

Little Bits Challenge

About

Challenge cards develop a students critical thinking and problem solving abilities. This builds the basic skills that are required for Science Engineering and Design.

How to Play

- Print out the cards.
- Cut along the dotted lines.
- Fold the cards in half.
- Glue, tape or laminate the cards for durability.

The activity is structured into small tasks much the way video games challenge kids.

Once they complete a level they raise their hand and the teacher checks their circuit. If they have solved the objective the teacher gives them the next level card. If they haven't they need to try again. Each kid gets to work at their own pace.

Note there is no "correct" circuits...only correct solutions to the problems. And make sure they struggle...don't make it too easy for them by telling them what to do. We tell computers and robots what to do, we need to teach our children how to learn.

Level 1

DELUXE

Make a blue light

**Little Bits
Challenge**

Level 2

DELUXE

Make a buzzing noise

**Little Bits
Challenge**

Level 3

DELUXE

Make a green light that
flashes every second

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Challenge**

Level 4

DELUXE

Make a blue light that you
can adjust brighter or dimmer

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Level 5

DELUXE

Make a red light that:
turns on when a button is pressed
and turns off when the button is
released

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Level 6

DELUXE

Make a motor that turns on
when you clap your hands

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Level 7

DELUXE

Make a buzzing sound that
turns on and off quickly

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Level 8

DELUXE

Make a ambulance sound

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Level 9

DELUXE

Make a motor that turns on when you clap your hands and stays on until you clap your hands again (note at least a 3 second delay)

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Level 10

DELUXE

Make a purple light that turns off after a short time

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Level 11

DELUXE

Make a light that wraps around a pencil and turns off when a button is pressed

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Level 12

DELUXE

Make a flashing red light and a buzzer that turns on and off quickly

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Level 13

DELUXE

When a button is pressed a pink light turns off and a buzzer turns on

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Level 14

DELUXE

Make a pencil that draws an arc on paper controlled by a slide switch

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Level 15

DELUXE

Make something that moves around by itself

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Level 16

DELUXE

Make something that claps when you clap your hands

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