

## Practical Notes for Teachers:

This is intended to be a largely student-directed activity. The remainder of this document is a set of printable instructions. For each step, we have included snapshots of the interface as hints. In our own experiences working with kids, this is often enough to get them going. However, if you or they want more details, there are also links to video tutorials on most topics.

Looking Glass is a free stand-alone application, so you will need to download it and install it ahead of time from <https://lookingglass.wustl.edu/downloads>. There are versions for Windows, Mac, and Linux. The application uses content shared through an online community, so the computers will need to have internet access for this to work.

If your students have never done any programming before, we recommend asking them to create a simple story (Steps 1-3). If some students have done a little bit of programming, the Remix Code Scrambles can provide greater challenge – these are pre-created animations that are out of order. Kids need to figure out what each action in the animation does, and how to order them correctly using both parallel execution (Do together) and looping (Count up to).

In both cases, we recommend asking your students to work in pairs. One student in the pair should be the driver (controlling the mouse and keyboard) and one the navigator (making suggestions about where and what to do). It is important that they switch every 10-15 minutes. We recommend announcing when it's time to switch to the whole class.

We encourage you to have your students share their creations through the Looking Glass community at the end of the hour. You can see other shared Looking Glass projects at: <https://lookingglass.wustl.edu/worlds>. Kids creating their own accounts will need parental permission. Asking them to create the accounts a couple of days before your planned activity will allow time for parents to approve. Alternatively, some teachers create a single account for the class and use that to share students' work.

If you have questions or comments, please send email to [lookingglasshelp@seas.wustl.edu](mailto:lookingglasshelp@seas.wustl.edu)