



Pollination: Tagging and Tracking your Plant

YEAR ROUND GRADES 3-5

DESCRIPTION:

AT THE BEGINNING OF THE YEAR, STUDENTS WILL CHOOSE 2 PLANT SPECIES AND ACTIVELY TRACK THEIR PHENOLOGY. VISITS TO THE OUTDOOR CLASSROOM TO OBSERVE THEIR PLANT AND RECORD DATA SHOULD BE NO FEWER THAN ONCE IN EACH SEASON, BUT IDEALLY WEEKLY. A GOOD MIDDLE GROUND IS ONCE A MONTH.

DURATION & TYPE OF PROGRAM:

INITIAL SESSION OF ABOUT 60 MINUTES, RECURRING SESSIONS OF ABOUT 30 MINUTES, AS FREQUENTLY AS TEACHER DECIDES.

MATERIALS

- LAMINATED ID CARDS WITH PLANT INFORMATION AND STUDENT NAMES, 2 PER STUDENT, 1 PER TEACHER
- AN ALTERNATIVE TO LAMINATE CARDS

Pre-lesson

- MAKE SURE EACH STUDENT HAS ACCESS TO INATURALIST FOR IDENTIFYING PLANTS IN THE SET AREA. TEACHER SHOULD MAKE SURE AREA PERIMETER IS DEFINED FOR STUDENTS TO KEEP THEM CLOSE TOGETHER AND EASIER TO MANAGE.
- TEACHER AND STUDENTS SHOULD BE FAMILIAR WITH HOW TO USE PLANT IDENTIFICATION GUIDE, OR INATURALIST FOR IDENTIFYING PLANTS. TEACHER SHOULD SET A PERIMETER IN WHICH THE STUDENTS CAN ROVE TO FIND PLANTS THEY WOULD LIKE TO STUDY FOR THE YEAR. STUDENTS SHOULD BE CHOOSING TWO PLANTS. WHEN OBSERVING PLANTS AND ANIMALS, FOCUS ON OBSERVING THEIR ACTIVITY THOROUGHLY AND OVER A PERIOD OF MINUTES. TEACHER SHOULD ALSO CHOOSE A PLANT TO TAG AND BE PREPARED TO MODEL THE OBSERVATION ACTIVITIES

Procedure

PART 1- OUTSIDE

1. GATHER STUDENTS IN A COMMON OUTDOOR MEETING AREA WITHIN YOUR AREA OF EXPLORATION. SET THE EXPECTATION THAT THIS IS WHERE AND HOW YOU WILL GATHER AS A GROUP BEFORE AND AFTER EACH OBSERVATION SESSION.

**COULD BE WOODEN
POPSICLE STICKS WITH
A HOLE PUNCHED
THROUGH. WHATEVER
MATERIAL THE TAG
MAY BE, IT NEEDS TO
BE ABLE TO
WITHSTAND THE
FORCES OF NATURE IN
ALL SEASONS, AS IT
WILL BE ATTACHED TO
THE PLANT UNTIL THE
END OF THE SCHOOL
YEAR. ZIP TIES FOR
ATTACHING ID CARDS**

- **FOLDER OR BINDER
FOR EACH STUDENT
FOR STORING
RECORDED
OBSERVATIONS**
- **OBSERVATION SHEET
FOR EACH STUDENT
(ATTACHED IN
FOLDER)**
- **PENCILS FOR TAKING
NOTES**
- **COLORED PENCILS FOR
SKETCHING**
- **RULERS FOR
MEASURING PLANTS**
- **MAGNIFYING LENSES
FOR OBSERVING
DETAILS OF PLANT AND
SOIL AROUND IT**
- **CAMERA OR PHOTO
CAPABLE DEVICE FOR
TAKING PHOTOGRAPHS**
- **MAINE PLANT
IDENTIFICATION GUIDE**
- **INATURALIST ON IPAD
OR TABLET**

2. **ASK STUDENTS WHAT THEY SEE, HEAR, SMELL,
AND FEEL. THEY SHOULD BE ABLE TO GIVE
DETAILED ANSWERS BASED ON THE PREVIOUS
OUTDOOR ACTIVITY OF MAKING
OBSERVATIONS AND USING DETAIL.**
3. **EXPLAIN TO STUDENTS THAT TODAY THEY
WILL BE EXPLORING THE DIFFERENT PLANTS
THAT LIVE ON THEIR SCHOOL GROUNDS, AND
HAVE THE OPPORTUNITY TO ‘ADOPT’ TWO
PLANTS IN ORDER TO MEASURE THEIR GROWTH
AND CHANGE OVER THE COURSE OF THE YEAR.**
4. **SET THE LIMITS OF WHERE THE STUDENTS CAN
ADOPT PLANTS AND ALLOW THEM 15 MINUTES
TIME TO EXPLORE THE AREA USING
INATURALIST TO LEARN ABOUT THE PLANTS
THAT LIVE THERE. DURING THIS TIME THEY
SHOULD BE RECORDING THE COMMON NAME
AND SCIENTIFIC NAME OF 5 OF THE PLANTS
THEY HAVE SEEN.**
5. **REGROUP STUDENTS TO MEETING PLACE. GIVE
EACH STUDENT THE OPPORTUNITY TO SHARE
THE NAMES AND LOCATION OF ONE OF THE
PLANTS THEY IDENTIFIED. HAVE OTHER
STUDENTS SHOW BY HANDS IF THEY ALSO
IDENTIFIED THAT SAME PLANT.**
6. **EXPLAIN THAT NOW STUDENTS WILL BE
CHOOSING TWO OF THE PLANTS IN THE AREA
TO MONITOR AND OBSERVE THROUGH THE
REST OF THE YEAR. WHEN THEY HAVE CHOSEN
THEIR PLANT, THEY SHOULD GET A TAG AND
ZIP-TIE TO ATTACH TO THE PLANT AND
RECORD THEIR NAME AND THE SCIENTIFIC
NAME OF THEIR PLANT.**
7. **ONCE ALL STUDENTS HAVE CHOSEN THEIR
PLANTS, TEACHER SHOULD GATHER THEM
TOGETHER AROUND TEACHER’S SELECTED
PLANT TO MODEL HOW TO RECORD DATA ON
THE OBSERVATION SHEETS, MAKING SURE TO
SHOW USING THE RULER CORRECTLY AND
MAKING ACCURATE SKETCHES.**

ACCESSIBLE FOR EACH STUDENT

- **RECORD SHEET FOR IDENTIFYING**

GOALS:

- **STUDENTS WILL BE ABLE TO IDENTIFY DIFFERENT TREE AND PLANT SPECIES THAT LIVE IN THE AREA OF THEIR SCHOOL.**
- **STUDENTS WILL BE ABOUT TO RECORD OBSERVATIONS ABOUT CHANGE OVER TIME OF THEIR CHOSEN PLANT.**

STANDARDS:

NGSS LEARNING STANDARDS:

4.LS1.2: CONSTRUCT AN ARGUMENT THAT PLANTS AND ANIMALS HAVE INTERNAL AND EXTERNAL STRUCTURES THAT FUNCTION TO SUPPORT SURVIVAL, GROWTH, BEHAVIOR, AND REPRODUCTION.

W.4.1 WRITE OPINION PIECES ON TOPICS OR TEXTS, SUPPORTING A POINT OF VIEW WITH REASONS AND INFORMATION

- 8. GIVE STUDENTS ABOUT 20 MINUTES TO RECORD THEIR OWN DATA.**
- 9. EXPLAIN TO STUDENTS THAT THEY WILL BE COMING OUTSIDE TO MAKE THESE OBSERVATIONS AND MEASURE THE CHANGE OF THEIR PLANTS OVER TIME.**

Post-Lesson/ ConClusion

DISCUSSION QUESTIONS:

- **WHAT DO YOU NOTICE ABOUT YOUR PLANT?**
- **ARE THERE ANY DIFFERENCES FROM LAST TIME?**
- **ARE THERE ANY DIFFERENCES FROM THE FIRST TIME?**
- **CAN YOU MAKE ANY PREDICTIONS ABOUT NEXT TIME?**
- **HOW ARE THE ENVIRONMENTAL CONDITIONS AFFECTING THE GROWTH OF YOUR PLANT?**