

# Scratch Program Design Worksheet

**Individual:** How does the game/program work currently?

> The catch game allows you to score points when you catch an apple in the bowl.

**Partners:** Brainstorm ideas for a mod to one of your tutorials with your partner.

**Individual:** My mod idea is...

> I would like to have math problems fall down instead of apples. If you catch the correct answer, then you score a point.

**Individual:** Create a prototype that that is at least partially working and test it.

**Partners:** Share your prototype with you partner to test/debug.

**Individual:** Explain at least one challenge you overcame.

> I wanted to the math problems to fall a little slower. When I changed the number that controls speed, the math problems kept getting stuck at the bottom. The apples were programmed to go to the top when reaching "y = -170". When I changed the speed from -5 to -3, the apples never reached exactly -170. Instead they went from -168 to -171 and became stuck at the bottom. I solved the problem by changing the = to < so the apples would only need to be less than -170 instead of exactly -170.

The apples were programmed to move to the top when equaling a number on the bottom, which happened to be a multiple of 5. When I changed the speed to -3, the apples equaled the multiple of 5.

**Individual:** Explain at least one future improvement that could be made to your game/program.

- Sometimes the math problem appears off the screen
- The same math problem shows up too frequently
- I would like to add more math problems