

The Language of Coding

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A coding language is a system of symbols that allows humans to write instructions for computers.

```
</p></main></body></html>
DOCTYPE html ><html lang = "en"><head><meta charset = "utf-8" />
meta name = "viewport" content = "width=device-width, initial-scale=1.0"
link rel = "manifest" href = "%PUBLIC_URL%/manifest.json" /><link rel
stylesheet" href = "./styles.css" /><script src = "./script.js" /></script>
title > The Language Of Coding </title></head><body><header><h1>
A coding language is a system of symbols that allows humans to write instructions for
```

Focus Morpheme

Prefix	<i>trans-</i>
Pronunciation	The prefix <i>trans-</i> is pronounced /tranz/.

Etymology of *trans-*

Origin	Latin
Meaning	across
Example: transport	Look at the word transport . The root <i>port</i> comes from the Latin <i>portare</i> , meaning “to carry.” By adding the prefix <i>trans-</i> , which means “across,” we create the word transport , meaning “to carry across.”

Vocabulary

- transportation
- transfer
- translate
- transform
- transmit
- transforming
- transmitted
- transit

Activating Prior Knowledge

- What do you think the photo above shows?
- What connections can you make between the photo and some of the words on the Vocabulary list?

The Language of Coding

Electronic devices require computer coding in order to work. Without it, these devices wouldn't be very useful!

What is computer coding? It is a set of instructions that tell a computer what to do. Computer programmers decide what they want a computer to do, and then they **translate** their ideas into code. The code is written in one of many different "languages" computers understand.



Computer programmers at work

JavaScript, Python, and Go are three common coding languages used to **transmit** instructions to a computer device. Scratch is a coding language some people use when they first learn to program a computer. Each language has its own rules to follow when writing code. If the rules are not followed, the instructions will not be **transmitted** correctly. In some ways, the various coding languages are similar. If you learn one coding language, you can **transfer** some of what you have learned to another coding language.

Vocabulary

Connections

The word **transmit** can be broken down into two morphemes. The root *mit* comes from the Latin *mittere*, meaning "to send." By adding the prefix *trans-*, meaning "across," we create the word **transmit**, meaning "to send across."

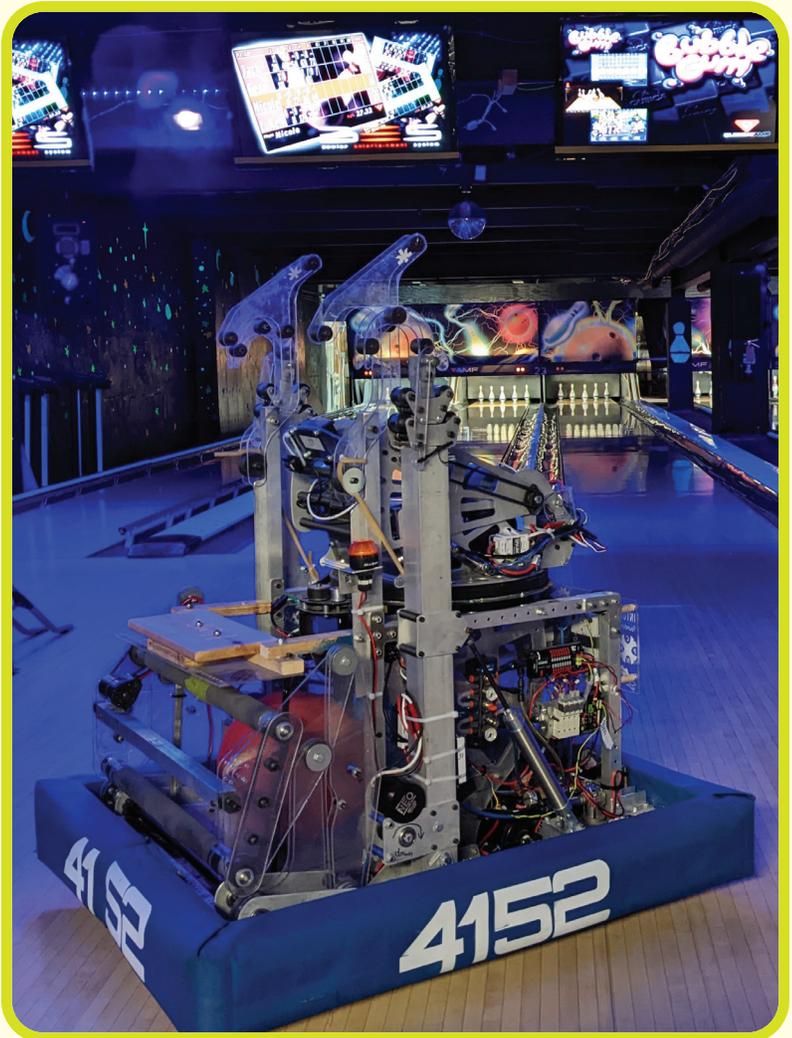
```
1  var myCanvas = document.getElementById("thecanvas");
2  var context = myCanvas.getContext("2d");
3
4  context.lineWidth = 20;
5  context.strokeStyle = "blue";
6  context.fillStyle = "red";
7
8  context.rect(450, 10, 50, 70);
9  context.fill();
10 context.stroke();
```

This is an example of JavaScript code.

Cellphones, tablets, and robots all require code in order to function. We know what cellphones and tablets can do, but what about robots?

Robots have many purposes. Some robots **transport** heavy materials in warehouses. Others deliver food. There are even robots in some hospitals or airports to greet people and help **transform** their mood. Driverless vehicles are a type of robot. They are being used for public **transportation—transit** buses and trains. Without computer code, none of these robots could do their job. They all require programming.

We see that technology is always **transforming**. Who knows what tomorrow will bring? Maybe *you* will learn to code and then invent a robot that can do amazing things!



Students at Huntsville High School in Ontario built this robot as part of a competition.

Did You Know?

Are you interested in learning how to write code? There are some free websites that will help you. You could also take courses, either online or in person. Some schools have a club for students interested in coding.

Time to Talk

Look closely at the JavaScript shown on page 2. What do you notice about the way it is written? Can you tell what instructions this code gives a computer? Why or why not?

Word Study

In your Word Study notebook, add today's morpheme.

New Morpheme	Type of Morpheme	Origin	Meaning
<i>trans-</i>	prefix	Latin	across

Predicted Meanings: Use the following clues to figure out the meaning of each of these words: **transparent**, **translucent**.

- Most windows are **transparent**.
- Windows with frosted glass are **translucent**.
- The plant was growing in a **transparent** box, so some of the roots were visible.
- They used tissue paper to create artwork that was **translucent** when placed on a window.

Write your predicted meanings for **transparent** and **translucent**. Remember to use the meaning of each morpheme to help you.

Writing Connections

For each word below, write a sentence that uses the word. Be sure to follow the guidelines.

	Position in Sentence	Length of Sentence
transportation	8th word	= eight words
transmitted	4th word	> six words
translate	5th word	< nine words
transforming	3rd word	> four words

**Visual Credits**