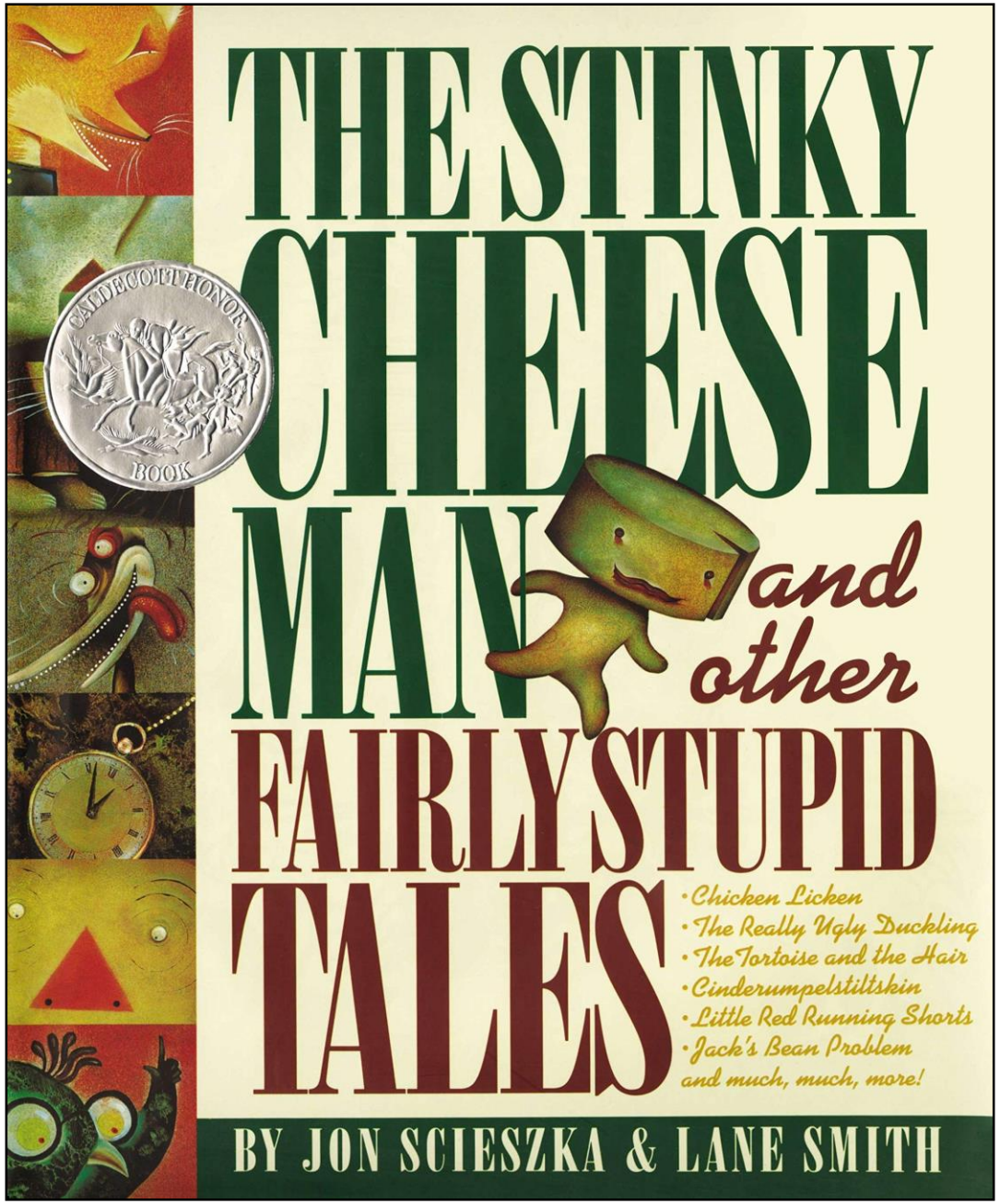
Loops

Repetition



Your grade 3 teacher may have read this book to you.

If they didn't, I recommend that you look it up some time.

Once upon a time there was a Giant. The Giant squeezed Jack and said, "TELL ME A BETTER STORY OR I WILL GRIND YOUR BONES TO MAKE MY BREAD. AND WHEN YOUR STORY IS FINISHED, I WILL GRIND YOUR BONES TO MAKE MY BREAD ANYWAY! HO, HO, HO." The Giant laughed an ugly laugh. Jack thought, "He'll kill me if I do. He'll kill me if I don't. There's only one way to get out of this." Jack cleared his throat, and then began his story.

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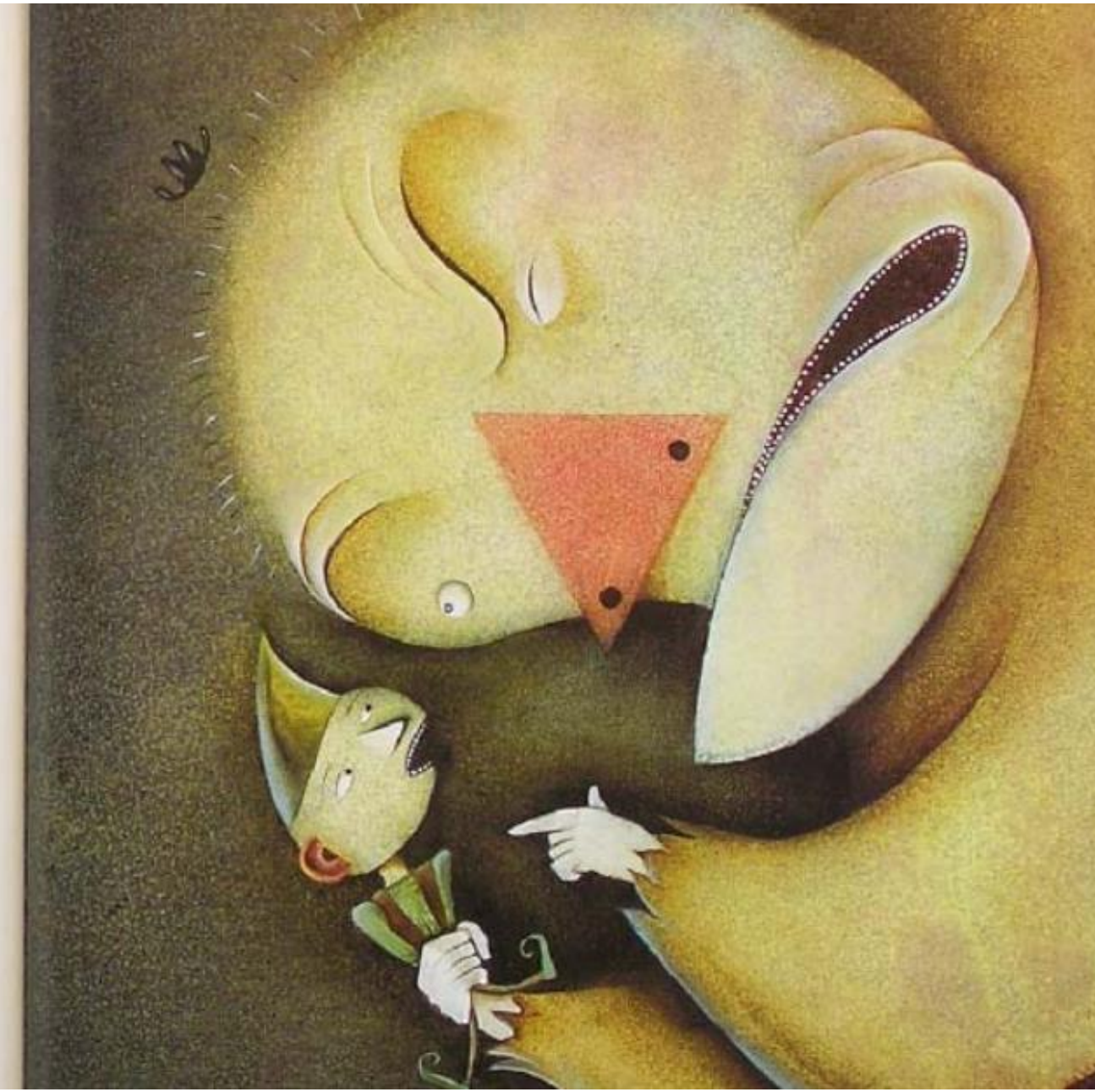

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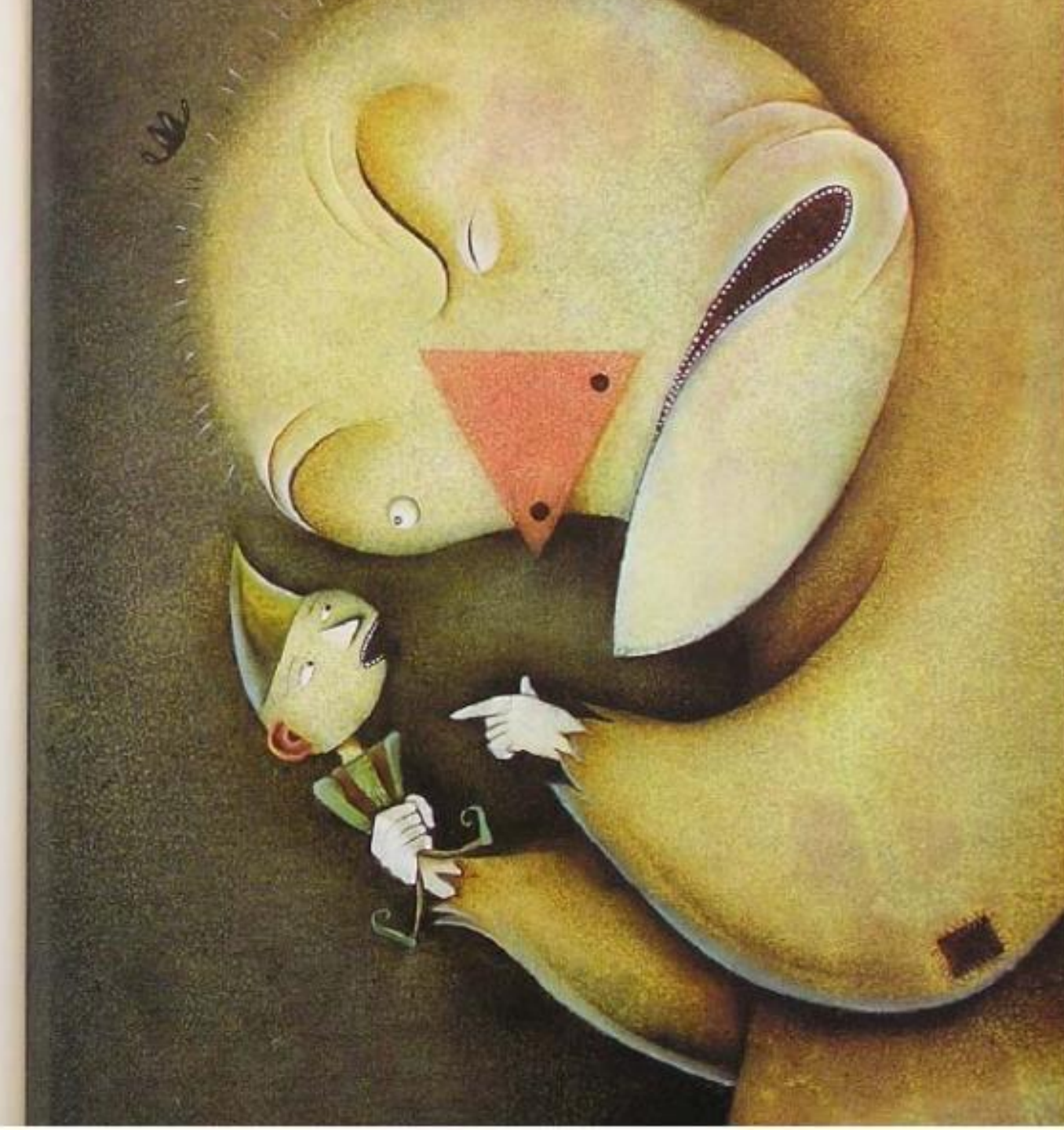
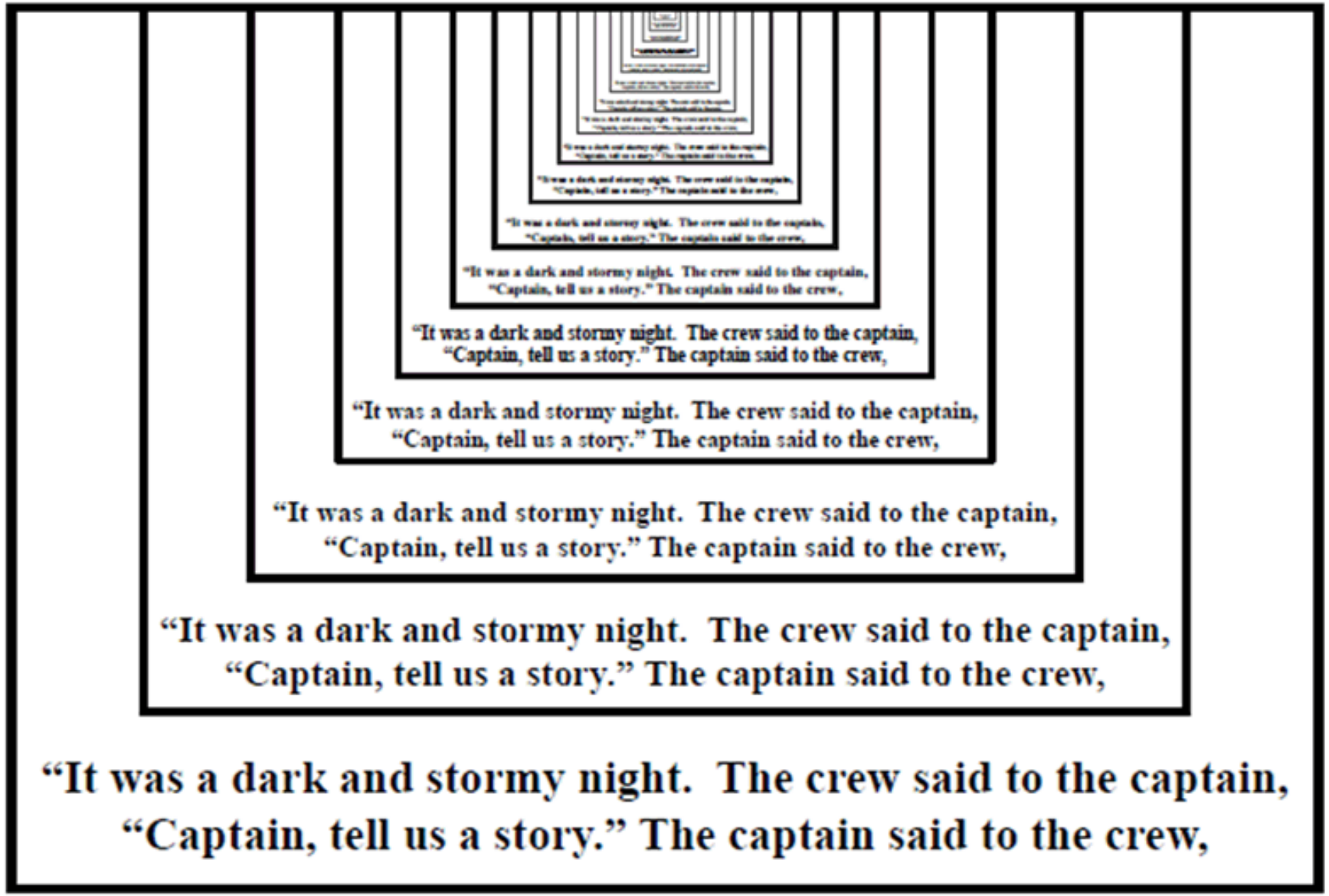



"It was a dark and stormy night. The crew said to the captain, "Captain, tell us a story." The captain said to the crew,

```
when run
move forward
move forward
move forward
move forward
move forward
```

```
when run
repeat 5 times
do move forward
```

Without loops, you need to repeat the same step over and over.

With loops, the code is more elegant.

Count is the loop stopping variable.

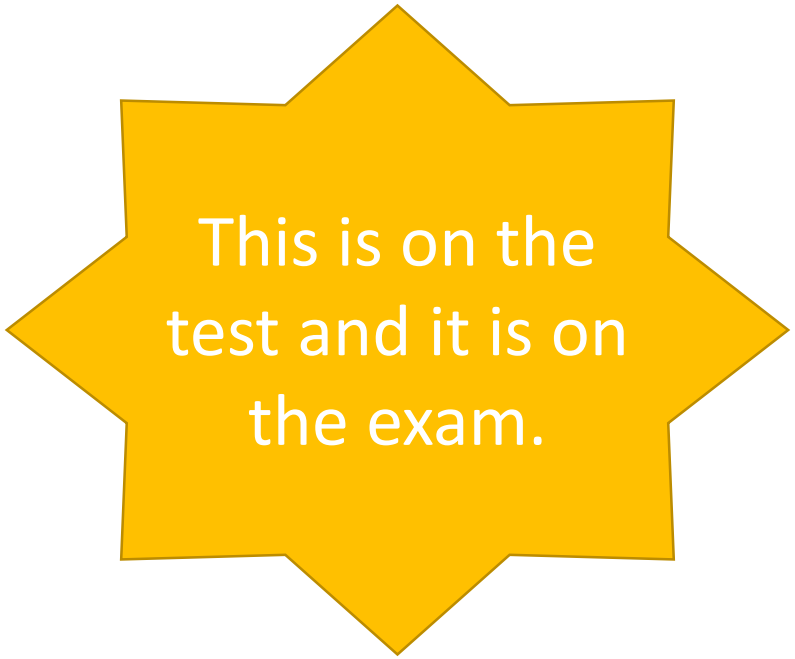
```
for (var count = 0; count < 5; count++) {
  moveForward();
}
```

It starts at 0 and stops before it gets to 5.

```
for (var count = 0; count < 5; count++) {
  moveForward();
}
```

0 1 2 3 4

The Parts of a Loop




```
for (var count = 0; count < 5; count++) {
  moveForward();
}
```

The Parts of a Loop

A. Initialize Loop Stopping Variable

A

```
for (var count = 0; count < 5; count++) {
  moveForward();
}
```

The Parts of a Loop

A. Initialize Loop Stopping Variable	B. Test Loop Stopping Condition

A B

```
for (var count = 0; count < 5; count++) {
   moveForward();
}
```

The Parts of a Loop

A. Initialize Loop Stopping Variable

B. Test Loop Stopping Condition

C. Steps to repeat

```
for (var count = 0; count < 5; count++) {
   moveForward();
}
```

A

B

C

The Parts of a Loop

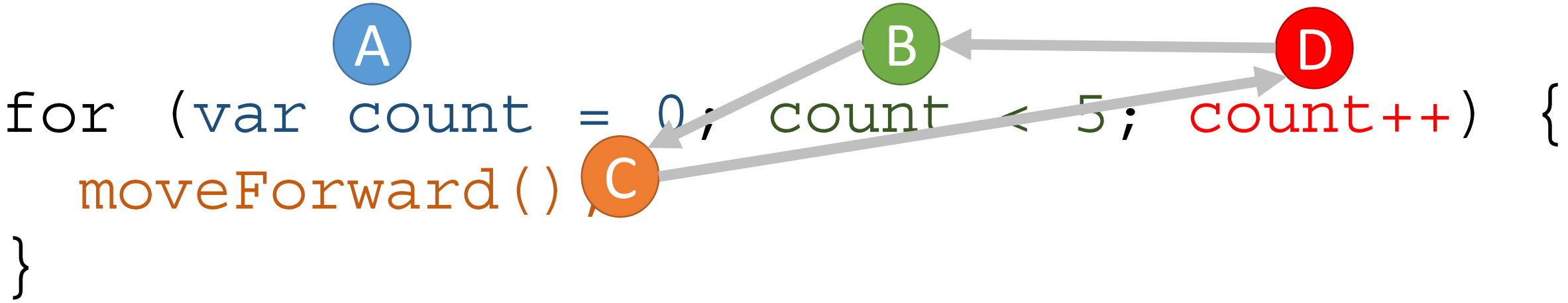
A. Initialize Loop Stopping Variable	B. Test Loop Stopping Condition	C. Steps to repeat	D. Progress to the Loop Stopping Condition

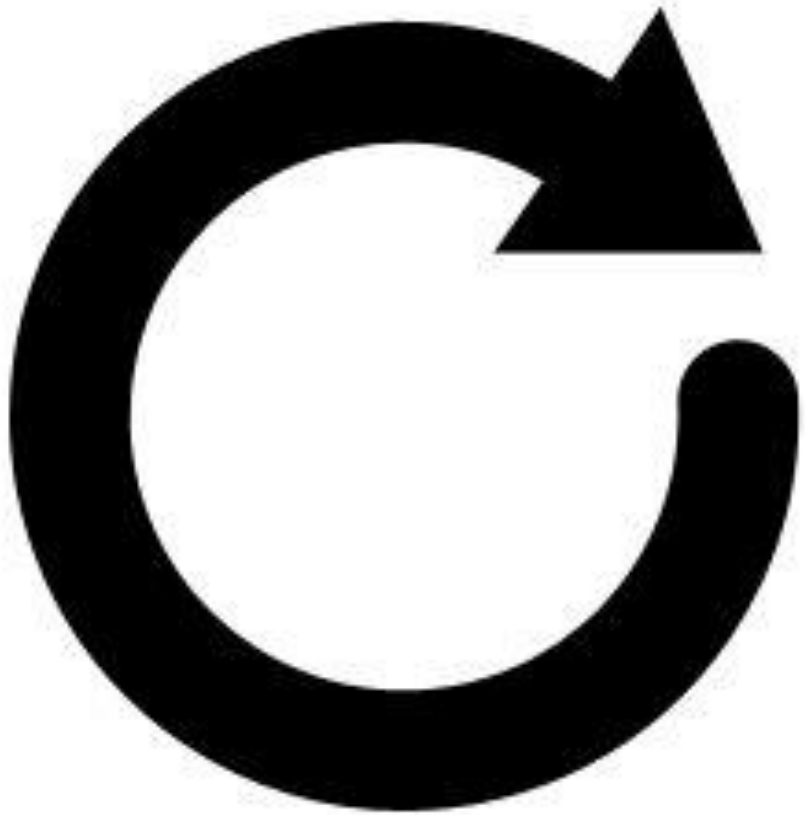
```
for (var count = 0; count < 5; count++) {
   moveForward();
}
```

A B C D

The Parts of a Loop

A. Initialize Loop Stopping Variable	B. Test Loop Stopping Condition	C. Steps to repeat	D. Progress to the Loop Stopping Condition





LOOPS REPEAT ACTIONS...

SO YOU DON'T HAVE TO