The imagination driving Australia’s ICT future.

When the Arduino meets Year 9

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NCSS Challenge

- High school students (Yrs 7–12)
- Online at home learn to program in Python
- Starts in August each year
- Residential course in January.
Started an *embedded* challenge in 2008
Same format
Started an *embedded* challenge in 2008
Same format — with hardware to play with
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**EMBEDDED CHALLENGE**

Started an *embedded* challenge in 2008
Same format — with hardware to play with

http://challenge.ncss.edu.au/
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EMBEDDED CHALLENGE

JANUARY 12, 2010

WHEN THE ARDUINO MEETS YEAR 9...
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**EMBEDDED CHALLENGE**
Too much time debugging hardware

Wiggle a wire and you’re gone!!!
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**Embeddéd Challenge**

3-line LCD display

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**EMBEDDED CHALLENGE**

Infra–Red Tx and Rx
Two push buttons
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**EMBEDDED CHALLENGE**

8 LEDs

JANUARY 12, 2010

WHEN THE ARDUINO MEETS YEAR 9...
When the Arduino meets Year 9...

Potentionmeter
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**EMBEDDED CHALLENGE**

**Temp. sensor**
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EMBEDDED CHALLENGE

LDR

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Piezo Buzzer
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**EMBEDDED CHALLENGE**

**Acelerometer**

*January 12, 2010 When the Arduino meets Year 9...*
Connector for iRobot
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EMBEDDED CHALLENGE

Connector for iRobot

3-line LCD display
Infra-Red Tx and Rx
Two push buttons
8 LEDs
Potentionmeter
Temp. sensor
LDR
Piezo Buzzer
Acelerometer
On-line course very similar C content
- C programming
- $I^2C$
- debouncing
- Boolean logic
- *extra* challenge: What can you do with the board?
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Zoi Petroulias

http://sites.google.com/site/copthat2009