

# FALL LEAVES: PART 2



Illinois Extension  
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

## OBJECTIVES

- LEARN WHY LEAVES CHANGE COLOR IN THE FALL.
- EXPLORE WHAT AFFECTS A TREE'S COLOR.
- CREATE A MASK USING COLLECTED LEAVES.

## MATERIALS

MASK TEMPLATE  
ELASTIC CORD  
GLUE STICK  
PIECE OF CARDSTOCK  
COPY PAPER  
PENCIL  
COLLECTED LEAVES AND OTHER NATURAL MATERIALS

## GUIDING QUESTIONS

1. WHY DO SOME LEAVES CHANGE COLOR IN THE FALL?
2. DO DIFFERENT TREES TURN DIFFERENT COLORS?

## CONCEPTS

- IN THE FALL, SOME TREES STOP MAKING FOOD.
- CHLOROPHYL IS WHAT PLANTS USE TO MAKE FOOD.
- THERE ARE OTHER CHEMICALS IN A TREE'S LEAVES BESIDE CHLOROPHYL.

## FACTS

- LEAVES HAVE COLOR DUE TO CHEMICALS CALLED PIGMENTS.
- THERE ARE FOUR MAIN PIGMENTS FOUND IN LEAVES.
  - CHLOROPHYL (GREENS)
  - XANTHOPHYL (YELLOW)
  - CAROTENOIDS (ORANGES)
  - ANTHOCYANIDS (REDS)
- AS SUMMER TURNS INTO FALL, DAYS GET SHORTER AND THERE IS LESS SUNLIGHT. THIS IS THE SIGNAL FOR TREES TO PREPARE FOR WINTER SO THE GREEN CHLOROPHYL STARTS TO FADE AS IT IS NO LONGER NEEDED FOR PHOTOSYNTHESIS (MAKING FOOD FROM SUNLIGHT).
- THIS ALLOWS THE OTHER PIGMENTS THAT WERE ALWAYS THERE TO SHOW IN THE LEAVES.
- WEATHER CONDITIONS, LIKE RAIN, SNOW, OR MUCH COLDER CONDITIONS CAN IMPACT THE COLOR OF THE LEAVES AND HOW LONG THE COLOR WILL LAST.



## INTEREST APPROACH-ENGAGEMENT

ASK:

- WHY DO YOU THINK LEAVES TURN COLORS?
- DO ALL TREES CHANGE COLORS?
- WHAT MAKES ONE TREE TURN YELLOW AND ANOTHER TREE TURN ORANGE?



### ACTIVITY 1: MAKE A NATURE JOURNAL

- TAKE A PIECE OF CARDSTOCK AND FOLD IT "HAMBURGER" STYLE OR WIDTH-WISE.
- FOLD SEVERAL PIECES OF COPY PAPER THE SAME WAY.
- PUT THE CARDSTOCK ON THE OUTSIDE OF THE COPY PAPER TO ACT AS A COVER.
- KEEP TRACK OF YOUR OBSERVATIONS BY DRAWING PICTURES OF WHAT YOU SEE AND WRITING DOWN DESCRIPTIONS AND MEASUREMENTS.

### ACTIVITY 2: COLLECTION AND OBSERVATION WALK

- IN YOUR BACKYARD OR PARK, EXPLORE THE DIFFERENT TREES.
- USE YOUR NATURE JOURNAL (ACTIVITY 1) TO RECORD YOUR OBSERVATIONS WITH WORDS AND SKETCHES.
- COLLECT A VARIETY OF FALLEN LEAVES AND OTHER INTERESTING NATURAL ITEMS.
- PLEASE PROTECT OUR TREES. ONLY COLLECT ITEMS THAT HAVE FALLEN TO THE GROUND.
- ITEMS YOU MIGHT COLLECT: LEAVES, ACORNS, GRASSES, SMALL STICKS.

### ACTIVITY 3: CREATE YOUR FALL INSPIRED MASK

- LAY OUT YOUR COLLECTED MATERIALS AND YOUR MASK BASE ON A FLAT SURFACE.
- ARRANGE YOUR ITEMS ON THE MASK TEMPLATE BEING CAREFUL NOT TO COVER UP THE EYE HOLES.
- ONCE YOU HAVE YOUR ITEMS ARRANGED THE WAY YOU LIKE, CAREFULLY GLUE THE ITEMS DOWN WITH THE GLUES STICK.
- INSERT THE ELASTIC CORD INTO THE SMALL HOLES ON EACH SIDE OF THE MASK. TIE A KNOT IN THE ELASTIC TO KEEP IT ATTACHED TO THE MASK.