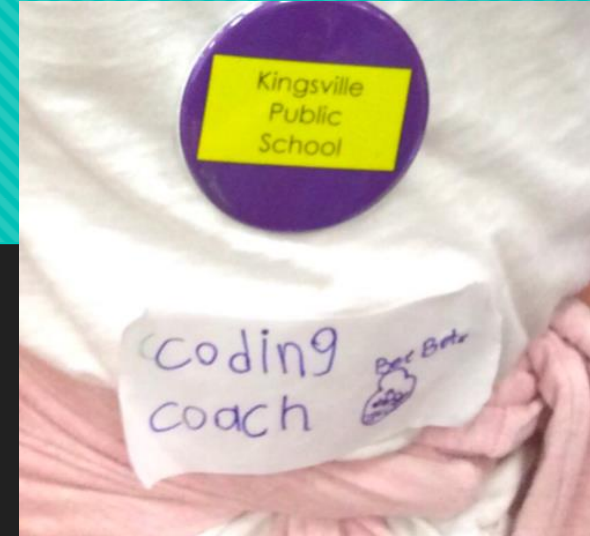


Primary Coding



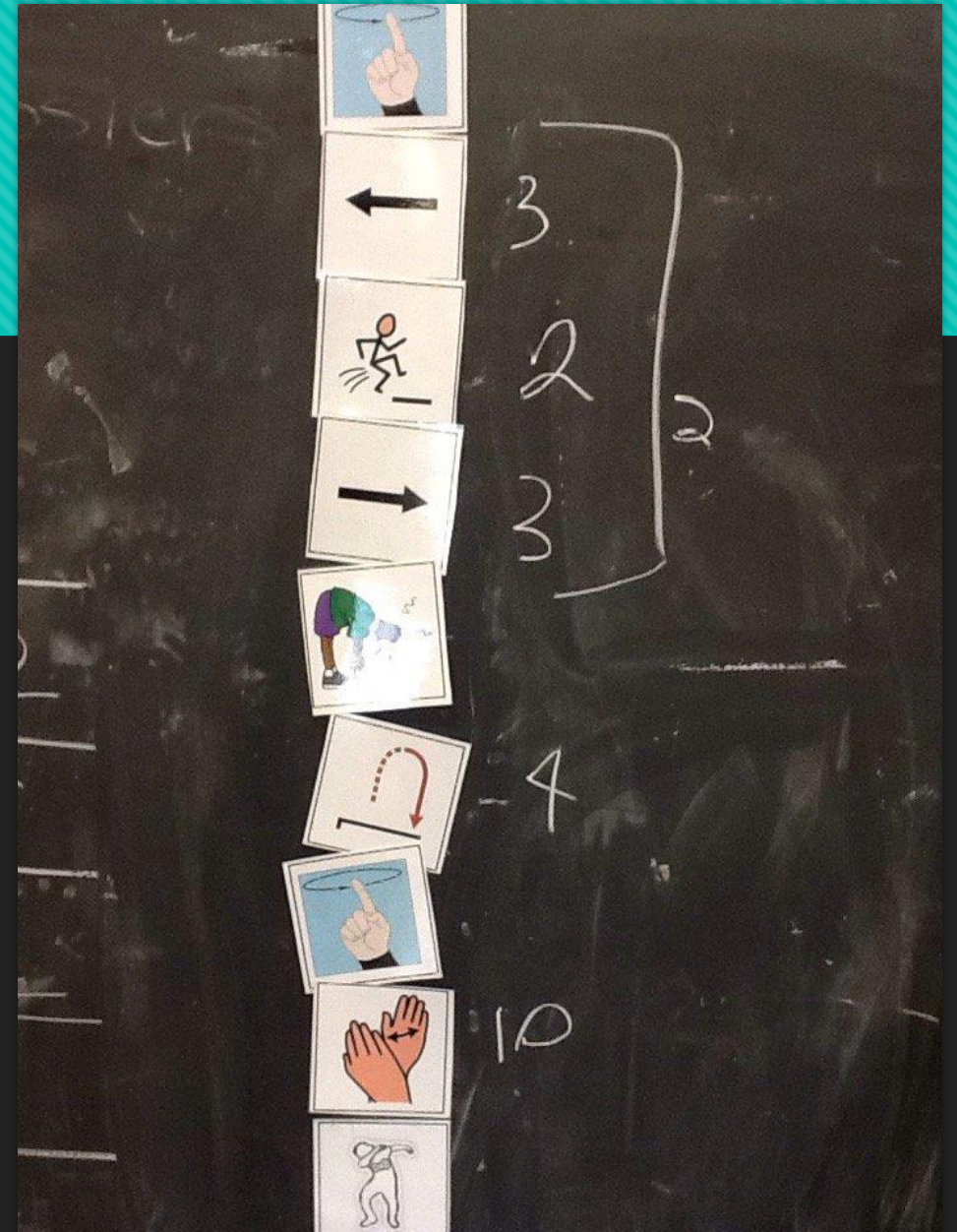
- Integrating Learning
- Inquiry
- Coding
- Perspective Taking
- Mapping
- Spatial Reasoning

○ www.kpscobracoders.weebly.com

Janet Molzan Cindy Loop Snyder Elizabeth Pearsall

Code a Dance

Create, Debug, Loop, Collaborate, Code



Concepts and Processes of Spatial Learning

- **Locating, Orienting Mapping, Coding, Perspective Taking**
- **Visualization** is the ability to see in your mind's eye spatial patterns and comprehend imaginary movements in space
- **Mental Rotation** is the ability to mentally rotate 2D and 3D shapes in your mind
- **Visual Spatial Working Memory** is the ability to hold and manipulate information in your mind's eye
- **Information Processing** is integrating one piece of information at a time, in sequence or in chunks
- **Spatial Language** describes math principles and relationships
- **Gestures** are movements with the body to communicate and help during problem solving

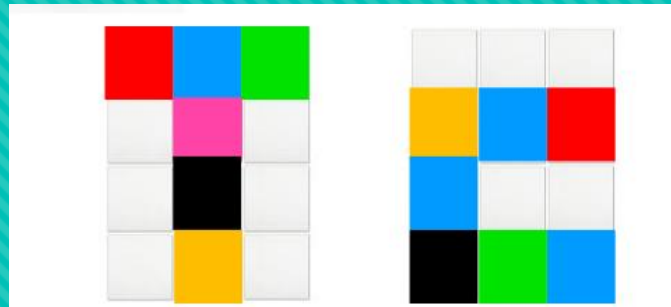
Unplugged

- Scratch commands for Guess my #? Pattern?
- Graph paper challenges
- What's my shape visualizing from code
- 100 chart. Lego





Blue Bot



What letters in our alphabet use lines and not curves?



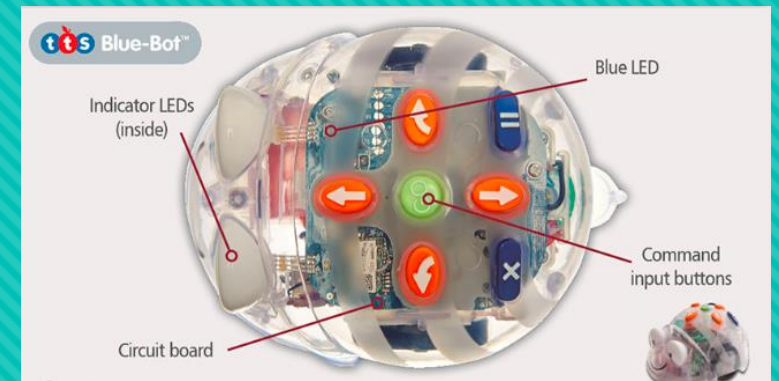
The Viking letters were called runes. They weren't written with pen and ink on paper. Instead, runes were carved with a knife or **chisel** into stone and wood. To make carving into these surfaces easier, the runes were made using only straight lines.

INQUIRY

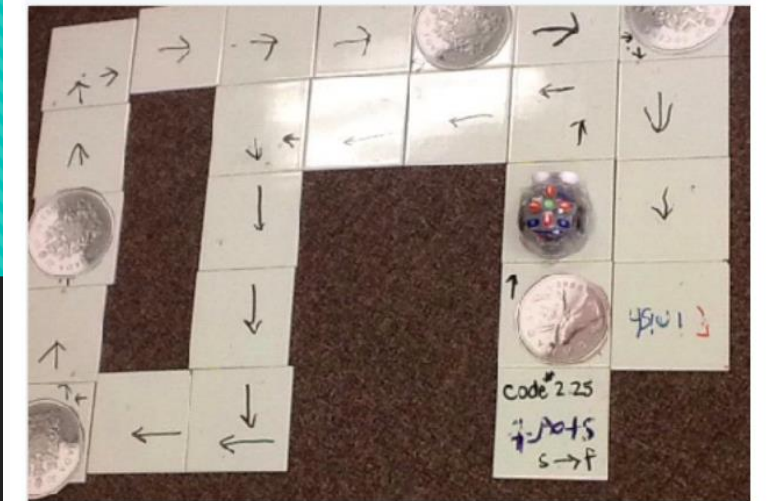
Can all letters of the alphabet be coded?

What letters are symmetrical?

What letters have more than one line of symmetry?



Maya and Daisy throw down a code challenge, make \$2.25 with bluebot
[@KngvilleCob'a](#) @mllemolzancass



Create Your Own Challenge

Concrete Coding

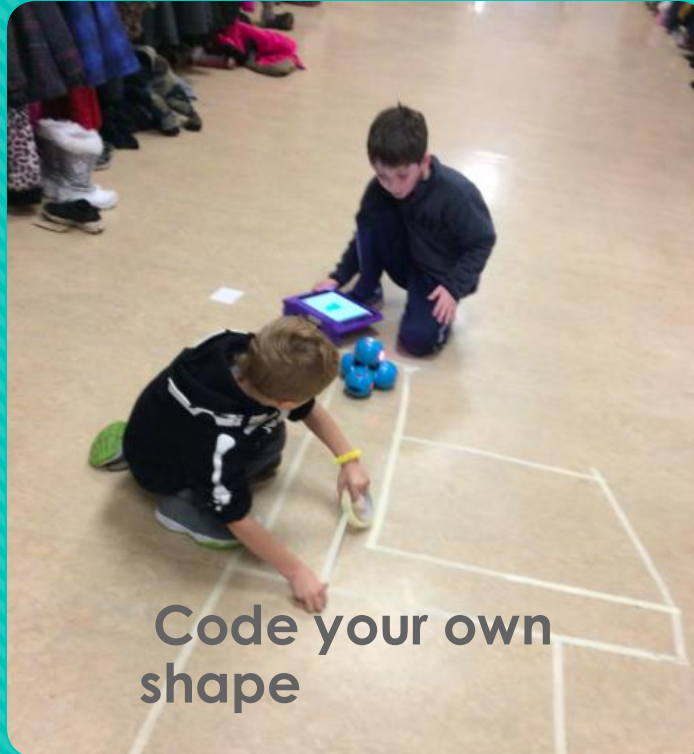
Focus on perspective, location, orientation and movement on a grid.

Spatial Language and Integrated Learning



Challenge

Design a shape that has a perimeter of _____ cm.



Code your own shape



Code to equivalent \$ amounts/values

Spatial Reasoning with Coding

Perspective, Location, Orientation, Movement on a grid
Integrating measurement, angles, geometry, number sense...

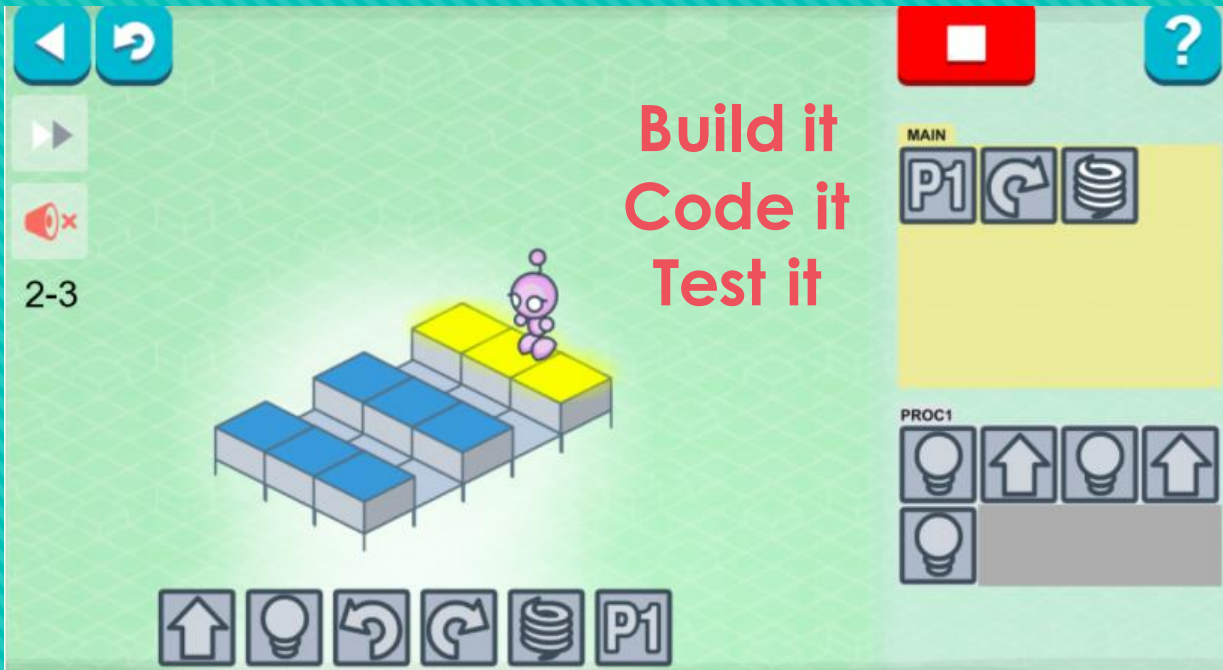
DASH



Wonder



Blockly



Bridging real to virtual

Integrate spatial concepts and processes and writing with coding.

Debug
Collaborate
Is it congruent?

Light Bot





SCRATCH JR

Code stories (beg middle, end) / water cycle/
vacation retell/ your math thinking/ endless!



www.kpscobracoders.weebly.com



Sandbox... try it out

Guide your own learning

Resources: dance cards, shape cards, Scratch Jr command cards

Adapt, Smash, Morph, Invent, Create Integrate, Connect

App Smash Light Bot and Scratch Jr to code your structure

○ Patterns

Create a number pattern using numbers from 0 to 100.

Justify your pattern to a friend.

Scramble your numbers (put randomly under mat)

Have a friend Code your pattern.

