

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

FACTS

- LEAVES HAVE COLOR DUE TO CHEMICALS CALLED PIGMENTS.
- THERE ARE FOUR MAIN PIGMENTS FOUND IN LEAVES.
 - CHLOROPHYLL (GREENS)
 - XANTHOPHYLL (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 CHLOROPHYLL STARTS TO FADE AS IT IS NO LONGER NEEDED FOR PHOTOSYNTHESIS.
- 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.

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.
- CHLOROPHYLL IS WHAT PLANTS USE TO MAKE FOOD.
- THERE ARE OTHER CHEMICALS IN A TREE'S LEAVES BESIDES CHLOROPHYLL.



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: COLLECTION AND OBSERVATION WALK

- IN YOUR BACKYARD OR PARK, EXPLORE THE DIFFERENT TREES.
- USE YOUR NATURE JOURNAL (ACTIVITY 2) 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 2: 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 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 GLUE STICK.
- INSERT ELASTIC CORD INTO THE SMALL HOLES ON EACH SIDE USING THE METAL PIECE TO CREAT A "T" SO IT DOESN'T COME OUT OF THE MASK.

LESSON PLAN CREATED BY WENDY FERGUSON, PROGRAM COORDINATOR