

## NATURE ACTIVITY

# LIFE CYCLE OF A TOMATO



**Kids will repurpose paper cartons to serve as planting containers to start tomato seeds. They can later transplant their tomato seedling into their garden or gift it to a gardening friend.**

### WHAT YOU'LL NEED:

- ☐ 1 or more small paper cartons
- ☐ Plastic bags or wrap
- ☐ Potting soil mix
- ☐ Tomato seeds (cherry tomatoes are a good choice if planting container gardens)
- ☐ Grow lights (optional)
- ☐ Life Cycle of a Tomato Poster (included at the end of this activity)
- ☐ Garden journal (optional)

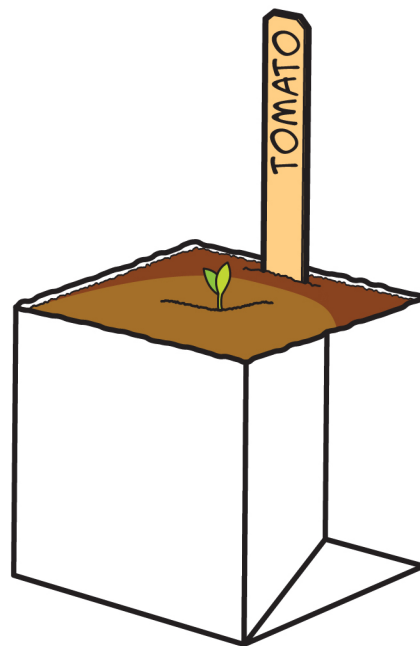
**TIME:** 6+ weeks

### INTRODUCTION:

Watching plants grow from seed to seed is a great way for kids to learn about the life cycle of plants. They begin by planting a seed which will then germinate forming roots and shoots. The seedling will grow in height and add leaves and stem until it is ready to flower. They can watch as the flower transform into a fruit and eventually be able to dissect the fruit to find the new seeds inside completing the full circle.

There are many plants that can be used to introduce kids to a plant's life cycle, but tomato seeds can be a fun choice. If you have a warm location with lots of light, seeds can be started indoor so growth can be monitored daily for close observation. After 4 to 6 weeks, you can begin to transplant your tomatoes into containers or gardens outdoors for them to reach maturity.

Tomatoes are a delicious staple of American cuisine, which is fortunate considering that they provide important vitamins, minerals, and cancer-fighting antioxidants. With fresh tomatoes on sandwiches and burgers, and processed tomatoes in pizza, salsa, and catsup, it's hard to make it through a day without eating a tomato or tomato-based product!



Follow the Nature Activity instructions on next sheet.



Presented by



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## INSTRUCTIONS:

### STEP 1

Prepare your paper cartons to use as growing containers by washing and drying thoroughly. Make a few holes in the bottom of your carton to drain access water.

### STEP 2

Fill your cartons with moistened potting soil. You want the soil to feel like a moist sponge, but you do not want it to be so wet that water can be squeezed out of it. You may need to alternate adding water and soil until the optimum moisture is achieved.

### STEP 3

Plant 2 to 3 seeds in each carton. The seeds need to be about  $\frac{1}{4}$  of an inch deep and about  $\frac{1}{2}$  inches apart. After germination you will thin your plants so that there is only 1 plant per container.

### STEP 4

Place carton inside a plastic bag or cover all cartons with a sheet of plastic wrap or a plastic tray lid to keep the potting soil mix from drying out. Make sure the plastic does not actually touch the soil surface.

### STEP 5

Put your cartons in a place out of direct sun where the temperature remains steadily around 70°F.

### STEP 6

The seedlings will begin to emerge in a few days. If you like, kids can document the germination and plant growth in a garden journal.

### STEP 7

Once the seedlings have emerged they need plenty of bright light to thrive. Generally they will do best under fluorescent lights. Set the plants an inch or two below the tubes and maintain that distance as the plants grow. If the distance is too great, the plants will stretch towards the lights and develop thin, weak stems. Keep the lights on 14 to 16 hours a day, but turn them off for the night. Plants need a rest, too! If you don't have fluorescent lights place plants in your sunniest windowsill.

### STEP 8

Because multiple seeds were planted, students might observe more than one seedling growing in the carton. If this is the case, once the seedlings have two sets of leaves snip out all but the one strongest seedling at the soil line using a pair of small sharp scissors.

### STEP 9

Let kids care for their plants, keeping the soil moist and watering plants. In about 4 to 6 weeks your seedlings will be ready to plant in a bigger container or out into the garden.

When moving your tomato plants outdoors, you will need to slowly help them adjust to outdoor conditions. Begin exposing plants to outdoor conditions 7-10 days before you plan to plant them outside permanently. Start by setting your seedlings out in a sheltered, partly shaded spot for a few hours; then bring them back indoors. Each day, gradually increase the amount of time the plants spend outside and light intensity they receive until they spend the day in full sun and the night outside.

Outdoor conditions also increase evaporation and transpiration (the process of plants giving off moisture), so make sure the potting mix doesn't dry out! After a week or so your seedlings will have toughened up enough to withstand the challenges of outdoor conditions. They'll be ready to get established quickly in their new home and put out strong new top and root growth.

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See the illustrated Life Cycle of A Tomato on the next sheet.



