

# Indoor Vertical Planter Lesson Plan

## Overview

**Skills and connections:** conditions for plant growth, watering needs of specific plants, photosynthesis, structures and stability, engineering design process

**Age:** 4<sup>th</sup> grade

**Community problem:** Students in an urban school recognized a space crunch in expanding the school garden. No more outdoor space was available for planting.

**Student design goals:** Students created CAD models and 3-D prototypes of indoor vertical plant stackers, and presented designs to the school science specialist. These plant stackers required that the plants had easy access to both sunlight and water, as well as being themselves sturdy, mobile, and able to stand within the school building. There was a fixed timeframe and budget for the project.

## Details

The students individually created CAD models of vertical plant stackers, and used Tinker CAD as the computational tool for designing their models.