

Kodu Module 4 Slides


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Do Two Things Idiom

Do Two Things

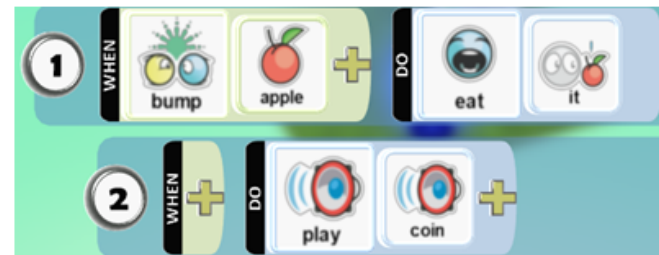
Make the Kodu take two actions with one rule.

WHEN *something* ... DO **this** 

and also → DO **that** 

Do Two Things

When you bump an apple, eat it *and also* play the coin sound.



General Form:

WHEN *something* DO *action1*


↳ WHEN DO *action2*

Indenting the second rule makes it dependent on the WHEN part of the rule above.

Count Actions Idiom

Count Actions

Make the Kodu keep a count of an action it takes.
This is a special case of Do Two Things.

WHEN *something* DO **action**  **+1**
↳ *and also* → score **color** 1 point

Count Actions

When you eat an apple, add one to the red score.

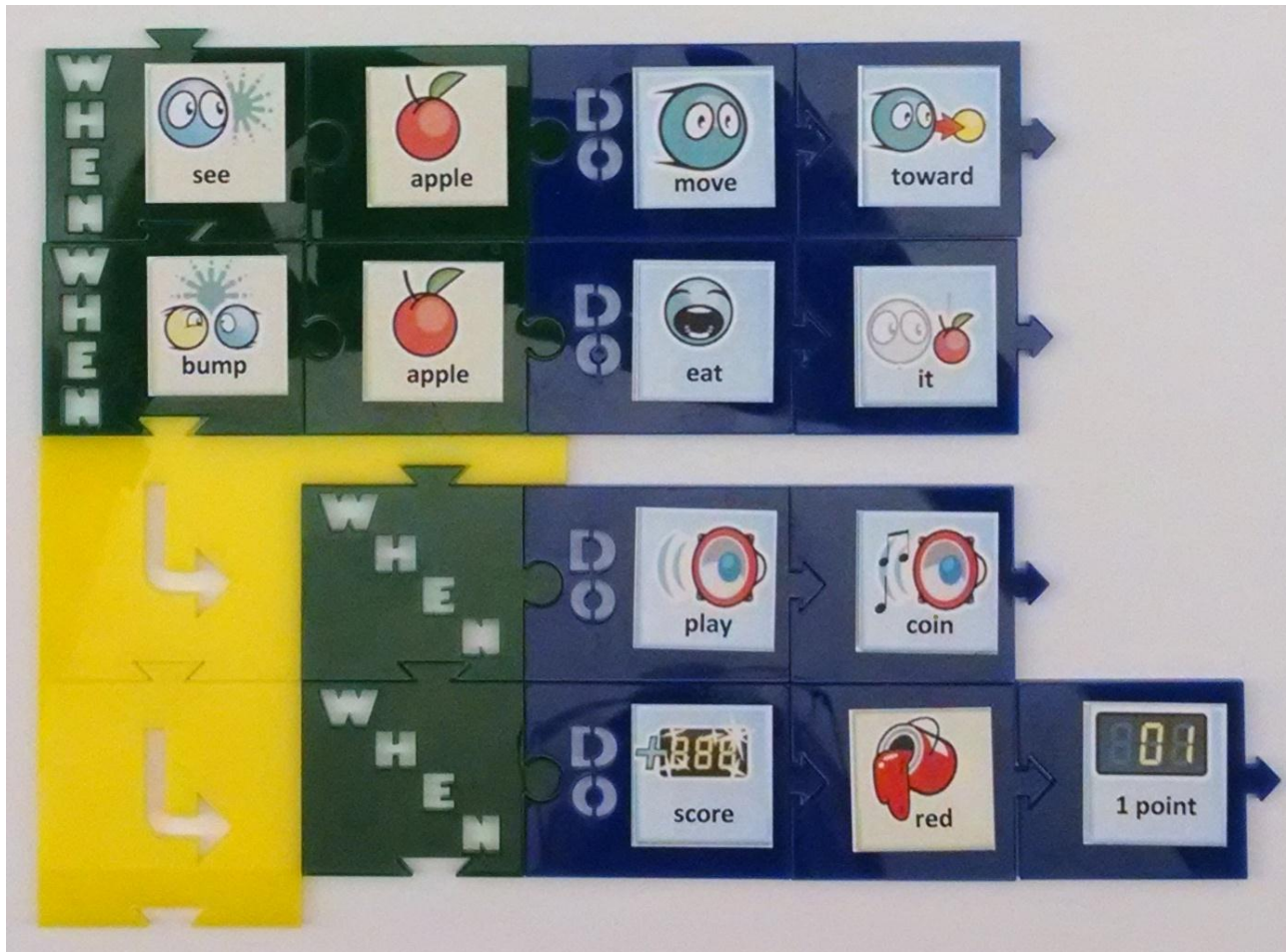


General Form:

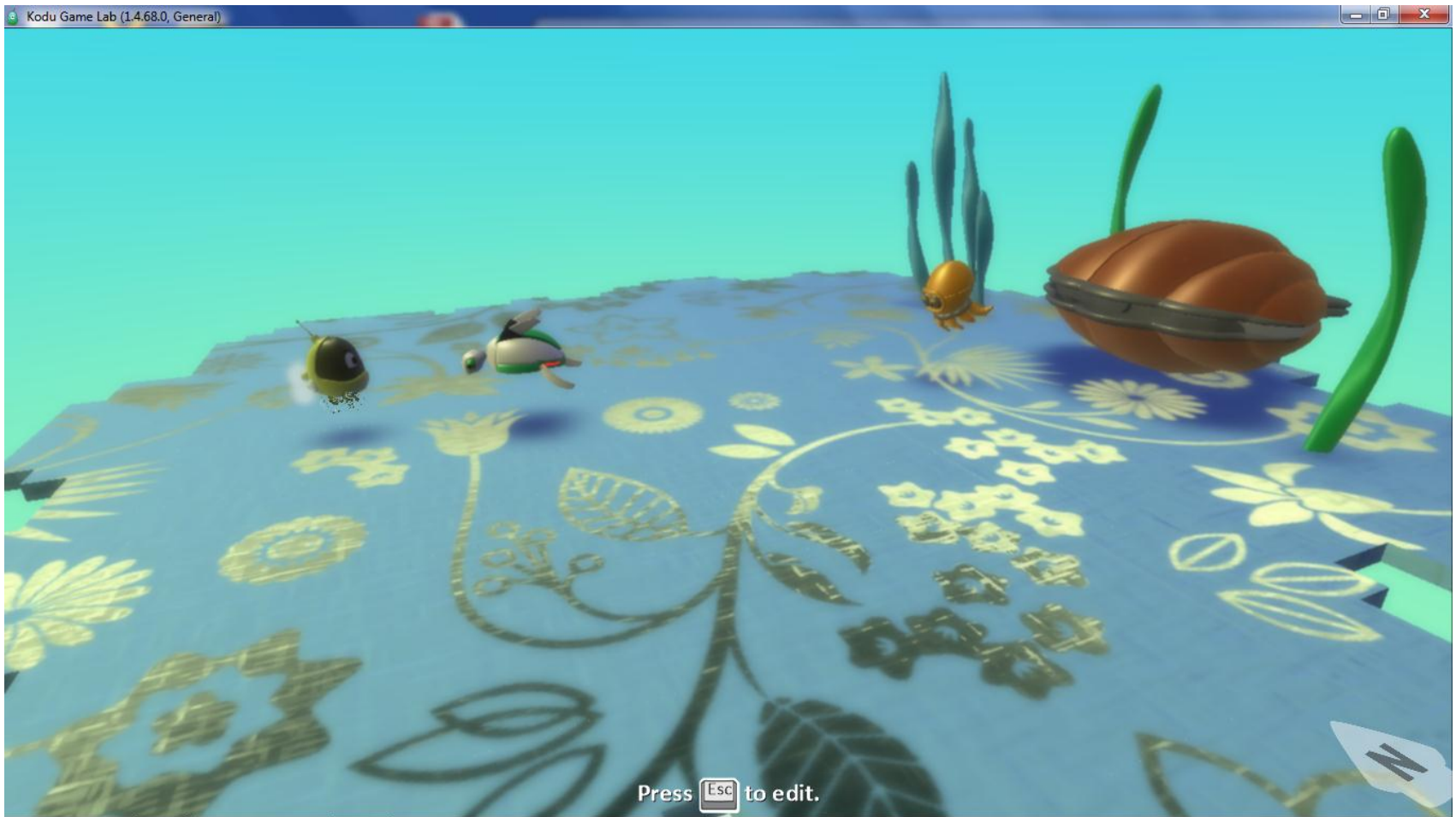
WHEN *something* DO **action**
↳ WHEN DO score **color** 1 point

Scores come in different colors. If color isn't mentioned, the red score is used.

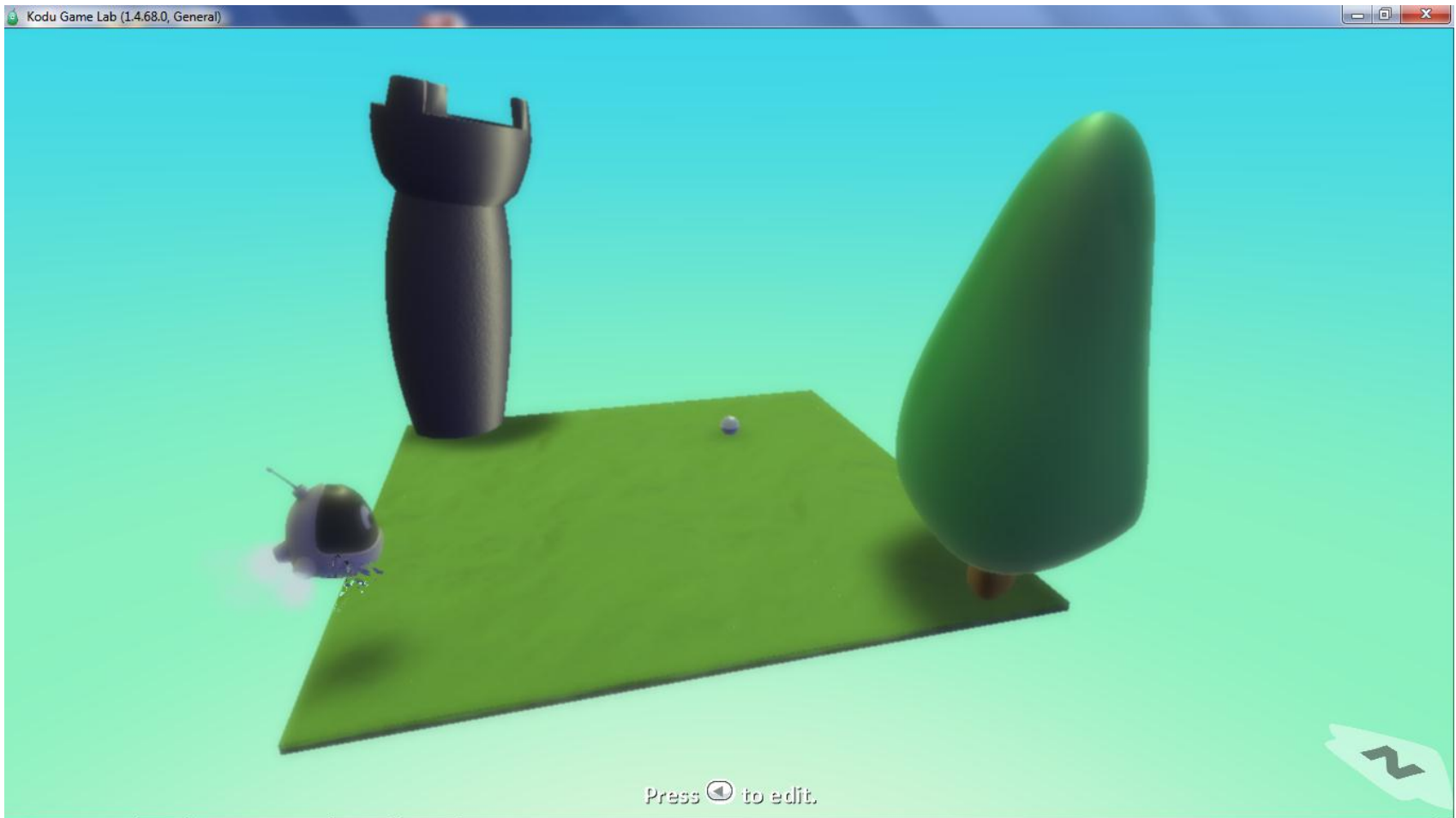
Do Three Things



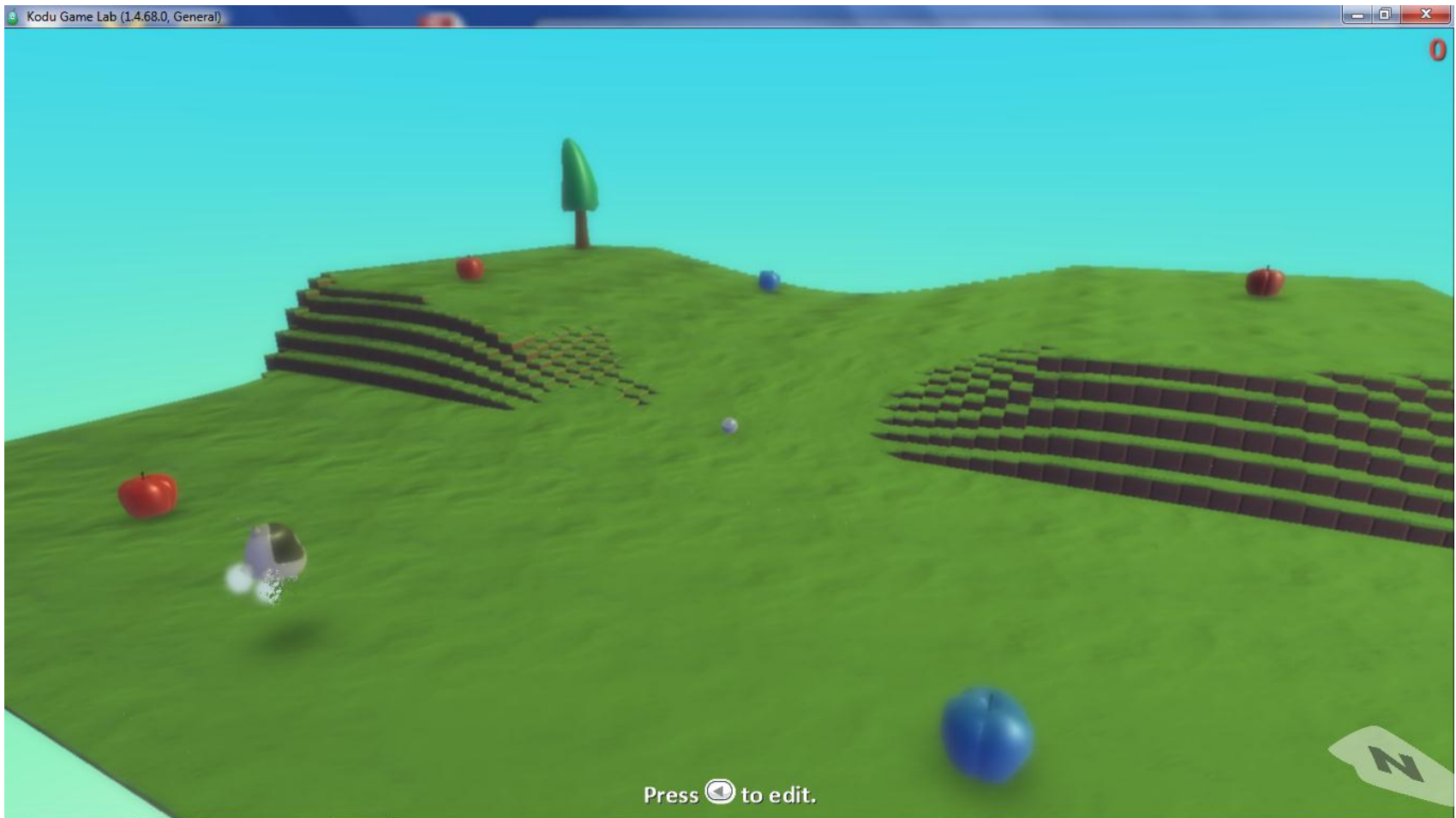
Indent1 World



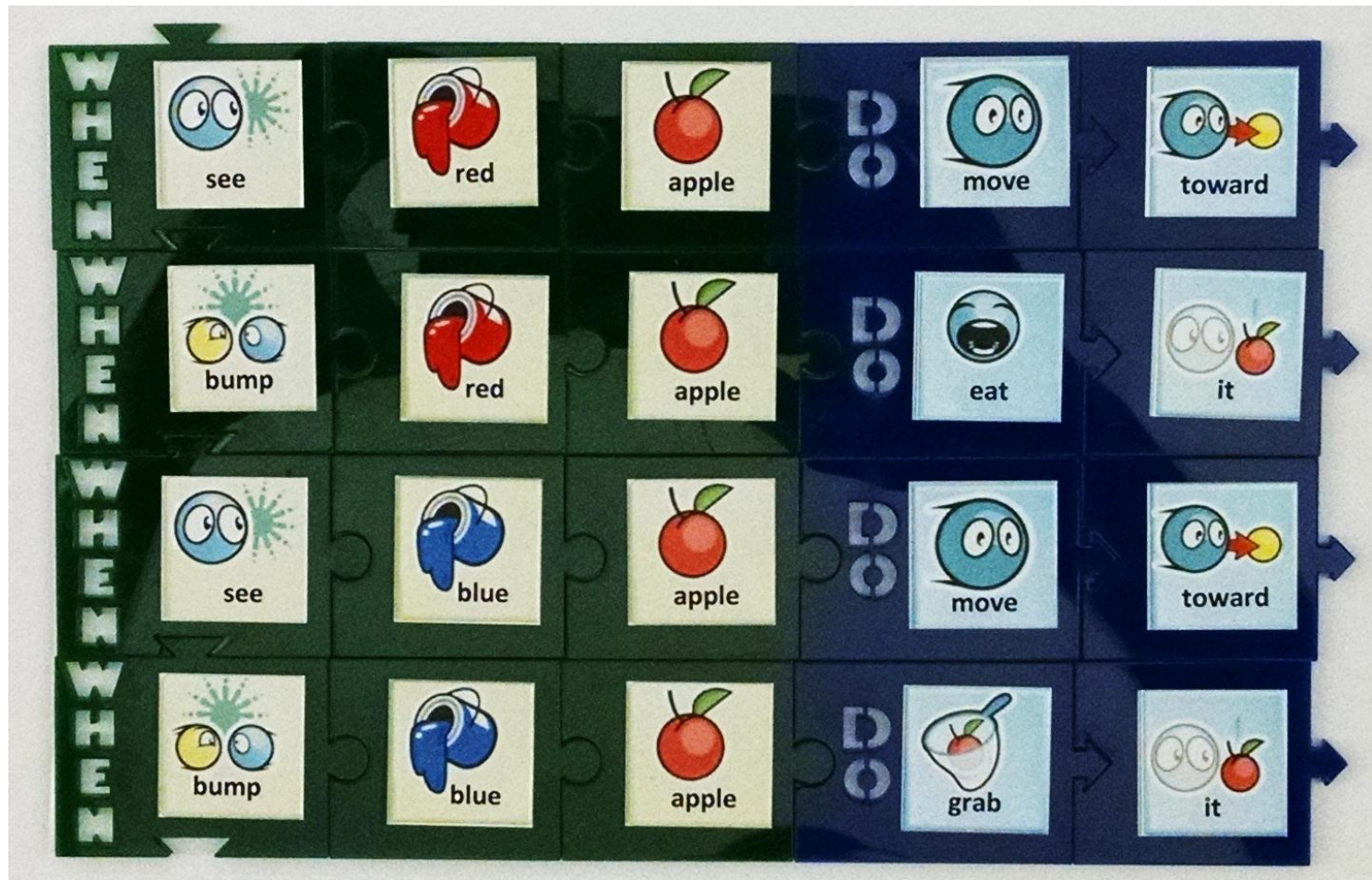
Tree and Castle



Apple2 World



Eat the Red, Then Grab the Blue



Default Value Idiom

Default Value

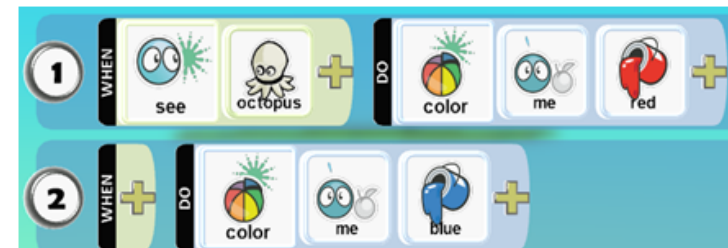
When you see an octopus, turn red.
Otherwise turn blue.



situation → DO **action1** **value**
otherwise → DO **action1** **default-value**

Default Value

Turn red when you see an octopus; turn blue otherwise.

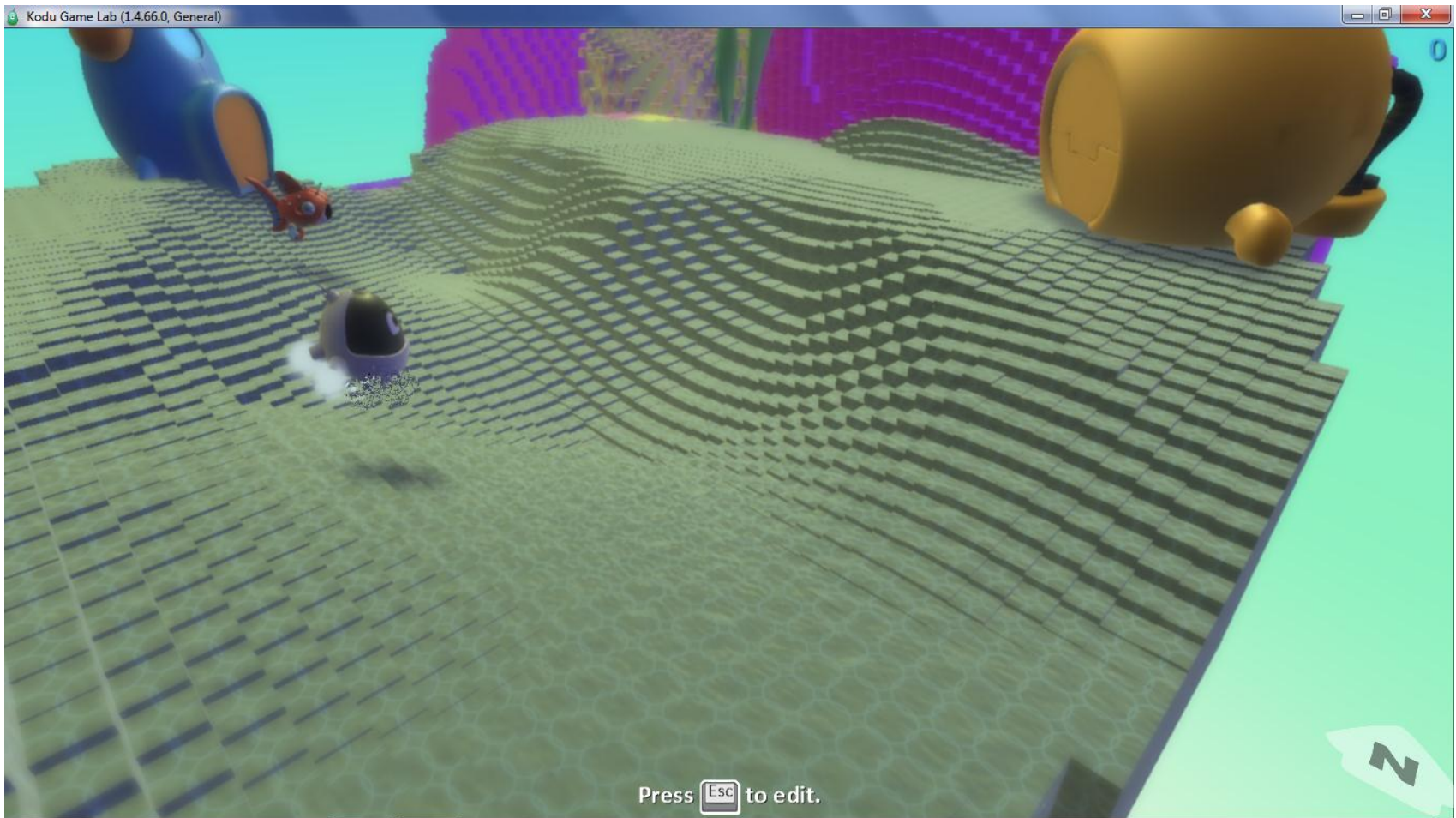


General Form:

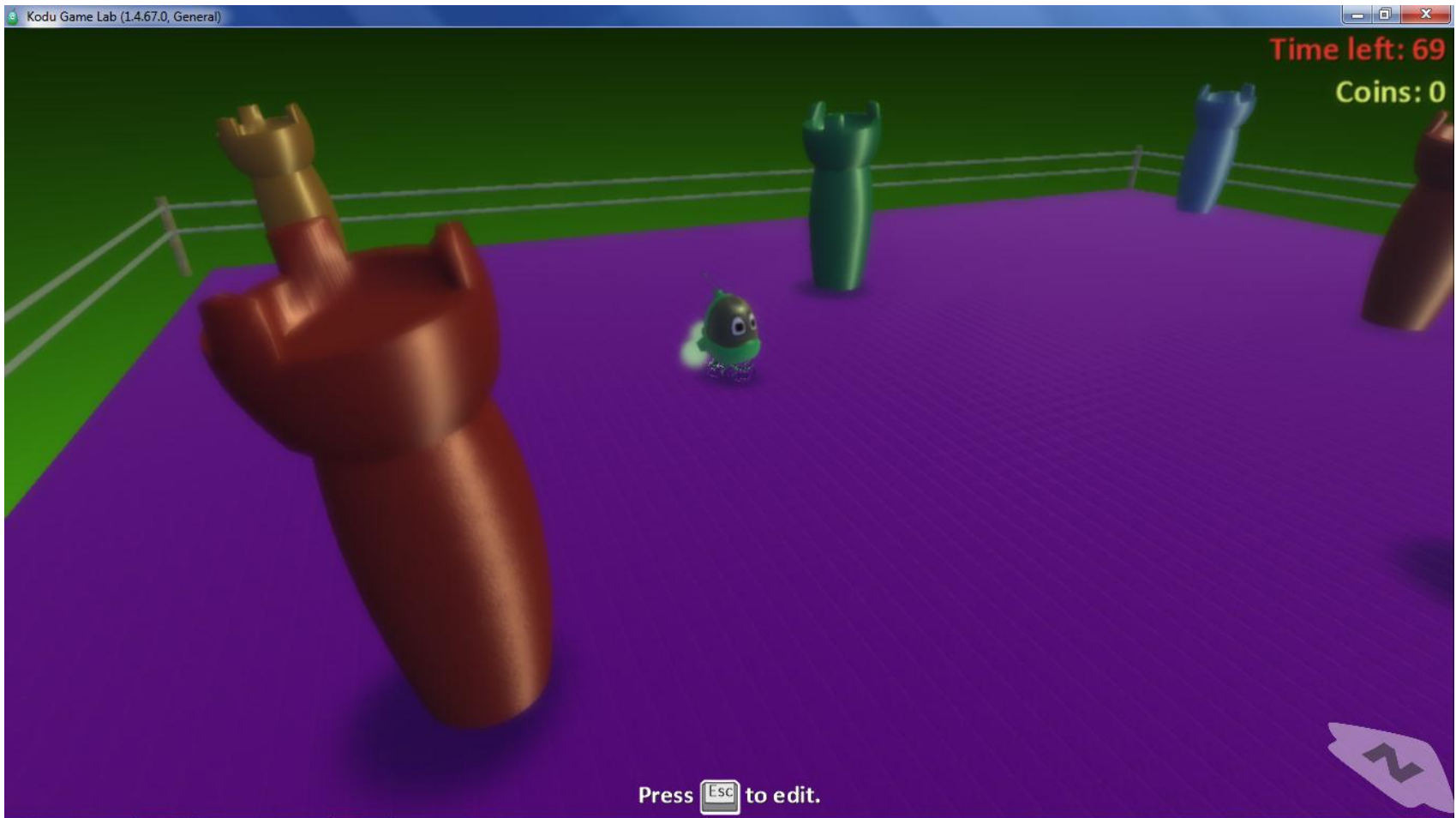
```
WHEN situation DO action1 value  
WHEN DO action1 default-value
```

The default case must come *after* the specific case. The action must be the same in both rules; only the value is different. For different actions, use the If-Then-Else idiom.









CountFish1 World



Castles1 World



In What Order Are the Apples Eaten?

1	WHEN	 see	 apple	+	DO	 move	 toward	+
	2	WHEN	 bump	 apple	+	DO	 eat	 it

















In What Order Are the Apples Eaten?

The image shows three rows of Kodu blocks, each representing a step in a sequence. Each row is divided into 'WHEN' and 'DO' sections.

- Row 1:**
 - WHEN:** see (eyes with green starburst), red (red apple), apple (red apple) +
 - DO:** move (eyes), toward (eyes with red arrow) +
- Row 2:**
 - WHEN:** see (eyes with green starburst), blue (blue hand), apple (red apple) +
 - DO:** move (eyes), toward (eyes with red arrow) +
- Row 3:**
 - WHEN:** bump (eyes with green starburst), apple (red apple) +
 - DO:** eat (eyes with open mouth), it (eyes with red apple)

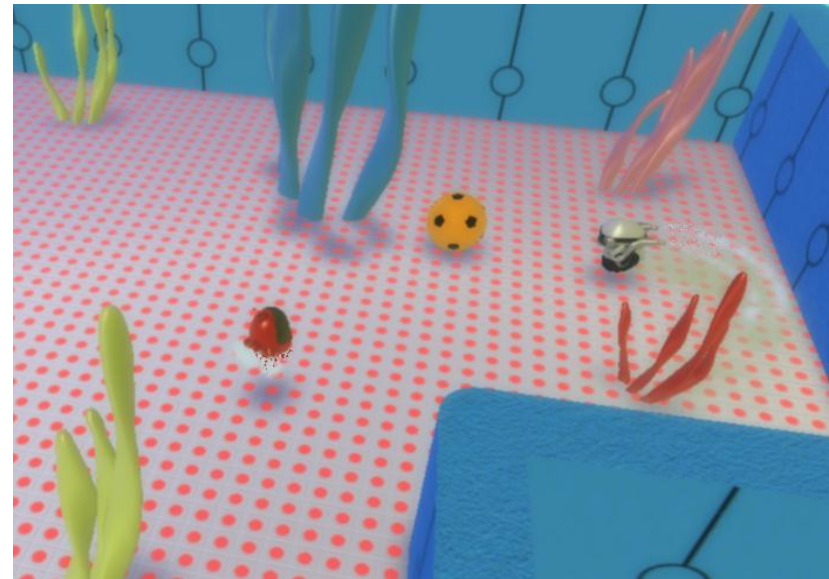
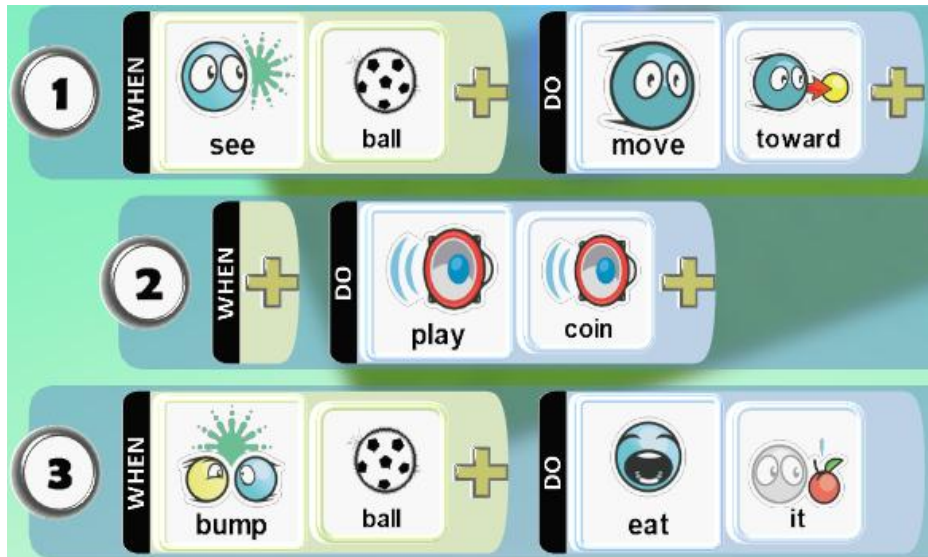


In What Order Are the Apples Eaten?

1	WHEN	 bump	 apple	+	DO	 eat	 it		
2	WHEN	 see	 blue	 apple	+	DO	 move	 toward	+
3	WHEN	 see	 red	 apple	+	DO	 move	 toward	+



What Do These Rules Do?



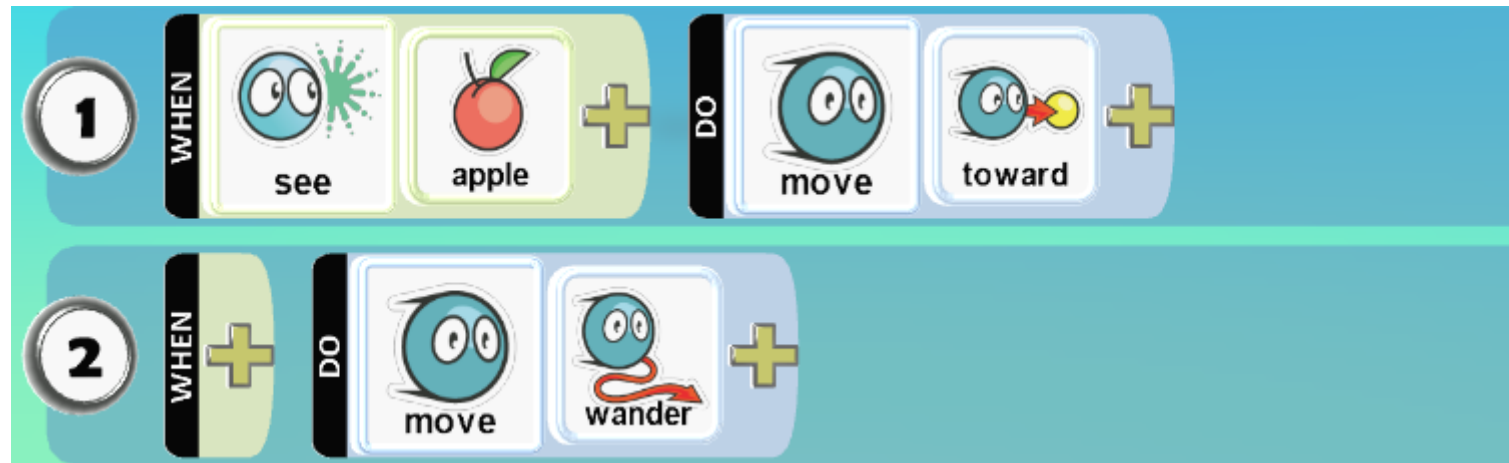
Default Value? (1/6)

The image shows two Kodu blocks on a blue background. Block 1 is labeled with a large '1' in a circle. It has a 'WHEN' section with 'see' (a blue character with green starburst) and 'apple' (a red apple). The 'DO' section has 'color' (a multi-colored wheel), 'me' (the blue character with a grey egg), and 'green' (a green apple). Block 2 is labeled with a large '2' in a circle. It has a 'WHEN' section with a plus sign. The 'DO' section has 'color' (a multi-colored wheel), 'me' (the blue character with a grey egg), and 'red' (a red apple).

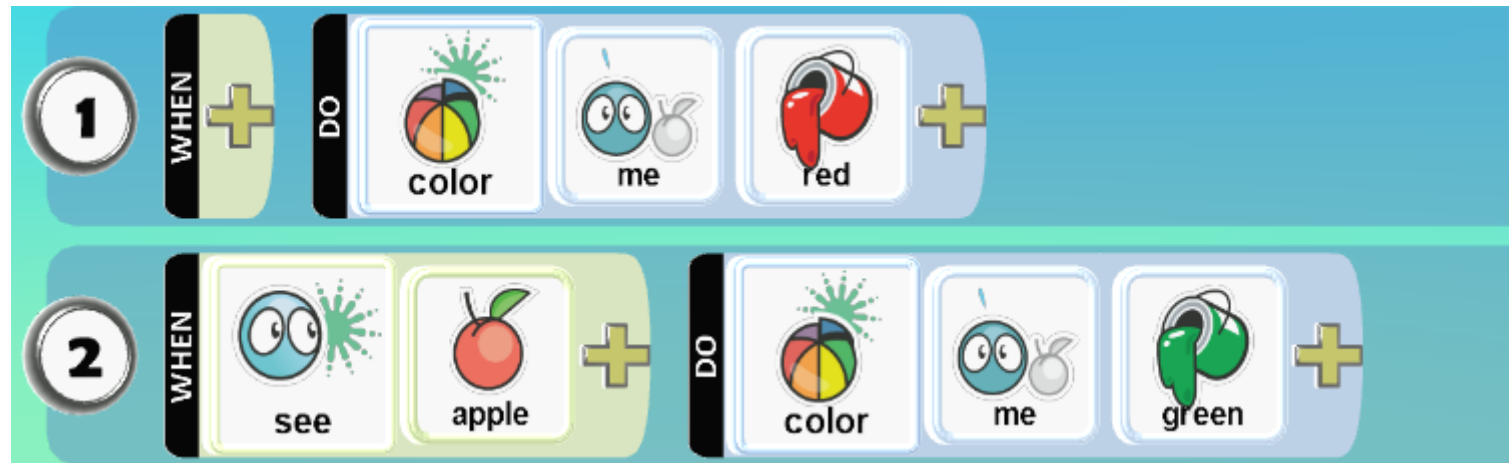
Default Value? (2/6)

The image shows two rows of Kodu blocks. Row 1 consists of a 'WHEN' section with 'see' and 'apple' blocks, and a 'DO' section with 'move' and 'toward' blocks. Row 2 consists of a 'WHEN' section with a '+' block, and a 'DO' section with 'color', 'me', and 'red' blocks.

Default Value? (3/6)



Default Value? (4/6)



Default Value? (5/6)

The image displays two Kodu programming blocks. The first block, labeled '1', has a 'WHEN' section with 'see' and 'apple' connected by a plus sign, and a 'DO' section with 'color', 'me', and 'green' connected by plus signs. The second block, labeled '2', has a 'WHEN' section with a plus sign, and a 'DO' section with 'color', 'me', and 'red' connected by plus signs.

Block 1:

- WHEN:** see + apple
- DO:** color + me + green

Block 2:

- WHEN:** +
- DO:** color + me + red

Default Value? (6/6)

