



Green Our Planet's School Garden Curriculum

Title: **Transpiration**

Topic: Plant Parts and Functions – Do Plants Sweat? Explore Transpiration

Link: <https://www.youtube.com/watch?v=Z2T1NaaEuxk&feature=youtu.be>

Grade Level: 2

Standards: K-2 ETS 1-2 (at 0:24)

Objectives: (at 1:06)

- Discover how water travels through plants
- Identify the ways plants use water

Materials Needed (at 0:54)

- Experiment 1 - one medium sized leaf and one plastic Ziploc bag
- Experiment 2 – stalk of celery, plastic cup, and food coloring

Segments:

- Teacher segment: 0:15 - 1:00
- Student segment: 1:15 - 12:40
- Quiz 12:42 - 14:52

Concepts and/or Topics Covered & Vocabulary Notes:

- Reviews parts of plants
- Introduces more information on parts and functions:
xylem, capillary action, phloem, photosynthesis, stomata
- Explains and demonstrates transpiration in plants
- Vocabulary section at end (12:53). Review parts: *roots, leaves, stem, flower, fruits, seeds, transpiration, xylem, phloem, stomata, capillary action, hypothesis.*
- Possible additional vocabulary:
pores, absorb, spontaneous, photosynthesis, gravity, nutrients, gas exchange, embryo (seed), reproductive, evaporation.

Methodology:

- Includes some reading and writing
- Explains new vocabulary with drawings
- Experiments - #1 shows transpiration #2 how water moves in a plant
- Quiz at end includes open-ended questions, multiple choice, and true / false

Possible Supplemental / Follow-up Activities:

Suggested activity- try experiment #2 with different plants or different colors (at 12:06)