

Activity Card 14

Rapunzel

- An evil witch has locked Rapunzel in her tower. The tower door is locked with a magic key and cannot be opened, so you will have to build a staircase on the outside of the tower to rescue her. Fortunately, there is a wagon nearby filled with square and rectangular boxes that you can use.
- Can you use plastic building cubes first to plan what you are going to build to help her? The tower is five cubes high and each of the square boxes is one cube long. The rectangles are different lengths. Some are one cube, some two, some three and some four cubes long. You can choose either the squares or the rectangles.
- For safety reasons, each step must not be more than one cube higher or lower than the step beside it.
- When you have solved the problem, can you draw a model of what the tower and the staircase will look like using Logo? First, use squared paper to draw a model of your design to remind you what you are trying to build.
- The commands for drawing Rapunzel's tower are:

repeat 2[forward 50 right 90 forward 30 right 90]

- Her tower is 50 steps high and 30 steps wide.

Can you save her?