Success with Primary Computing

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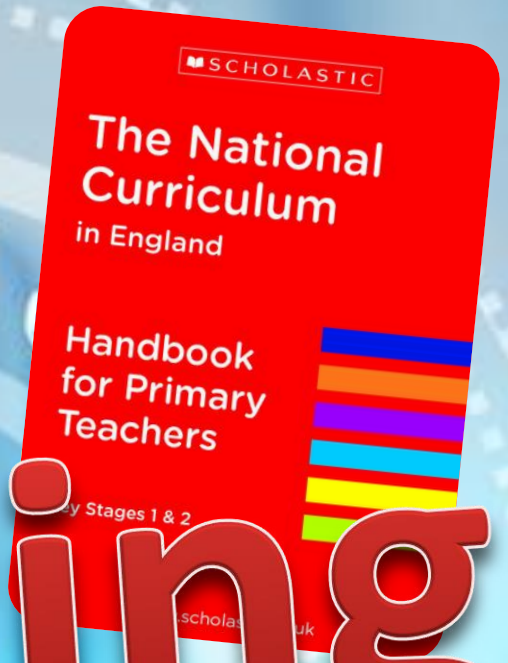
Mr Bailey is a visionary for how ICT can be used creatively to motivate, stimulate and raise standards.
Nick Anderson (Headteacher - Bede Community Primary School - Gateshead)

Primary Curriculum 2014



Computing

Programming/Coding

Algorithms????

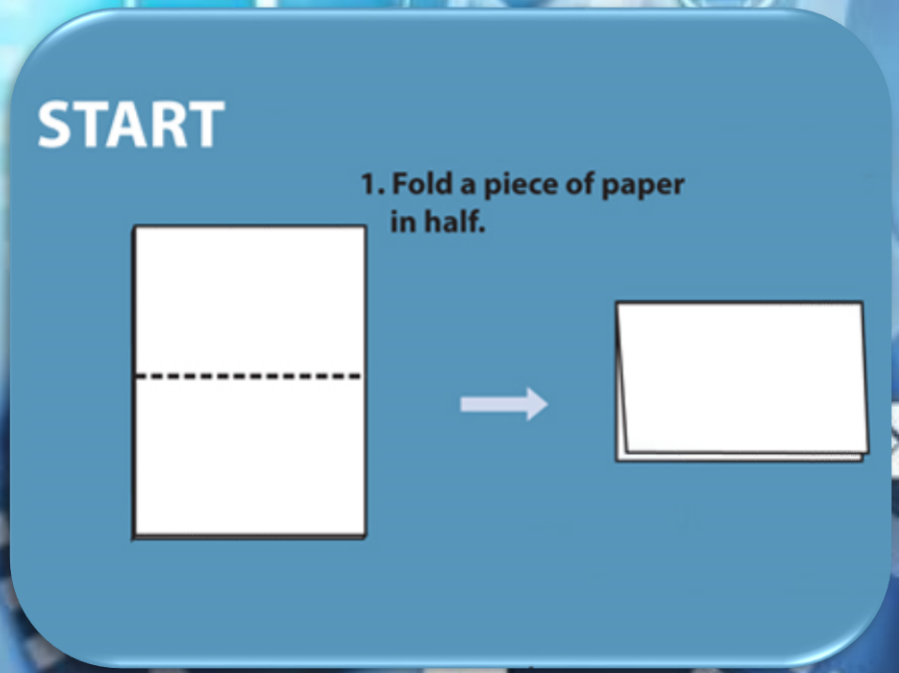
Helping you succeed with CURRICULUM 2014

Purpose of study:

A high-quality computing education equips pupils to use computational thinking and creativity to understand and ***change the world.***

Success with Primary Computing

Algorithm: A **PRECISE** step-by-step set of instructions to achieving a specific goal



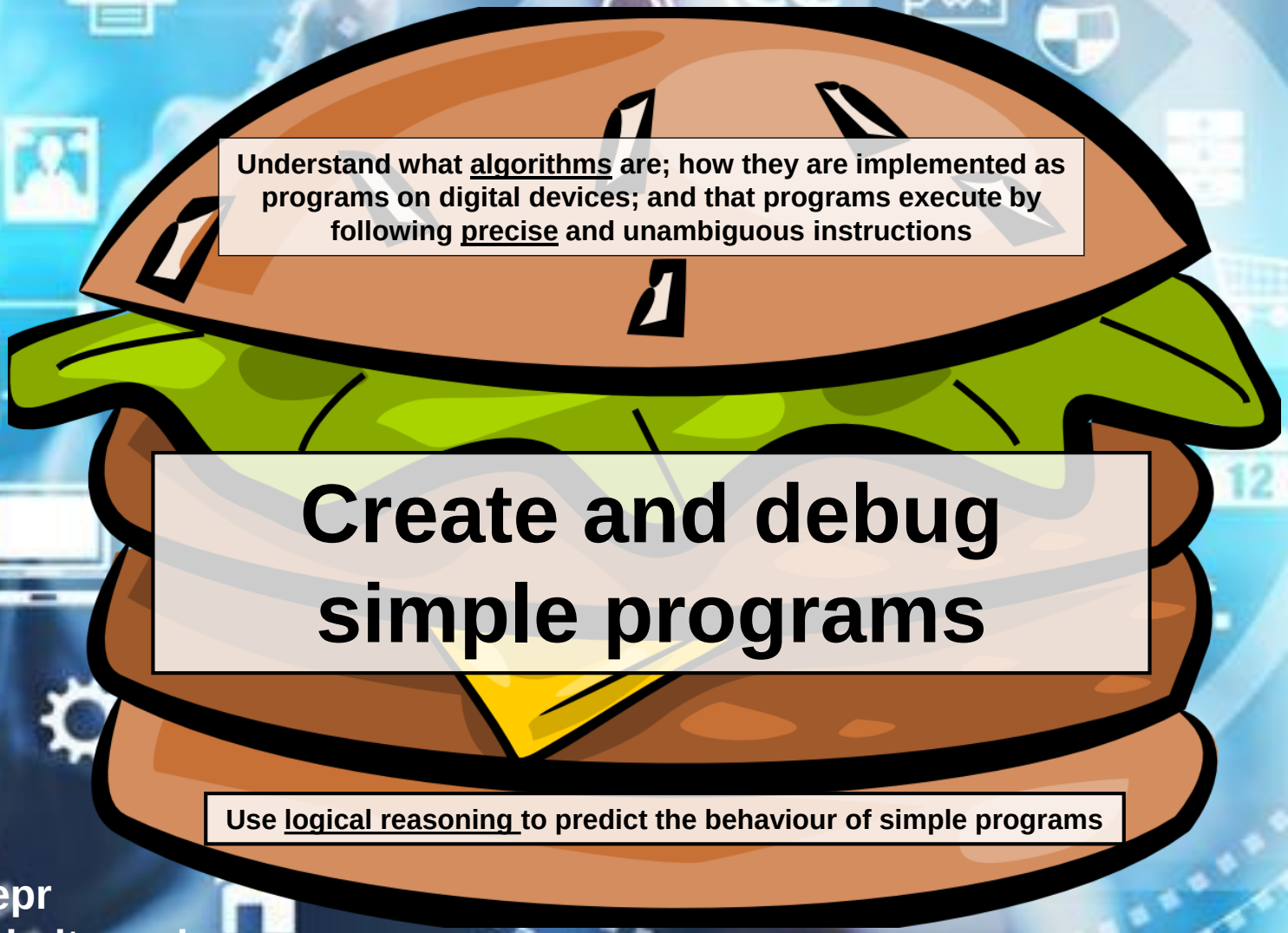
Key stage 1

Naace Delivery Partner

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

KS1 Programming Burger



Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions

Create and debug simple programs

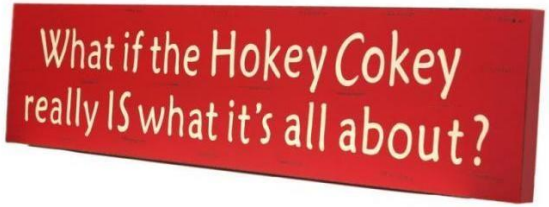
Use logical reasoning to predict the behaviour of simple programs

@baggiepr
www.code-it.co.uk

Algorithms

YOU PUT YOUR
LEFT LEG IN
YOUR LEFT LEG OUT
IN OUT IN OUT
YOU SHAKE IT ALL ABOUT

Algorithm – *A **<u>precise</u>** step-by-step set of instructions to achieving a specific goal.*



The Algo-rhythm!

Algorithm – *A **precise** step-by-step set of instructions to achieving a specific goal.*

Algorithms

PE lessons etc are a great place for introducing algorithms. We all have our own personal *'getting ready'* algorithm. Pupils need to understand that ***'put on shoes'*** is not a single instruction.

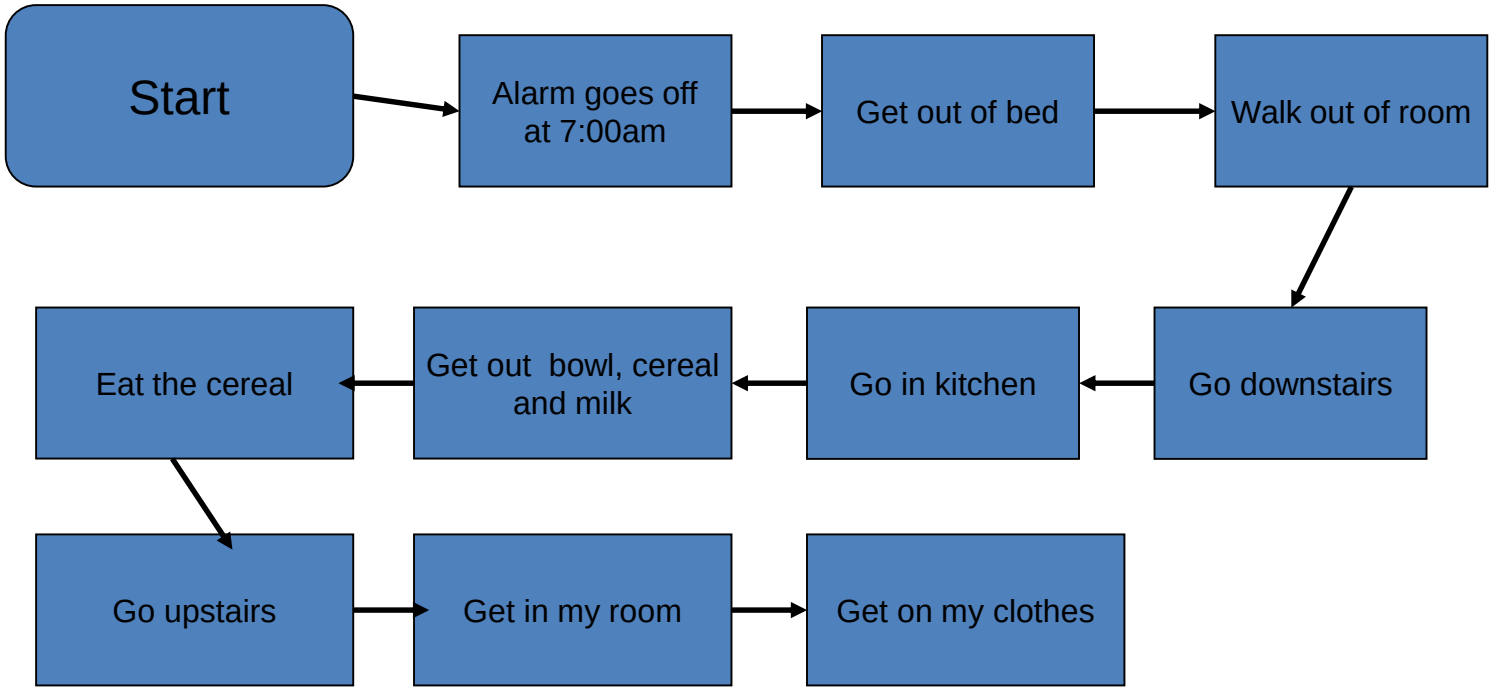
Algorithm – *A **precise** step-by-step set of instructions to achieving a specific goal.*

Algorithms

- Use the classroom, playground and school hall for lots of practical algorithms.
- Children needs lots of experience of both writing and following **PRECISE** instructions.

Algorithm – *A **precise** step-by-step set of instructions to achieving a specific goal.*

Getting Up Algorithm



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BRINGING THE CURRICULUM TO LIFE

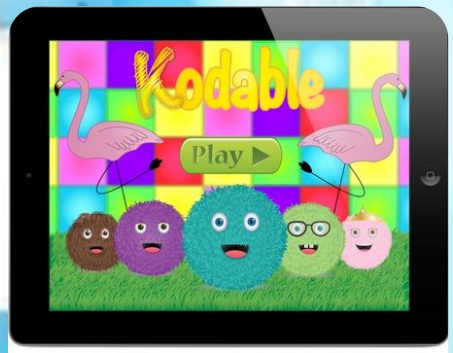
Algorithm – *A **precise** step-by-step set of instructions to achieving a specific goal.*

Algorithms

Algorithm – *A **precise** step-by-step guide to achieving a specific goal.*

Algorithms & Programs

busy things .co.uk
Award winning activities for nursery and primary



Algorithm – *A **precise** step-by-step set of instructions to achieve a specific goal.*

Program – *An algorithm **written in a language that a computer can understand**.*

‘Helicopter Rescue’ *(part of Busy Bundle 1 by Busythings.co.uk)*

‘Path Puzzler’ *(by Busythings.co.uk)*

Key stage 2

2014 National Curriculum

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Algorithms in the Classroom

Start

Have you completed your Numeracy work?

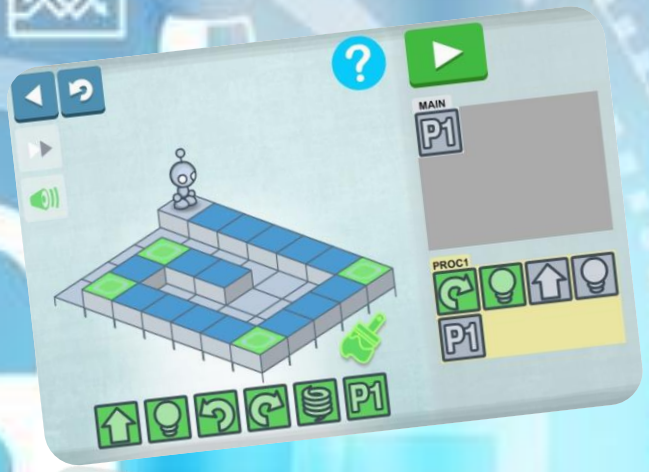
YES

Go out for playtime

NO

Stay in and finish your work

Maps and Algorithms



Underground Algorithms

Algorithm: A **PRECISE** step-by-step guide to achieving a specific goal

Underground Algorithms

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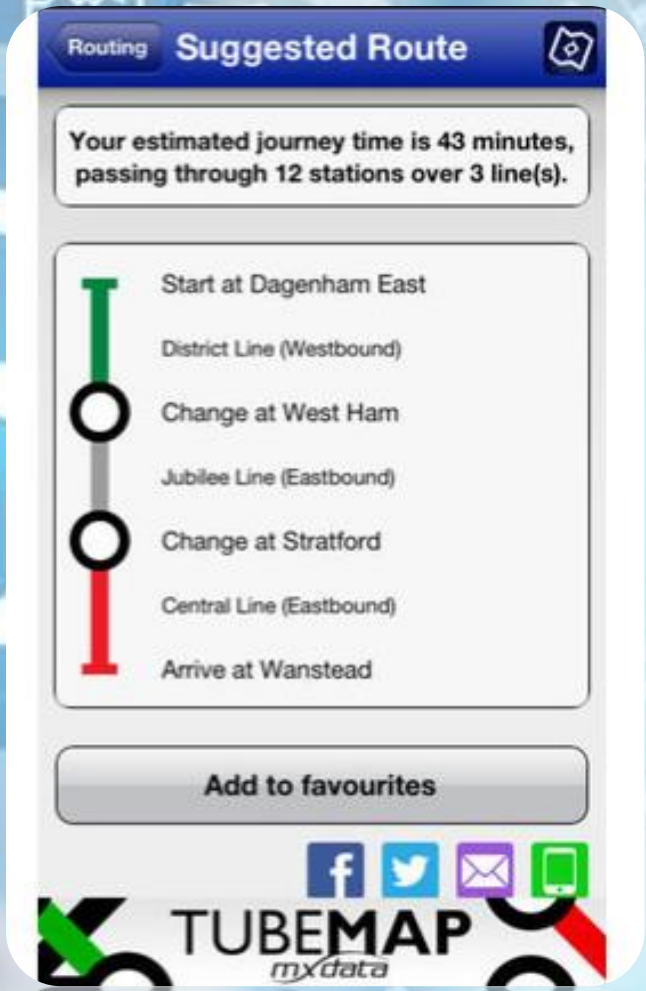
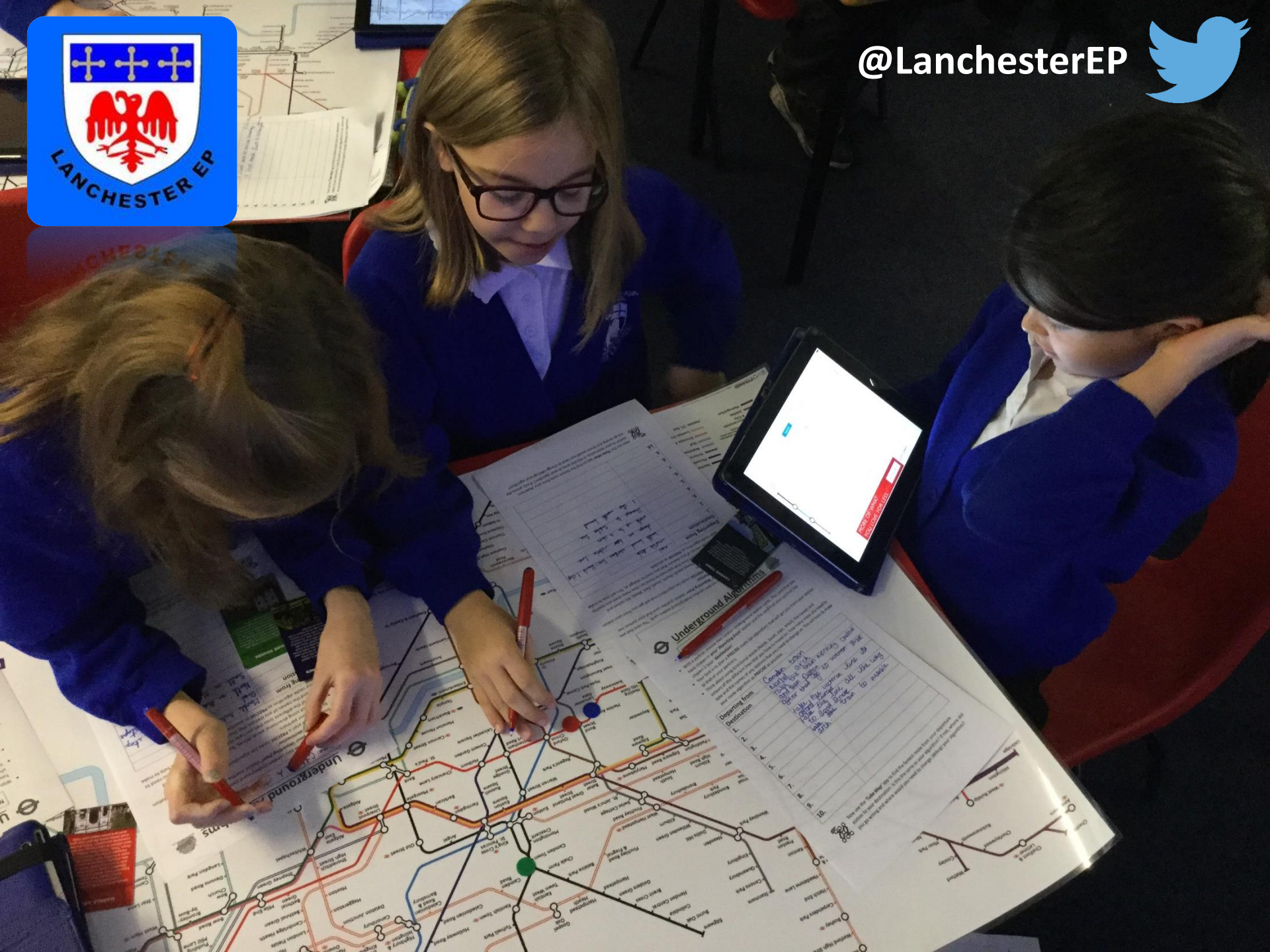


•Pick 2 cards. Plan a PRECISE route between your chosen stations *(what lines/colour? North or southbound? How many stops?)*
•Compare your route with a partner and then check accuracy and timings use **TubeMap** app.

•Verbal instructions – Give your partner a starting point on the Underground map. Have a second point in mind. Can you give **PRECISE** instructions to that point? Did your partner arrive at the correct destination?


LANCHESTER EP
@LanchesterEP
Underground Algorithms

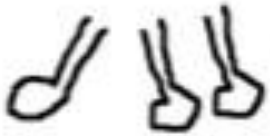
PRECISE Instructions

How to draw Tribob algorithm

draw a triangle for the body

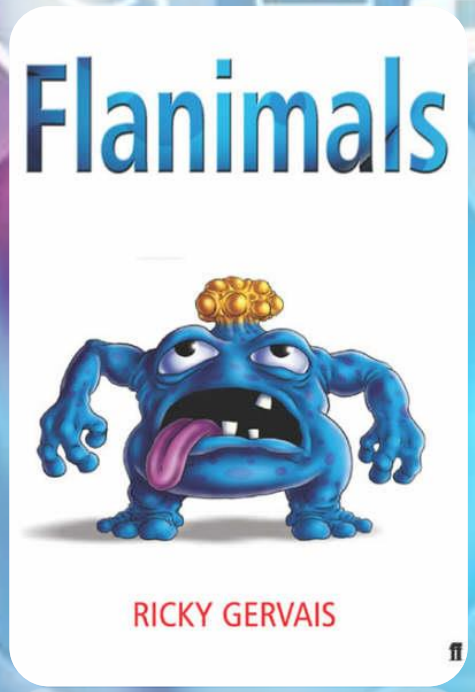
add 3 tiny eyes

add three wings with stripes



add three tiny legs at the bottom

add a tail



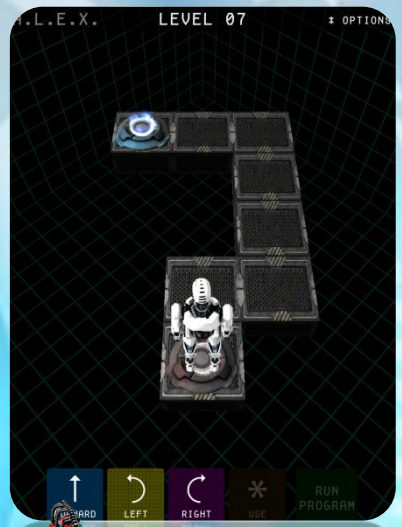
Computer Programming

Coding

+

Computational Thinking

Algorithms & Programs



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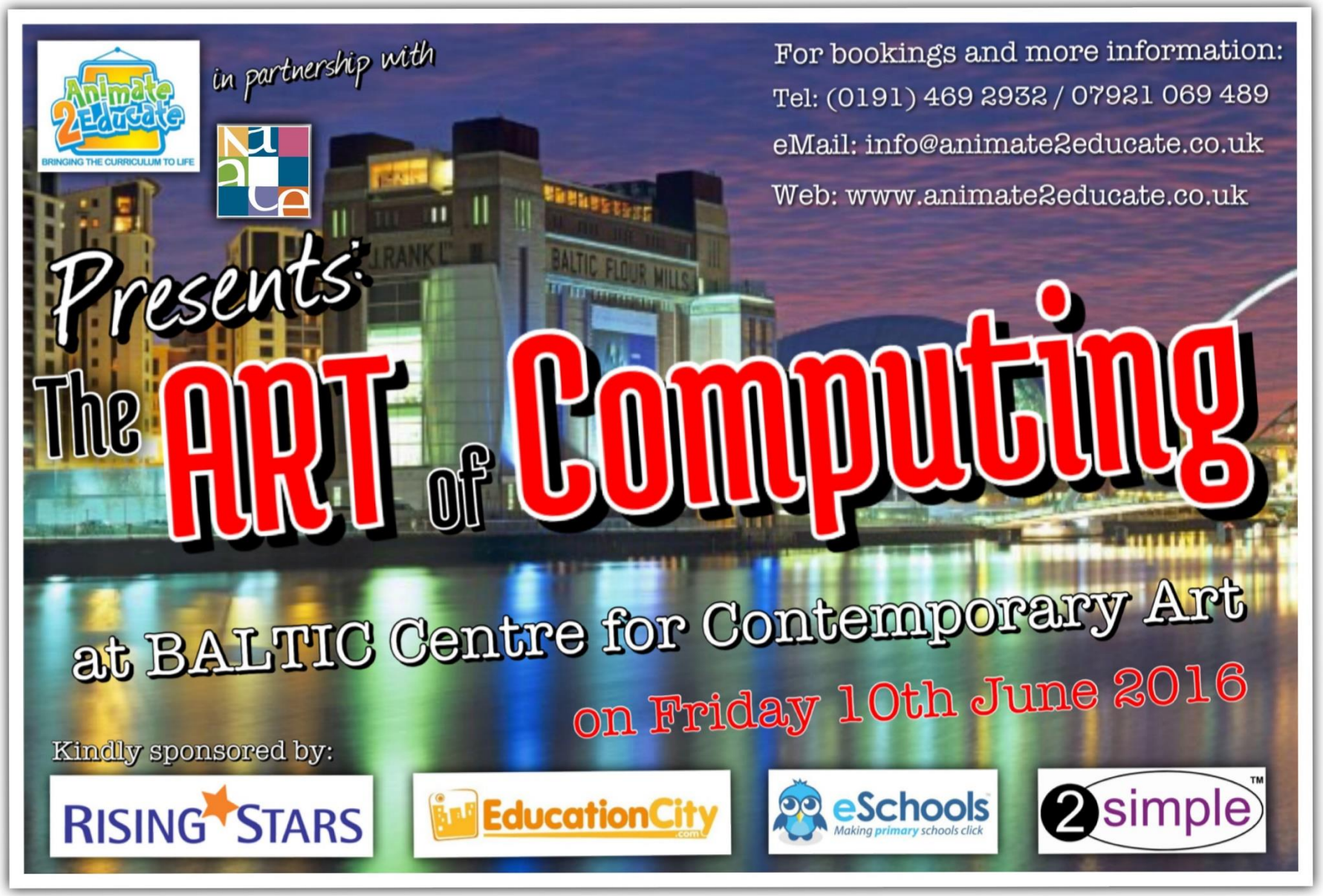
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Presents:
The ART of Computing
at BALTIC Centre for Contemporary Art
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bett Special BETT Show Offer

- **2 tickets for *'Art of Computing'* conference** on Friday 10th June 2016.
- **Overnight accommodation** at Jury's Inn Hotel, Gateshead Quayside *(adjacent to conference venue)* on the evening of Thursday 9th June.
- **Entry to *'Talk on the Tyne 2'* social event** (food included) at Jury's Inn on the evening of Thursday 9th June.
- **One year's Naace membership** for each delegate.

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