Harvard LTER Schoolyard Program

Teacher Developed Lessons and Documents that integrate Harvard Forest Schoolyard Ecology Themes into curriculum.

- Lesson Title: Structuring Fall Phenology Remote Observation
- Teacher/Author: Elisa Margarita
- School: Brooklyn Technical School
- Level: High School
- Date: November, 2020
REMOTE APPROACH SUMMARY:

IN ORDER TO ENGAGE STUDENTS IN THE BUDS, LEAVES AND GLOBAL WARMING PROJECT REMOTELY, TEACHER, ELISA MARGARITA WAS ABLE TO GET PERMISSION TO MEET SOME OF HER STUDENTS AT THE FIELD SITE. AT THE SITE,

-- INITIAL TREE WALK. LIVE-STREAMED THE TREE WALK AND INTRODUCTION TO STUDY VIA ZOOM TO THE STUDENTS WHO COULD NOT ATTEND. I HAD 15 STUDENTS ATTEND IN PERSON, AND 50 ATTEND ON ZOOM.
WE TOOK PHOTOS OF THE TREES.

-- TEACHER TOOK PHOTOS ONCE A WEEK AND SENT THE PHOTOS TO THE STUDENTS ON GOOGLE CLASSROOM. I UPLOAD PHOTOS ONCE A WEEK. SHE CREATED TEAMS OF 3-4 STUDENTS, GAVE EACH STUDENT A ROLE, EXPLAINED THE RULES, AND GAVE THEM A TIME FRAME FOR THE FALL PORTION OF THE STUDY.

-- BEFORE MEETING IN PERSON, TEACHER DID A LIVE STREAM ABOUT THE STUDY. SHE EXPLAINED WHAT PHENOLOGY IS AND WHY IT IS ESSENTIAL. SHE INCLUDED AN INTRODUCTORY TREE IDENTIFICATION LESSON, AND HAD THE STUDENTS DO SOME OBSERVATIONAL DRAWINGS ON LEAVES COLLECTED FROM THE FIELD SITE.

-- SUGGESTIONS FOR OTHER TEACHERS LEADING SCHOOLYARD ECO. PROJECTS DURING COVID:

ELISA SUGGESTS TO BREAK THE STEPS DOWN INTO CHUNKS. SHE SUGGESTS MODELLING AND EXPLAINING EACH STEP OF THE STUDY. SHE RECOMMENDS HAVING STUDENTS PRACTICE CODING TREE CANOPY AND TREE LEAVES. SHE ALSO WOULD HAVE STUDENTS PRACTICE COUNTING LEAVES THEY ARE COUNTING ON EACH BRANCH.

THE FOLLOWING PAGES SHOW THE WAY ELISA PRESENTED/SHARED PHOTOS OF TREE BRANCHES/LEAVES FOR EACH VISIT TO THE FIELD SITE FOR STUDENTS TO MAKE REMOTE OBSERVATIONS AND ENTER DATA ACCORDINGLY.
OCTOBER 14, 2020 BRANCH PHOTOGRAPHS FOR STUDENT INTERPRETATION

October 14, 2020 Branch Photographs for Student Interpretation

10.14.2020 TREE # 2: OSAGE ORANGE

HARVARD FOREST PHENOLOGY
HARVARD FOREST PHENOLOGY

10.14.2020 TREE # 5 WILLOW OAK, WK
10.10.2020 WILLOW OAK, WK
GREEN ASH
10.14.2020 TREE 7 PIN OAK PO
10.14.2020 TREE 8 BLACK CHERRY BC
10.14.2020 TREE 11 NORWAY MAPLE NM
10.24.2020. TREE #3: ENGLISH ELM, EL

HARVARD FOREST PHENOLOGY
OCTOBER 24, 2020
BRANCH PHOTOGRAPHS FOR STUDENT INTERPRETATION

10.24.2020 Tree # 5 Willow Oak, WK
TREE # 6 GREEN ASH 10.24.2020

HARVARD FOREST PHENOLOGY
10.24.2020 TREE 8 BLACK CHERRY BC
10.24.2020 TREE 10 WHITE OAK WO
10.24.2020 TREE 11 NORWAY MAPLE NM
OCTOBER 31, 2020

BRANCH PHOTOGRAPHS FOR STUDENT INTERPRETATION

- 10.31.2020 Tree # 1: Japanese Pagoda
10.31.
2020 TREE # 2: OSAGE ORANGE

HARVARD FOREST PHENOLOGY
10.31.2020. Tree #3: English Elm, el
• 10.31.2020 Tree # 5 Willow Oak, WK
10.10.2020 WILLOW
OAK, WK
10.31.2020 TREE 8 BLACK CHERRY BC
10.31.2020 TREE 10 WHITE OAK WO
10.31.2020 TREE 11 NORWAY MAPLE NM