

Middle School Coding Challenge - WTSA State 2021

Regulations:

Using the version of the **Scratch** tool installed on your laptop, create a solution to address the following challenge. Your goal is to develop your solution to the challenge as much as possible, within the allotted amount of time (120 minutes). It is advised that you save your work as you progress through the challenge. Keep in mind that you will be required to submit a link to where your scratch program is hosted (see submission instructions below).

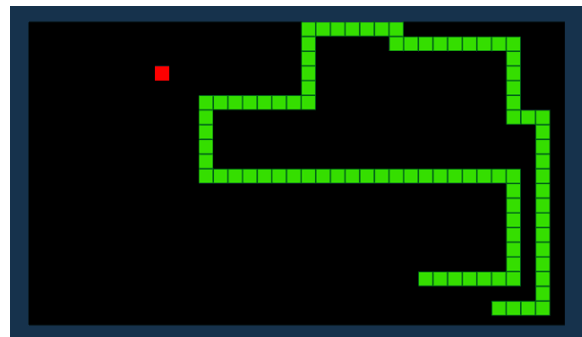
To emulate real life coding practices, you **will** be allowed to access online resources to research how to develop your solutions. However, you **MUST list all the links to every resource used**, or else your team will be disqualified. Do note that under normal supervised circumstances, you will **NOT** be permitted to access any resources; this change was made to accommodate a virtual competition.

When you finish, save your work, **list your resources in your submission**, and submit your project. The judges will record your official completion time. Teams will not be permitted to make any changes after final submission.

Challenge:

Your challenge is to create your own version of the **Snake Game** in Scratch.

Snake is a classic video game where you move up, down, left, or right; no diagonal movements. The goal of the game is to eat pellets, each of which grows your snake by one unit, while avoiding running the head of the snake into itself or into a wall. The more pellets you collect, the more points you gain, but the longer your snake grows, making the game more difficult as the player progresses.



You are expected to fulfill the minimum requirements:

- Your snake must only move in 90 degree angles (up, down, right, left)
- The body of the snake must follow the head's movements exactly
- Each pellet must make the snake grow by one unit

- The game must end when the snake's head touches itself or a wall (or a life must be lost).
- A game over screen and start screen (regardless of how basic) must be present

Since this is an open prompt, players who implement other features that **still adhere to the above requirements** will be awarded additional points. Some ideas include:

- Score keeping
- Sprucing up game environment (something "prettier" than a simple pixelated game)
- Sound effects
- Lives counter for the snake
- Items to restore lost lives
- Barriers that appear as the player progresses
- Multiple levels with different wall/barrier layouts
- Other creative ideas

Submission/Evaluation:

You will submit a file with a link to your project hosted on scratch. Do **NOT** submit your scratch file itself; please submit a hyper-link to your project. Be sure to include your list of references in the description! The time the submission is received will be considered as your time logged for this event. However, keep in mind that total time taken and total features implemented will **BOTH** be taken into account when judging; the team that implements the most features will set the benchmark. This may be annoying to not know what the "best" entry will look like, however, this is how many computer science competitions are run (Hakathons, for example). Do your best and use your full time as you need to implement as many features as you can. Good luck, and have fun!