



# Morse Code 1

## Lesson Plan: Class 06 / IPP / 01



<b>Overall goal of the lesson</b>	<b>Familiarize kids with Morse Code so as to understand the concept of coding and decoding</b>
<b>Prior knowledge required</b>	None.

**MODULE 1:**                      **Module time:** 35 minutes

<b>Goal:</b>	<b>Familiarize kids with Morse Code.</b>
<b>Description:</b>	
<b>Material required:</b>	<b>Physical:</b> <b>Electronic: Slide 11 has a video with sounds for all the letters. Depending on the size of the class you may need something to amplify the sound. Also you will need internet to play it. If internet is not available you can skip the slide.</b>
<b>Procedure Details:</b>	<ol style="list-style-type: none"> <li>1. Use the first 2 slides to start the class with history of long distance communication. <ol style="list-style-type: none"> <li>a. Explain how messages needed to be carried by people were slow and erroneous if someone memorized them.</li> <li>b. Explain the cons of visual messaging: <ol style="list-style-type: none"> <li>i. One needed to be near enough to see them and</li> <li>ii. Weather, time of the day, terrain, etc affected visual communication.</li> </ol> </li> </ol> </li> <li>2. Invention of Telegraph <ol style="list-style-type: none"> <li>a. The first commercial telegraph was developed by William Fortherrgill Cooke and Charles Wheatstone in 1837.</li> <li>b. The telegraph allowed messages to be sent very fast over long distances using electricity.</li> <li>c. They developed a telegraph system which used a number of needles on a board that could be moved to point to letters of the alphabet.</li> </ol> </li> <li>3. Invention of Morse Code <ol style="list-style-type: none"> <li>a. In 1838, Samuel Morse and his assistant, Alfred Vail, demonstrated an even more successful telegraph device.</li> <li>b. In Morse Telegraphs, messages were sent by tapping out a special code for each letter of the message with a telegraph key.</li> <li>c. The telegraph changed the dots and dashes of this code into electrical impulses and transmitted them over telegraph wires.</li> <li>d. A telegraph receiver on the other end of the wire converted the electrical impulses to dots and dashes on a paper tape.</li> <li>e. This code became universal and is now known as <b>Morse Code</b>.</li> </ol> </li> <li>4. Morse developed a code for each English letter, number, and some symbols</li> <li>5. Morse Code uses 2 types of signals - Dits and Dahs: <ol style="list-style-type: none"> <li>a. Dit: pronounced with a short "i" sound and a silent "t" <ol style="list-style-type: none"> <li>i. a very short sound (1 unit of time)</li> <li>ii. represented by a dot "." in writing</li> </ol> </li> <li>b. Dah: pronounced with a short "a" sound. <ol style="list-style-type: none"> <li>i. a longer sound: 3 times a Dit that is 3 units of time</li> <li>ii. represented by a dash "-" in writing.</li> </ol> </li> </ol> </li> </ol>

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|  | <ol style="list-style-type: none"><li>6. Note to the class that Morse code need not always be used only in electrical signals. It can be used by flashing lights for long (to show dahs) and short (to show dits) or by using sound like clap for dahs and clicks of fingers for dits, so on.<ol style="list-style-type: none"><li>a. Ask class for what more example can they think of. Anything binary should work with a time gap should work.</li></ol></li><li>7. Teach the class the international Morse Code:<ol style="list-style-type: none"><li>a. Tell them that the distance between 2 letters of the same word is 3 units of time: that is same time as for a dah.</li><li>b. the distance between 2 words is 7 units of time: that is little more than 2 times as for a dah.</li><li>c. Explain the morse code for each letter.</li></ol></li><li>8. Explain the flow chart, and explain them how such a representation makes its easy to remember the codes for different letters.<ol style="list-style-type: none"><li>a. Visualization of flow chart may help in learning</li><li>b. Each time you go down left subtree you add a dit (dot).</li><li>c. Each time you go down right subtree you add a dah (dash).</li></ol></li><li>9. Use the video for better understanding, you can skip it if you do not have internet access.</li><li>10. Next, video is a mnemonic technique to remember Morse code. Again, optional if you don't have internet.<ol style="list-style-type: none"><li>a. "Mnemonic devices are techniques a person can use to help them improve their ability to remember something. In other words, it's a memory technique to help your brain better encode and recall important information."</li></ol></li><li>11. The next 4 slides are just some common letters with morse code.<ol style="list-style-type: none"><li>a. Make the students speak them loud, guess, learn them both side.</li><li>b. Also ask students to play letters using clap for dahs and clicks of fingers for dits.</li></ol></li><li>12. In the worksheet, for the second question ask them to determine the letter for the given code.</li></ol> |
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