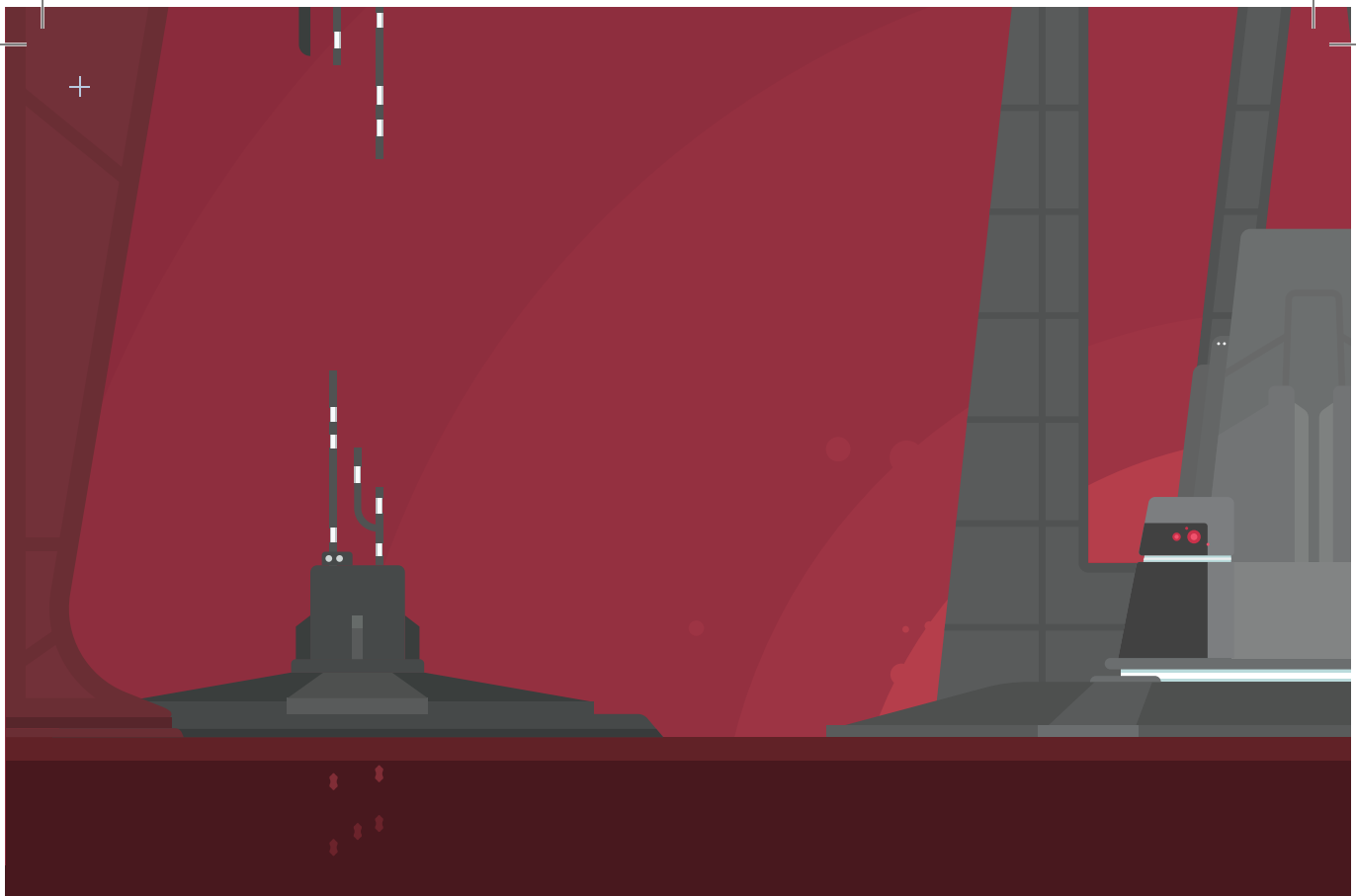
YAHOOOOO!
Your kit is complete, kid

Now, simply download the **Star Wars™ Coding Kit by Kano** app onto your device to start playing with the **Star Wars™ The Force™ Coding Kit** motion sensor

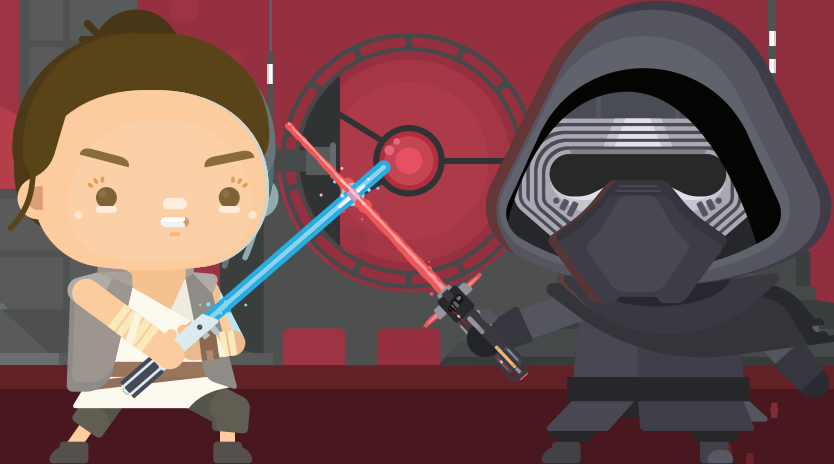


Download it at kano.me/app/starwars





Go from learner to master as you create endless *Star Wars*™ adventures



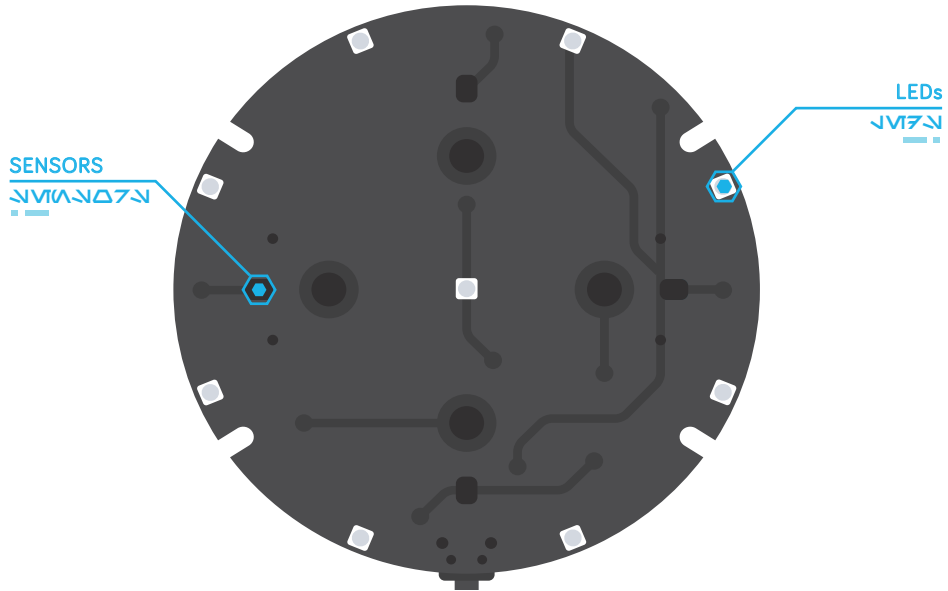
The more you train, the more powerful you'll become



a galaxy of tips

Κ ΓΚΥΚΔΥ ΔΡ ↓ΠΝ

Take a closer look



It's made of sensors, LEDs, microprocessors, resistors and tracers

A diagram showing a top-down view of a sensor unit. The sensor is a black rectangular device with a circular lens in the center. A red, cone-shaped beam of light originates from the lens and spreads outwards, filling the upper half of the frame. The background is dark gray with some circuit-like patterns. The text 'Each sensor has two lenses. The top lens sends out an infrared beam' is positioned above the sensor. The text 'Infrared is a type of light invisible to humans' is positioned below the sensor. The page number '26' is in the bottom right corner.

Each sensor has two lenses. The top lens sends out an infrared beam

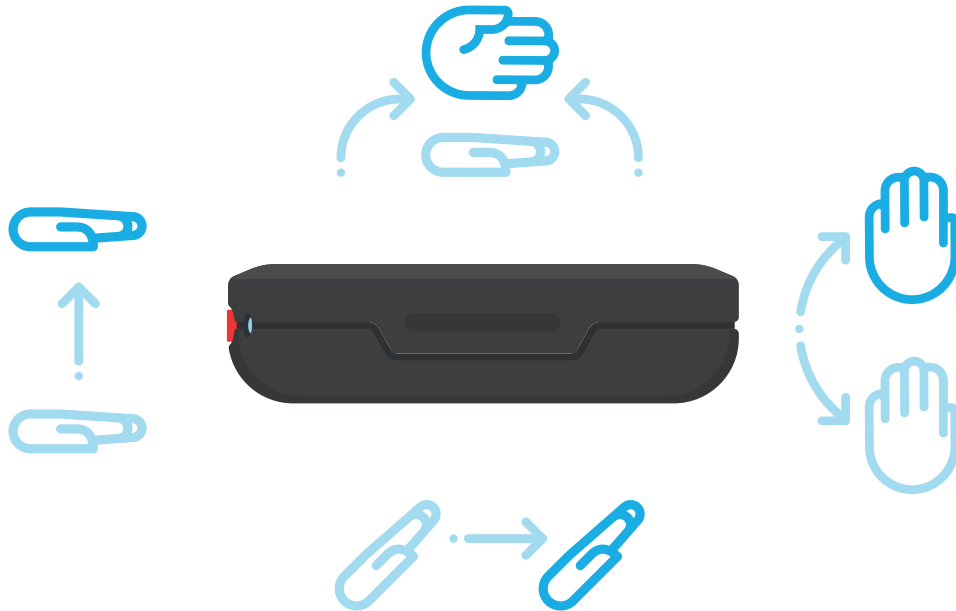
Infrared is a type of light invisible to humans

When your hand breaks the beam, it gets reflected back to the bottom lens



so the sensor can see where your hand is

All four sensors work together to tell if your hand is going...



up, down, forwards, backwards, left, right, or tilting

The power button should always point towards you

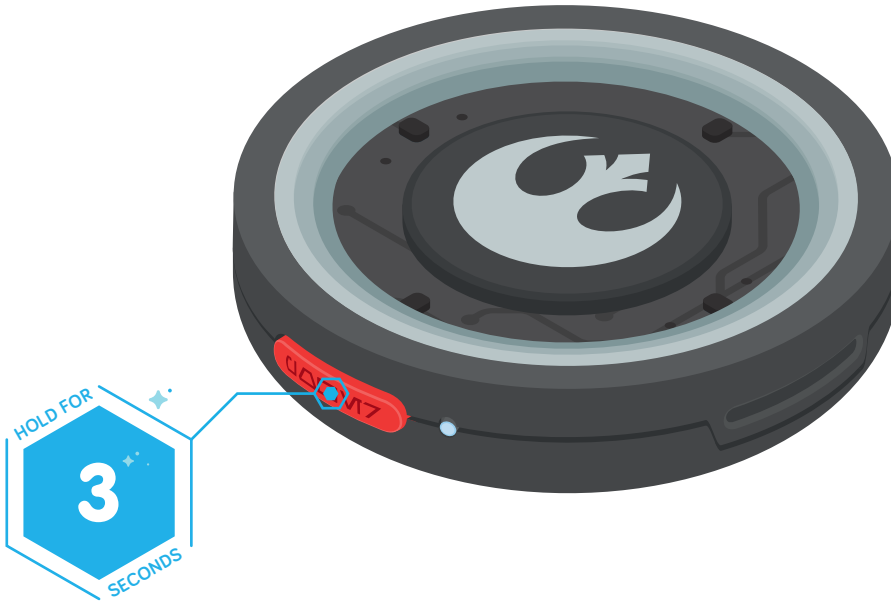


I'll take good care of her.
She won't get a scratch



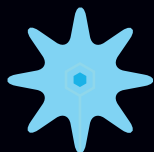
so the kit knows which way it is facing

To save battery power, put the kit into sleep mode



Press and hold the button for three seconds

The Bluetooth light on the side will tell you if your kit is connected



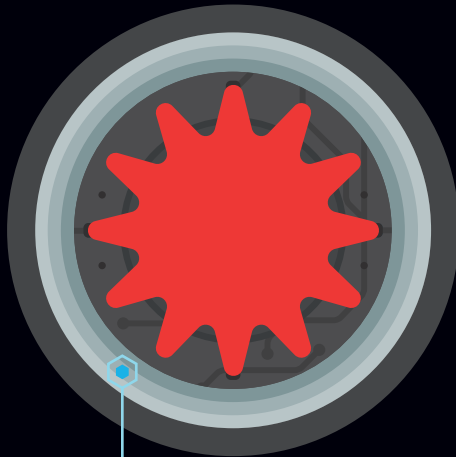
FLASHING
SEARCHING FOR
YOUR DEVICE



SOLID BLUE
CONNECTED TO
YOUR DEVICE

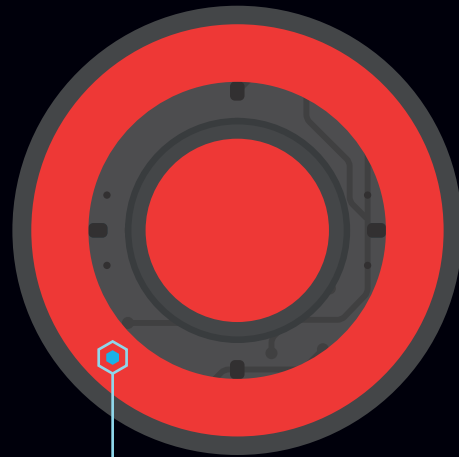


The lights on top also tell you different things



LOW BATTERY

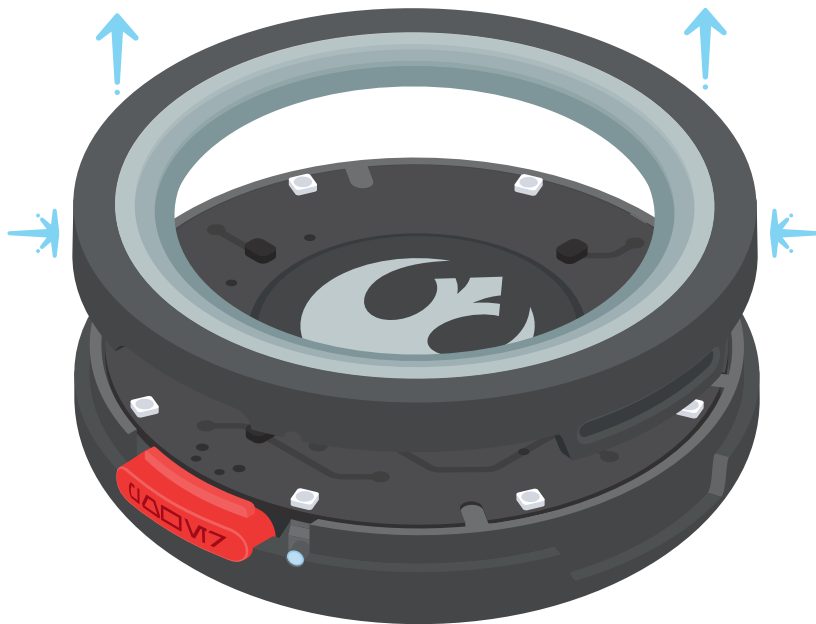
100 3K 17V



CHANGE BATTERIES

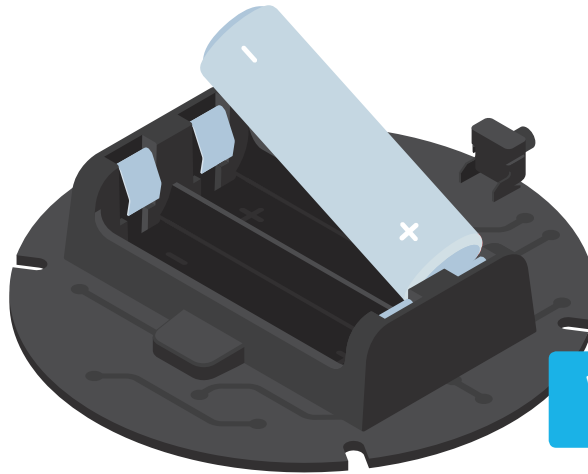
100 3K 17V

To change the batteries, press and hold the side



Pull the top case off

Take out the PCB



Why don't we just
use the Force?

and change the batteries



Aurebesh is a language in the *Star Wars*™ galaxy



A

B

C

D

E



F

G

H

I

J



K

L

M

N

Try to translate some of the Aurebesh words you see throughout this book



O



P



Q



R



S



T



U



V



W



X

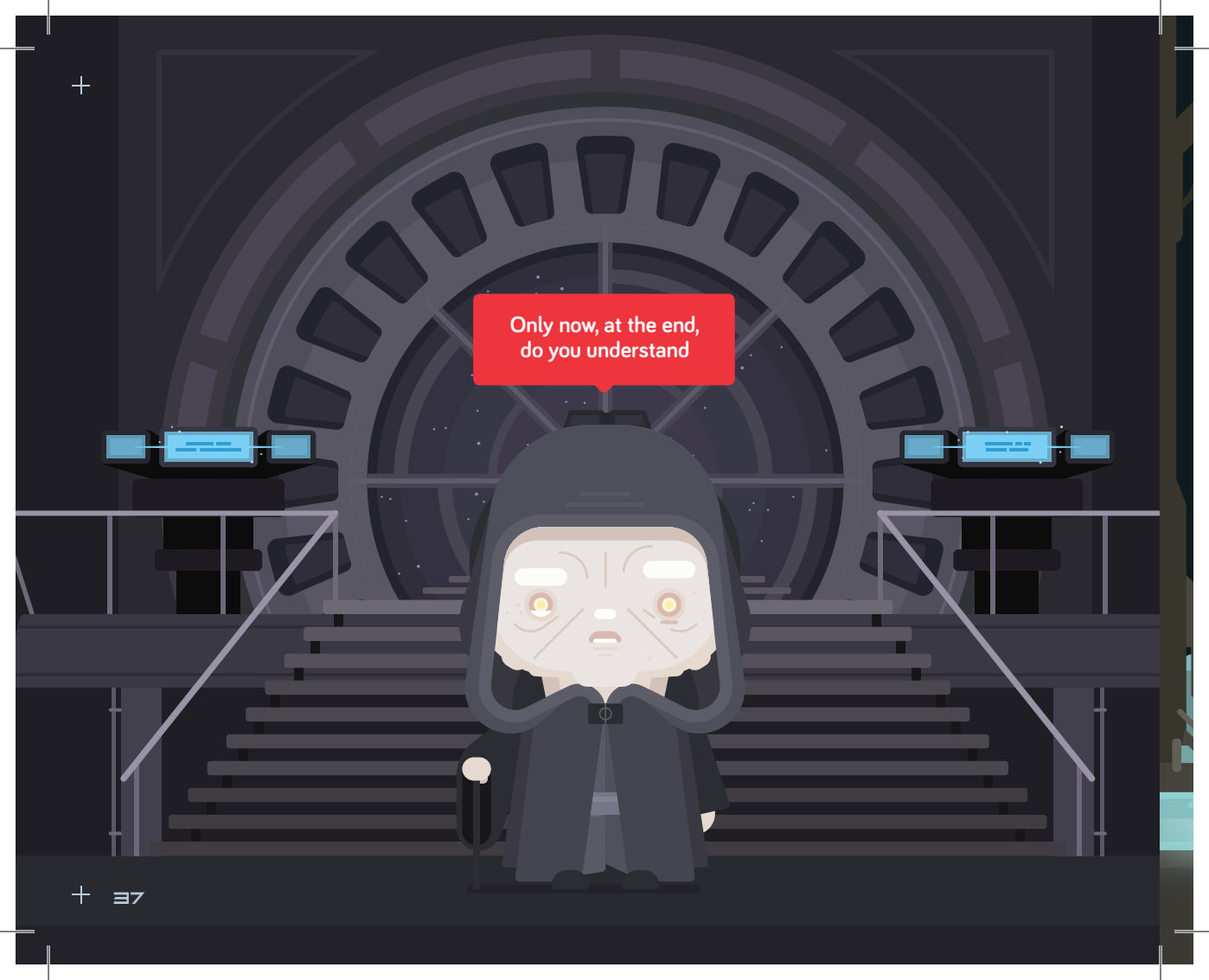


Y

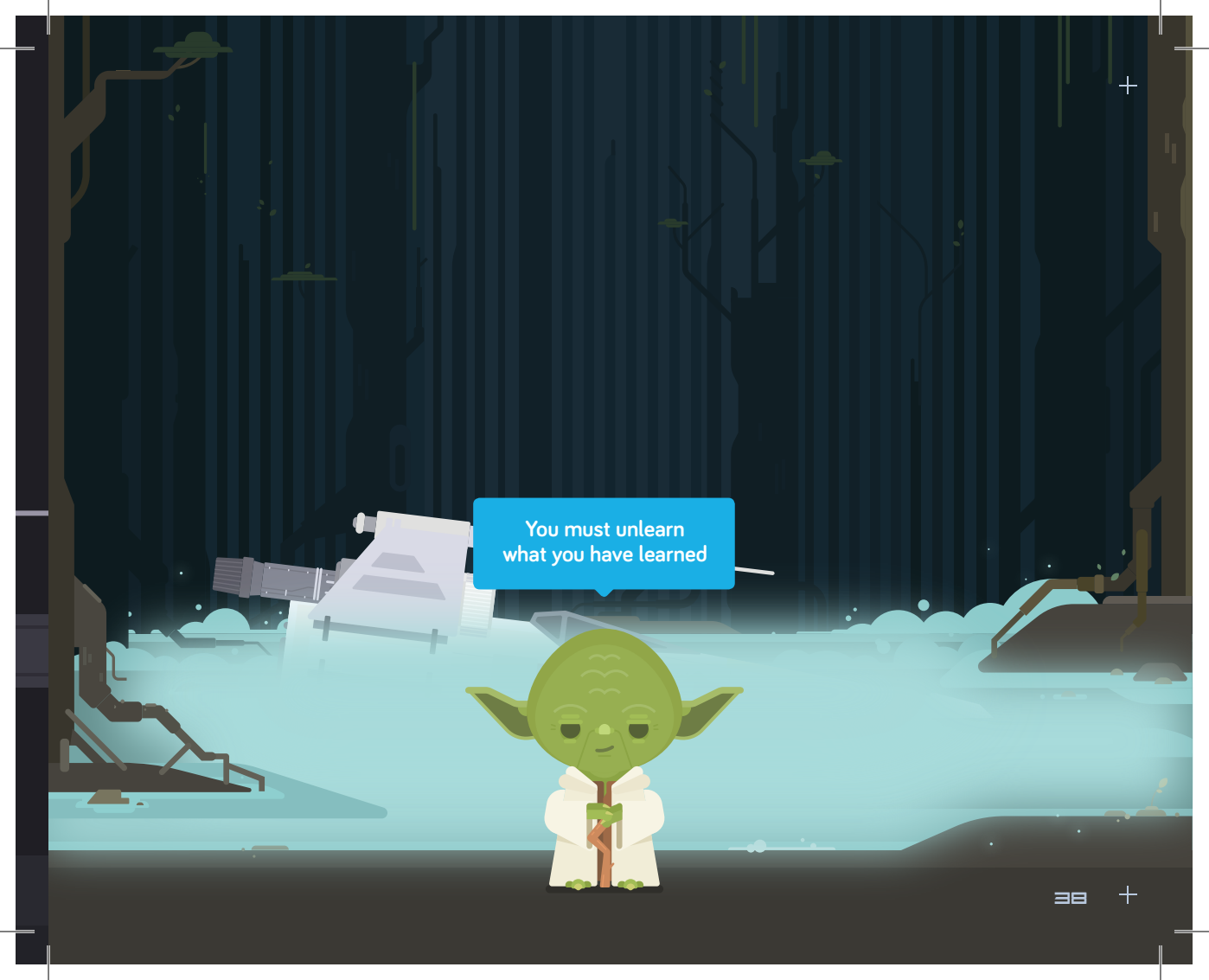


Z





Only now, at the end,
do you understand



You must unlearn
what you have learned

Something not working? Get help fast at help.kano.me

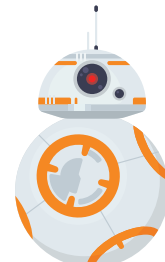
Use these help codes

The Force™ Coding Kit not powering up FK2

The Force™ Coding Kit won't connect to device FK3

Help installing or using the *Star Wars*™ Coding Kit by Kano app FK4

Device isn't supported FK5



FCC Statement

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: (1) Reorient or relocate the receiving antenna. (2) Increase the separation between the equipment and receiver. (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. (4) Consult the dealer or an experienced radio / TV technician for help.

IC Caution:

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.





anyone can make



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