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Bike test

FIRST RIDES

Victoria Hazael and four-year-old daughter Martha test two starter pedal bikes for children: an Islabikes Cnoc 16 and a Frog 48

THE DESIGN OF bikes for children has come a long way in the last dozen years. There are still plenty of heavy 'bicycle shaped objects', but there's now a choice of well-designed junior bikes that are lightweight, correctly proportioned and, as a consequence, much easier to learn to ride on. Islabikes and Frog Bikes, both UK companies, are two of the best-known brands.

Islabikes was founded in 2006 by triple British cyclocross champion Isla Rowntree, who couldn't find decent children's bikes for her nieces and nephews. She began designing her own, and Islabikes quickly became the brand that enthusiasts bought for their children and grandchildren. The industry was forced to raise its game.

Islabikes are only available direct; they're not sold in shops. To try out a bike, you can visit their test track in Ludlow or attend events all over the UK. Alternatively, you can order a bike after measuring your child at home. If it's not quite right you can send it back, even if it's been ridden outdoors.

Frog Bikes was started in 2013 when

Jerry and Shelley Lawson wanted to buy quality bikes from a bike shop for their young children and found it difficult. They quit the corporate world and launched their own company, aiming to sell lightweight children's bikes through independent dealers. There are now 900 UK bike shops selling Frog Bikes. You can get your child measured and try out the bikes in store.

FRAME & FORK

Both bikes are robust but light enough for a four-year-old rider to pick up. The frames are aluminium, as is the fork of the Frog 48; the Cnoc 16's fork is steel. While the bikes are visually different, the frame geometry is remarkably similar.

The Cnoc's frame and fork comes with a five-year guarantee (two years for components). Frog Bikes offer a standard warranty of two years, which you can extend to five to cover the frame and fork. Both aren't valid if you sell the bike or pass it on. Frog Bikes provide a small bottle of touch-up paint, which was useful as ours picked up scratches.

You can fit mudguards to both bikes.

They're essential if your child will be cycling to school and you don't want a muddy uniform. The Cnoc 16 has standard mudguard fittings, with chromoplastic guards available from Islabikes for £24.99. Mudguards are standard on the Frog 48, although missing from our test bike. The Frog's shorter guards bolt to the fork crown and seat-stay brace; there are no eyelets at the dropouts.

COMPONENTS

Each bike is a singlespeed with a 27in gear. Pedalling either bike should be even easier for little legs than the small gear size suggests, because both Islabikes and Frog Bikes provide sensibly short (102mm) cranks with a narrow pedal tread (or Q-factor).

A smaller distance between the pedals makes it more practical for a child to pedal, and it reduces the wobble from left to right. Frog Bikes have worked hard to reduce the Q-factor on their bikes. They paid for



BOTH ISLABIKES AND FROG BIKES PROVIDE SENSIBLY SHORT (102MM) CRANKS WITH A NARROW PEDAL TREAD (OR Q-FACTOR)



Above: The specially-made Islabikes tyres are designed for use on road and off



**ISLABIKES
CNOC 16**

There are two smaller
Cnoc models: the Cnoc 14
Small and Cnoc 14 Large



FROG 48

The number in the
name gives the
minimum inside leg
length in centimetres



Clockwise from far left: Easy-reach micro brake levers; Hebie Chainglider; the Frog's slicks suit hard surfaces; your tester, Martha



WEIGHT IS MORE IMPORTANT FOR A JUNIOR BIKE THAN AN ADULT'S; THE AVERAGE FOUR-YEAR-OLD WEIGHS ONLY 17KG

research at Brunel University, and in 2015 they redesigned their cranks. Nevertheless, the Cnoc 16 has a marginally smaller Q-factor (130mm versus 132mm). For comparison, the Hoy Bonaly has a Q-factor of 140mm.

Both bikes have small pedals with narrow sides, so that if your child tries to pedal on the sides by accident, the pedal rotates so the foot lands on one of the flats.

A chainguard is a useful addition for a small child's bike. It doesn't just keep oil and grease off clothes, it stops a dress, skirt, or coat being torn. It also protects inquisitive fingers. The Cnoc 16 has a tiny Hebie Chainglider, which is lightweight and comes off easily if you need to fix a puncture. The Frog 48 has only a chainwheel

guard, but a full chainguard is available from Frog Bikes on request.

The Frog 48 comes with a choice of hybrid tyres or off-road tyres, which offers flexibility. In practice, our family rides take in all kinds of surfaces, so changing tyres regularly would be a faff. I suspect most families will stick to the hybrid tyres, which are great on most surfaces but offer limited grip if your little one likes flying down hills in the mud.

With the Cnoc 16, you don't get a choice of tyres as standard, but you do get specially made ones from Islabikes with lighter weight

casings. I asked Isla why she bothered to design her own, when most children's bikes have Kenda tyres. She said: 'I wanted a tyre that would perform well on all the surfaces children mostly ride on, a tyre with some knobbles so that they grip on the grass and paths. But you want those knobbles not to

be too big as you don't want them too draggy, and you want them fairly closely spaced so they are not too much hard work on tarmac. There is an optimum blend of those, and an optimal tyre width for the wheel diameter.' The new Islabikes tyres have a puncture resistance strip in the casing and, like the Frog, reflective sidewalls. The Cnoc 16's wheels are lighter, with fewer spokes.

The Frog 48 does have one thing the Cnoc lacks: an anti-jackknife headset, so the steering won't turn beyond a certain point, which prevents your child trying to ride the bike with the handlebar facing backwards.

CYCLING WITH KIDS

For advice on cycling with children, including a video on how to teach a child to ride a bike, see cyclinguk.org/family.

OTHER OPTIONS



1 Hoy Bonaly 16 £260

I'm not sure why this bike has a white saddle and white grips – they turn grey and look grubby really quickly. evanscycles.com



2 Wiggins Macon £190

Another aluminium singlespeed that gets some of the 'big ticket' items (crank length, weight) right. halfords.com



If your child will be riding off-road a lot, treaded tyres are an option for the Frog 48

➤ (This was an issue for my son when we tested balance bikes.)

I'd like to see both bikes with a more obvious, coloured 'minimum insert' line on the seatpost, so inexperienced parents don't raise the saddle beyond its safe limit.

RIDE

The heavier a child's bike is, the harder it will be to ride. Weight is more important for a junior bike than an adult's; the average four-year-old weighs only 17kg – perhaps a quarter or a fifth of your weight. It follows that half a kilo difference for a four-year-old is like 2-2.5kg for you. So the fact that the Cnoc 16 is lighter by 600g is significant. Yet both bikes were light enough for Martha to pick up and carry over obstacles like kerbs and tree roots. (Note that some manufacturers list weights without pedals!)

Martha and I tested the bikes on grass, woodland paths, disused railway lines, tarmac, and through mud. On one of our tests, I got Martha to weave in and out of small cones. The Islabikes Cnoc 16 seemed slightly more manoeuvrable than the Frog 48; it has less trail and thus slightly lighter steering. The Cnoc's more upright riding position, due to the higher handlebar, may have been a factor too – Martha seemed to look ahead more rather than at the ground.

Isla Rowntree said she designed the higher-rise handlebar as 'regardless of what types of cycling they do, three- and four-year-olds don't bend over well – the organs in their tummy are quite big relative to their size, so they tend to have bigger tummies and it's more comfortable for them to sit in an upright position.'

Frog Bikes offer a stem riser adapter (£20) to change the height of the handlebar. I'd add this. Frog Bikes Head of Research and Development Dr Tom Korff said: 'The research we do with Brunel University

showed that some children want to be more upright and others don't mind. Our bikes are child-focused and designed around the child, so with the spacers you can choose what suits your child.'

The Cnoc's slightly lower bottom bracket meant Martha's feet could quickly reach the ground, but its slimmer pedals also meant she didn't clip them when cornering.

SUMMARY

It's a close call between the Cnoc 16 and Frog 48. They are extremely well-designed children's starter bikes, and you wouldn't go wrong with either. There is no difference in gear ratio, many of the dimensions are similar, and both have brake levers that are easy for a small child to use.

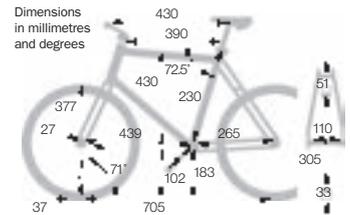
I thought Martha might be biased towards the Frog, as that's the brand she learned to ride on a year ago. Yet the Islabikes Cnoc 16 edged ahead as her favourite – and mine.

I particularly liked the Cnoc's handlebar setup and its really thin but safe and sturdy grips, which don't break when the bike is dropped on the ground. (We have replaced a set of Frog grips.) There are other, easy-to-overlook details where the design of the Cnoc 16 is a little more refined. (Islabikes have been improving and fine-tuning it for 12 years.) Taken together, things like the bottom bracket height, the lower weight, the tyres, the provision for full-length mudguards, and the chainguard help make the Cnoc 16 a particularly confidence-inspiring and practical starter bike. 📌



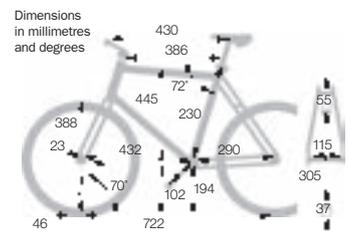
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Tech specs



ISLABIKES CNOC 16

- PRICE:** £289.99
- SIZES:** one size (42-52cm inside leg)
- WEIGHT:** 6.05kg (inc pedals)
- FRAME & FORK:** 7005 T6 aluminium frame with track ends, chromoly steel fork, both with mudguard fittings
- WHEELS:** 34-305 (16x1.35) Islabikes lightweight 72tpi tyres, Islabikes single wall aluminium rims, 16 spokes (radial front, x1 rear), Allen-bolted hubs (steel rear, aluminium front)
- TRANSMISSION:** Islabikes resin pedals, Islabikes aluminium 102mm cranks, Islabikes aluminium 25t chainring, 107mm cartridge bottom bracket, 14t freewheel. 1 ratio, 27in.
- BRAKING:** Islabikes aluminium micro levers, mini V-brakes
- STEERING & SEATING:** Islabikes ultra slim (23mm) bulb-ended grips, Islabikes aluminium riser bar (100mm rise, 440mm width, 22mm dia), Islabikes aluminium 43mm threadless stem, 1in threadless headset. Islabikes saddle, 25.4x200mm aluminium micro-adjust inline seatpost, Allen-bolt seatpost clamp
- EQUIPMENT:** bespoke Hebie Chainglider. Other equipment available islabikes.co.uk



FROG 48

- PRICE:** £250
- SIZES:** one size, 48cm+ inside leg
- WEIGHT:** 6.65kg (inc pedals)
- FRAME & FORK:** aluminium frame with track ends, aluminium fork
- WHEELS:** 40-305 (16x1.75) Kenda hybrid tyres, aluminium rims, 20 spokes x1, Allen-bolted aluminium hubs
- TRANSMISSION:** plastic pedals, 102mm aluminium cranks, 32t steel chainring with chainwheel guard, 107mm cartridge bottom bracket, 18t freewheel. 1 ratio, 27in
- BRAKING:** Tektro aluminium JL352 RS-V levers, Tektro C310 aluminium V-brakes
- STEERING & SEATING:** Frog Bikes slim (29mm) locking grips, Frog Bikes aluminium handlebar 445x25mm, 40mm threadless stem, 27mm anti-jackknife headset. Frog Bikes saddle, 27.2x200mm aluminium seatpost, QR seatpost clamp (allen bolt as standard)
- EQUIPMENT:** Plastic mudguards front and rear (but they were missing from the test bike). Other equipment available frogbikes.com