

Tech Solutions for Great British Athletes

KS2 Computing Science Slides

By

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Name as many athletics events as you can in 30 seconds?

Long jump
Triple jump
High jump
Pole vault
Shot put
Discus throw

60 m hurdles
100 m hurdles
110 m hurdles
400 m hurdles
3000 m steeplechase
4×100 m relay
4×400 m relay

Name as many athletics events as you can in 30 seconds?

Hammer throw
Javelin throw
Pentathlon
Heptathlon
Decathlon

60 m
100 m
200 m
400 m
800 m
1500 m
3000 m
5000 m
10,000 m

Blind & Deaf athletes overcome extra barriers to participate

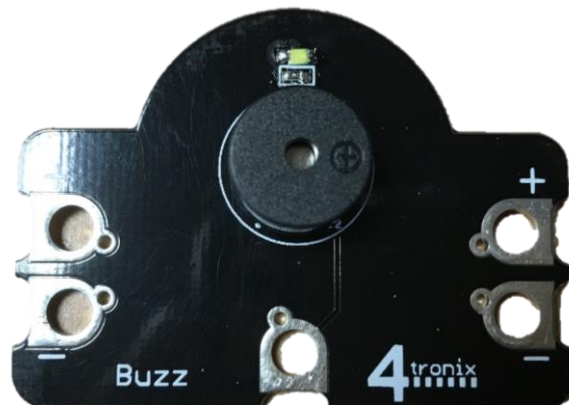
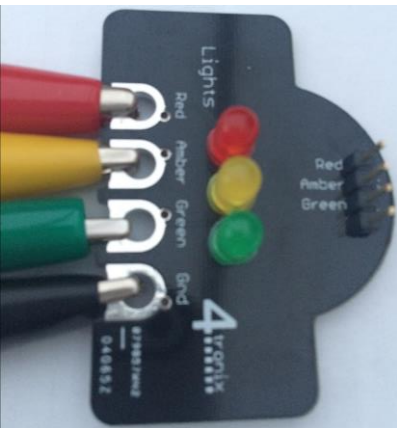
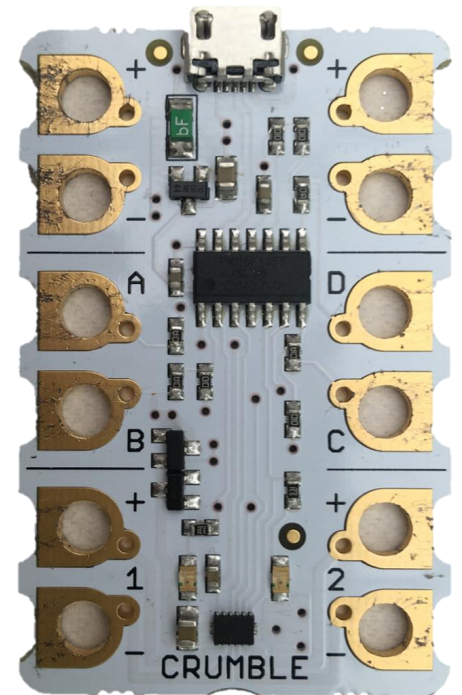
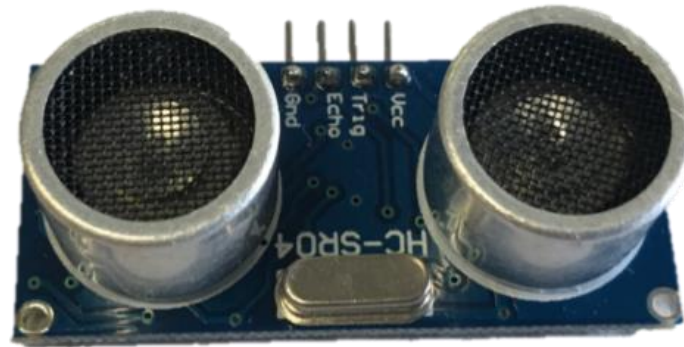


Libby Clegg
Scotland & GB
Silver Medal
Holder T12 Para
Olympics Beijing
2008 & London
2012

Libby is
registered blind

How can technology help blind or deaf athletes participate or train?

- Crumble boards
- Distance sensor that can detect up to 100cm away
- Buzzer
- Lights



The BIG idea

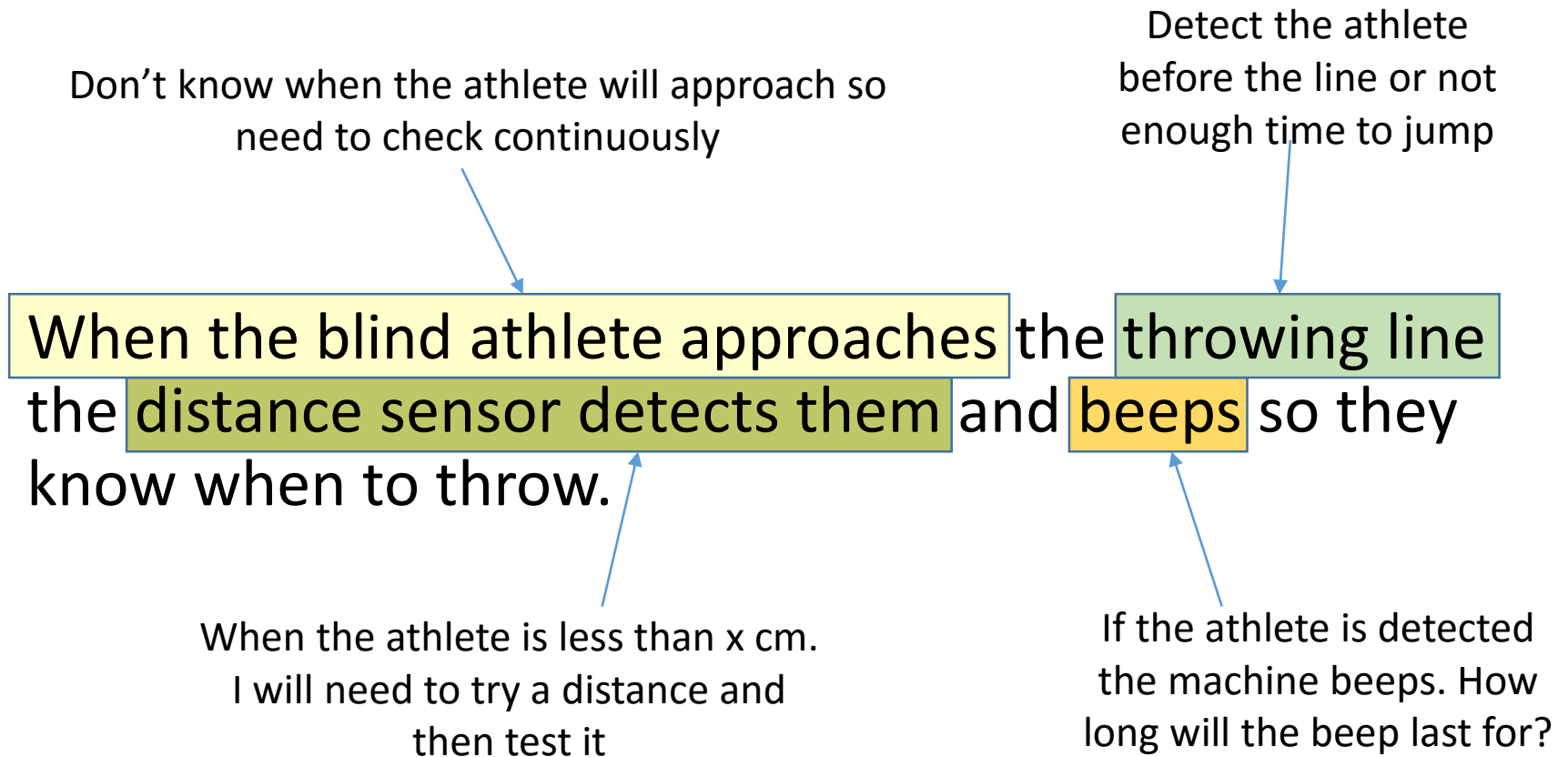
I look for a range of solutions to the same problem

- What event or training exercise will you choose?
- Which part of the exercise or event will tech help with?
- Describe how it will work with your partner
- Describe how your tech solution will help your athlete on your sheet in the BIG idea box

I can contribute useful ideas to a partner or group

I can discover the most important part of a problem (abstraction)

Big Idea Decomposed



Can you break your big idea up into parts (decomposition)



Big Idea into Code

Don't know when the athlete will approach so need to check continuously

Detect the athlete before the line or not enough time to jump

When the blind athlete approaches the throwing line the distance sensor detects them and beeps so they know when to throw.

When the athlete is less than x cm. I will need to try a distance and then test it

If the athlete is detected the machine beeps. How long will the beep last for?



Can you break your big idea up into parts to help you decide which code to use?

Circuit Diagram

- Use your Crumble Maker Cards to work out where the wires need to go
- Draw them in on the sheet
 - Use a ruler
 - Draw coloured lines
 - Try to cross wires as little as possible

