Developing Comic-based Learning Toolkits for Teaching Computing to Elementary School Learners

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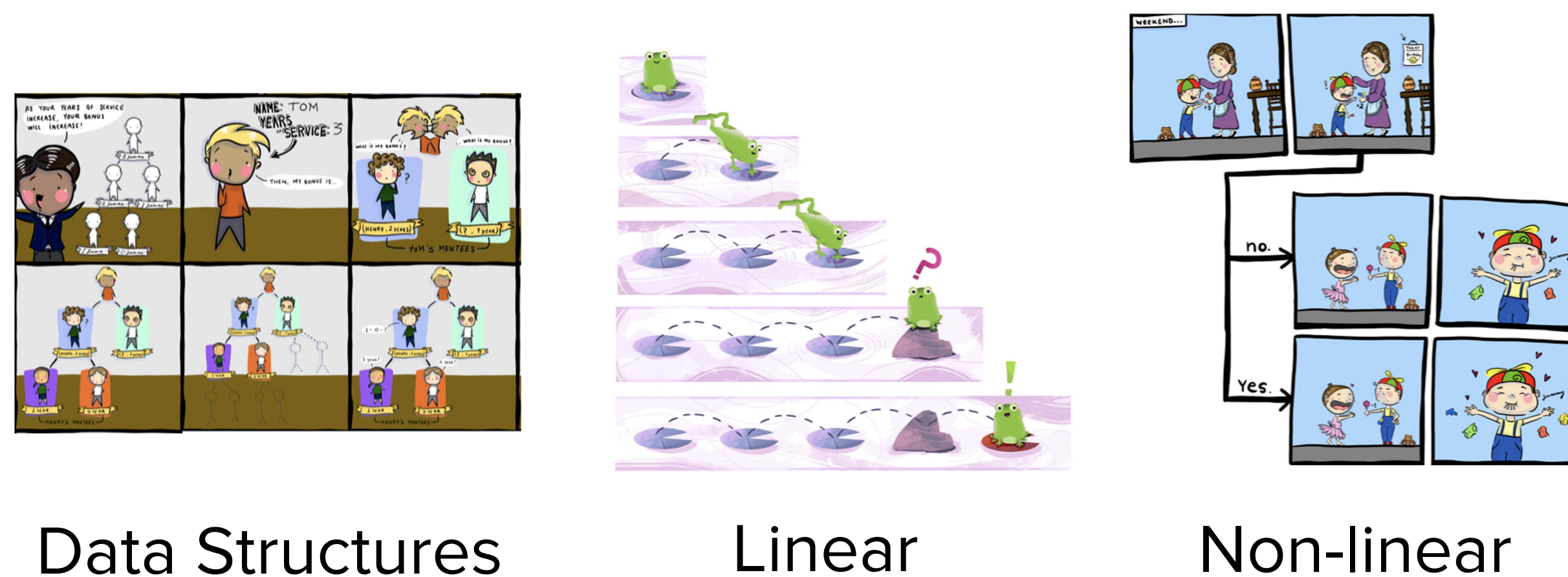**Sangho Suh** sanghosuh@ucsd.edu

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Why **Comics**?

Comics is a promising medium for teaching programming because of its **expressiveness** and **flexibility**.

Data Structures   Linear   Non-linear

Comics can be used to express many programming concepts, from abstract data structures to linear and nonlinear computational procedures.

Artshine Partnership

Artshine is an organization that offers **art education** to children through **art boxes**. We are collaboratively designing an art box that introduces **computing** and **story-crafting** through comics.
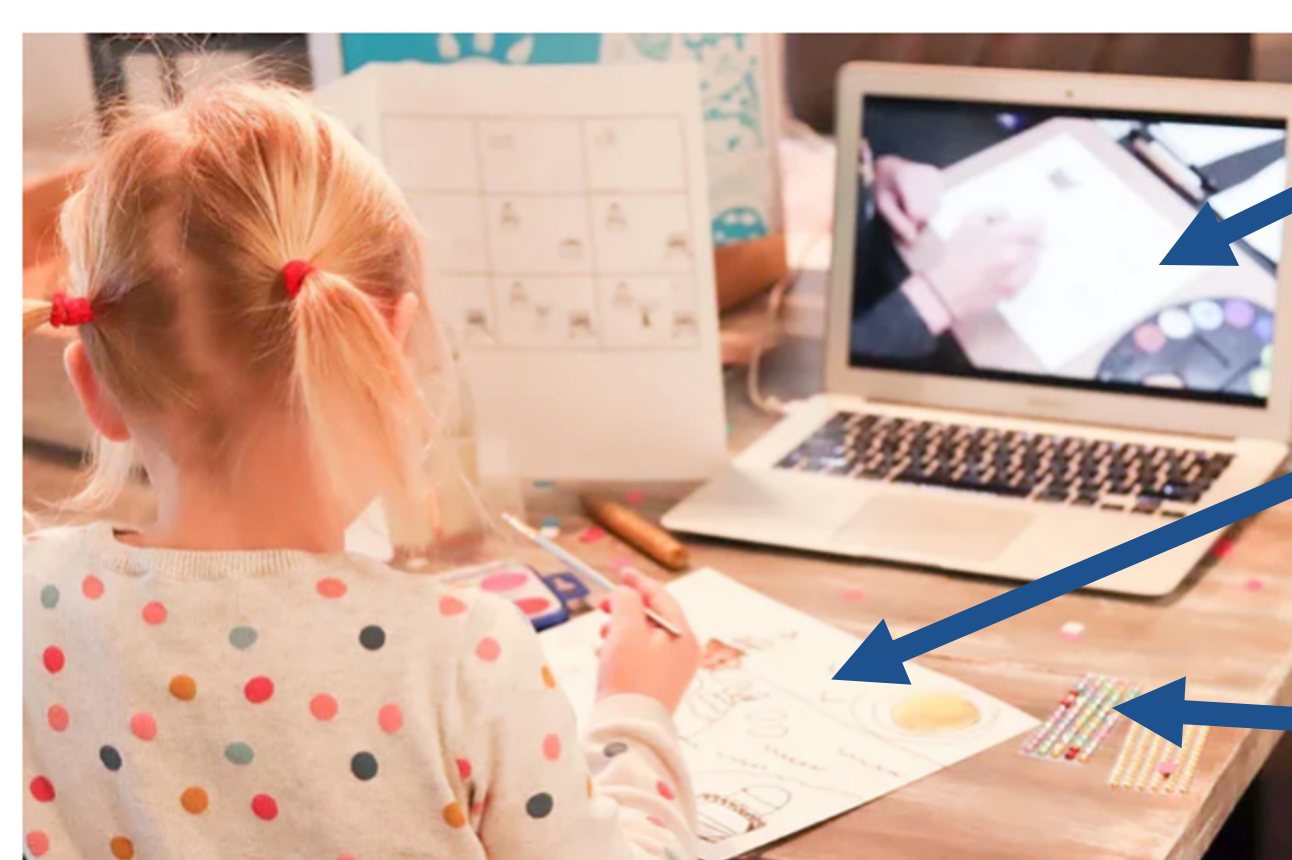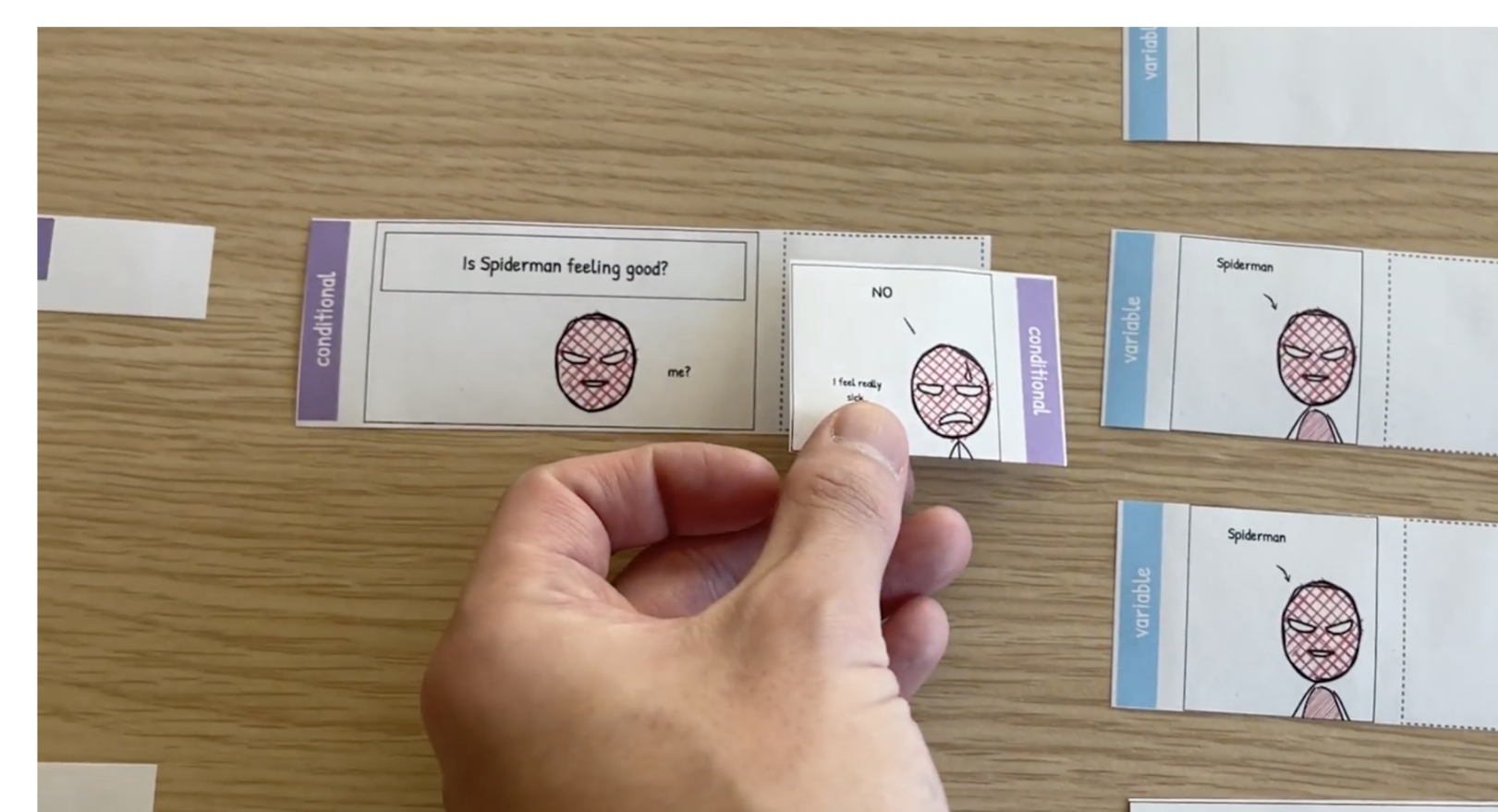

→ Instruction video

→ Student's artwork

→ Physical materials

Building Narratives Through **Physical Comic Blocks**

Our toolkit consists of **physical comic blocks** embodying different **programming concepts**.

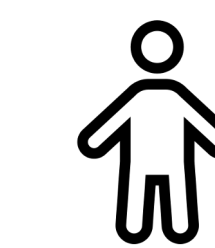Learners can use different combinations of comic blocks to create **multiple storylines** for their comics.
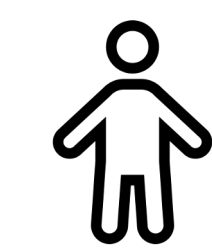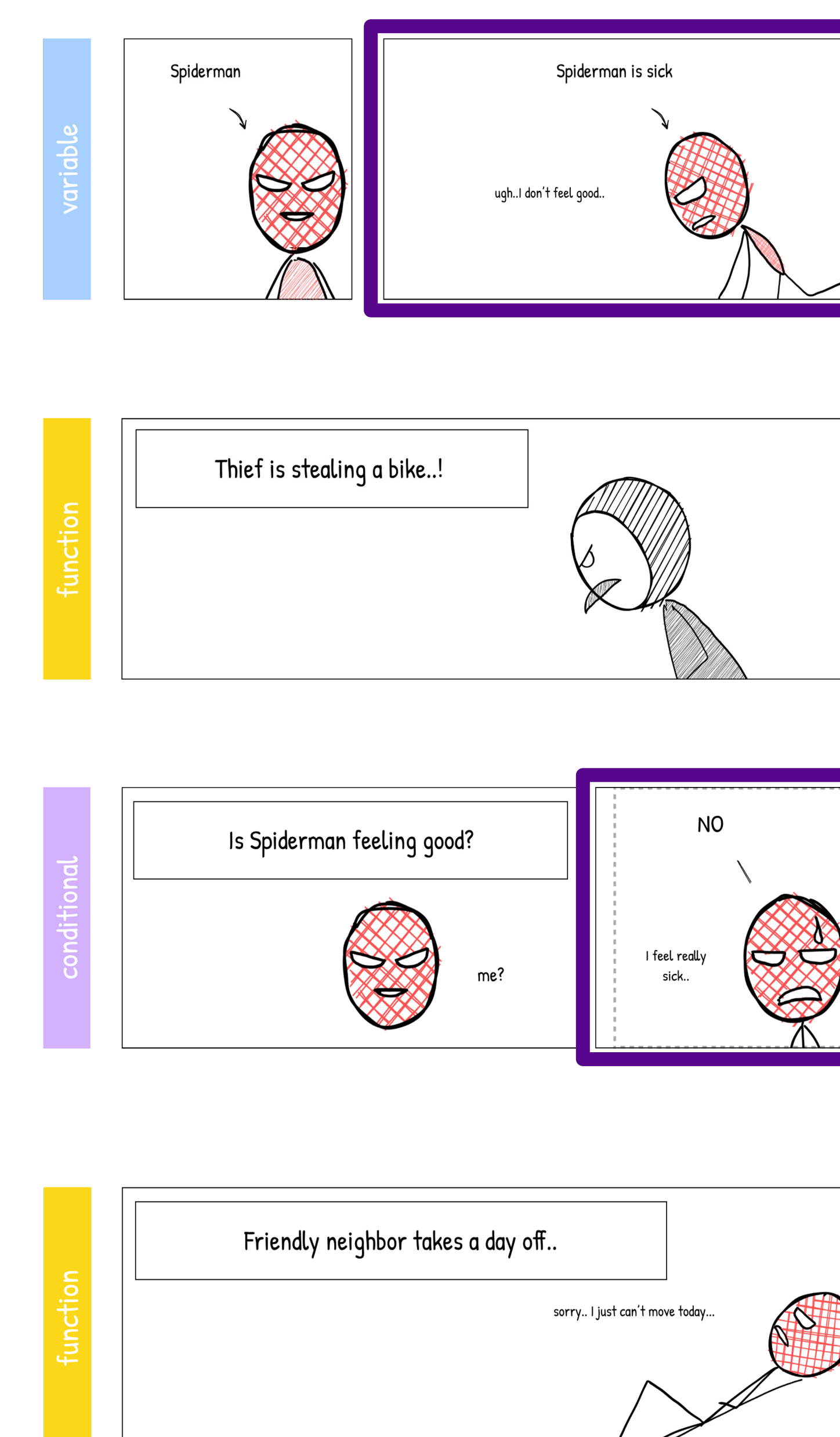

Narrative Flow
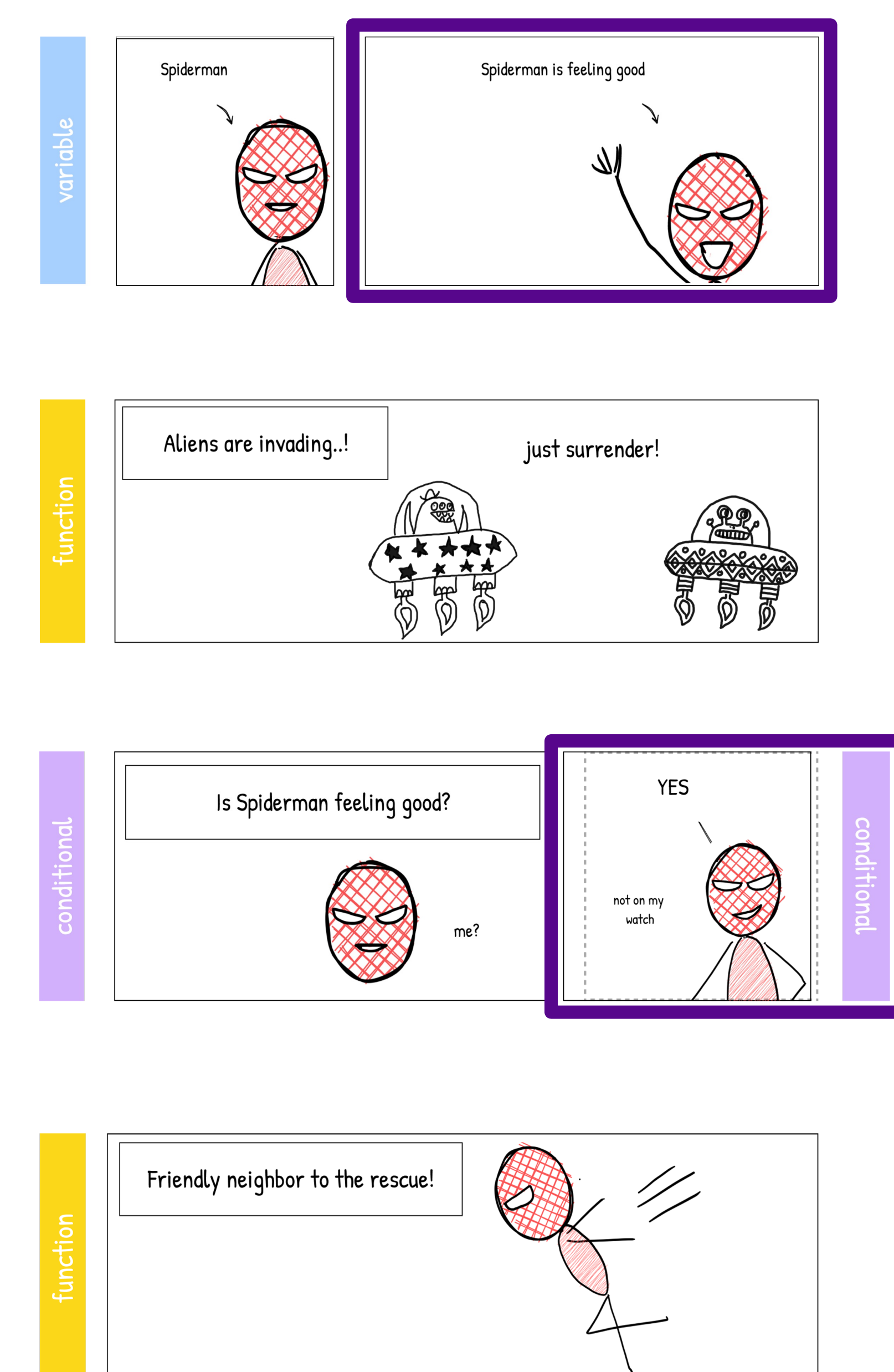
- Context
- Conflict
- Condition
- Resolution

Learner A

Learner B

How do we support the **informal learning** of **computing concepts** for elementary school learners through a **physical comic-based learning toolkit**?

Scan me! Try out our comic block prototypes, download this poster and our papers, and check out our demo.