

PBB 501: Introduction to plant phenology and climate change:

Project BudBurst for K-12 Educators

Syllabus

Course Overview

Welcome to Project BudBurst! We are glad that you will be a part of our community! This course is designed for K-12 teachers to assist them with the knowledge to fully participate in Project BudBurst involving their students.

Involvement in Project BudBurst will give students valuable experience collecting data and will give them the opportunity to make meaningful contributions to ongoing scientific research where scientists are very interested in the observations students across the county are making.

This professional development course will provide you with detailed information on Project BudBurst and how to participate including how to select your plants and make observations, suggestions for structuring your classroom involvement, classroom activities to engage your students in making observations, as well as forming a community with other K-12 teachers within Project BudBurst.

Each Unit includes a combination of readings, videos, discussions, activities, and self-assessments.

Course Dates:

This course runs from February 15 to the March 14th, 2012. This is a self-directed course with suggested Unit deadlines. You will be completing this course in 30 days with a cohort of other educators.

Instructor Communication

Although this course is a self-directed course, there is an Instructor monitoring the course and available for questions. To contact the Instructor, please direct your messages to kirsten@budburstacademy.org.

Course Objectives

After completing this course, you will be able to:

- Fully participate in Project BudBurst
- Successfully use Project BudBurst as a part of your curriculum
- Engage your students in Project BudBurst observations and activities
- Become part of the growing community of Project BudBurst educators

Course Materials

This course requires Internet connectivity and access to an Internet Browser (i.e. Internet Explorer, FireFox). The following software is also required:

- Adobe Reader is also required and is available free of charge at <http://get.adobe.com/reader/>
- Microsoft Word (version 2007 or higher)

Continuing Education Units (C.E.U's)

Optional Graduate level Continuing Education credit will be available through Colorado School of Mines. The cost of 2 credits is \$90. Details on how to sign up will be made available during the first week of the course.

Requirements for Successful Completion

Successful completion is measured by your completion of all assignments, which includes taking both the pre- and post-assessments. You will need to earn 80% or higher on the post-assessment.

Course Outline

Unit 1: Background

This Unit will share an overview of Project BudBurst activities and the Website.

Learning Objectives:

- Complete the pre-assessment.
- Understand the mission of Project BudBurst and partnering Institutions.
- Navigate the Website for general information about the various aspects of Project BudBurst
- Share your initial ideas for implementing Project BudBurst in your classroom.

Unit 2: Plants and Climate

This Unit will provide readings and activities for you to learn more about the connections between plants and our climate.

Learning Objectives:

- Read about the growing scientific study of phenology.
- Learn why plant phenology is important.
- Gather information on the connections between plant phenology and climate change.
- Read/listen to stories of dedicated people involved in phenology.

Unit 3: Plants and Phenophases

In this Unit, you will start the active process of participating in Project BudBurst. You will learn about the specific plant species targeted in Project BudBurst and the phenophases of interest to the Project.

Learning Objectives:

- Understand what a phenophase is.
- Identify phenophases in timelapse videos.
- Select a plant for observation.
- Identify the phenophases for your selected plant.
- Describe your observation location including GPS coordinates.

Unit 4: Participation

In this Unit, you will continue the active process of setting up your Project BudBurst account by registering on the Website and describing your location and plant(s) for observation. This is an exciting Unit as you are now a registered member of the Project BudBurst community!

Learning Objectives:

- Register for Project BudBurst.
- Setup your Project BudBurst account including at least one plant for observation
- Setup student accounts if applicable.
- Understand the reporting process on the Project BudBurst Website.
- Understand where the data is submitted and where to view the data results.

Unit 5: Project BudBurst in the Classroom

In this Unit, you will be exposed to the spectrum of features available through Project BudBurst for elementary, middle and high school grade levels. You will continue the brainstorming activity begun in Unit 1 and expand in more detail on how you might use Project BudBurst in your classroom.

Learning Objectives:

- Navigate the educational resources available on the Project BudBurst Website.
- Select at least one activity suitable for your classroom.
- Discuss in greater detail how you will implement Project BudBurst in your classroom.

Unit 6: Project BudBurst in MY classroom

In this final Unit, you will bring together all that you have learned in this course by developing a one-page lesson sketch. This one-page lesson sketch will detail in general terms how you will be implementing Project BudBurst in your classroom.

Learning Objectives:

- Develop a lesson sketch detailing how you will be using Project BudBurst in your classroom.
- Complete the post-assessment.
- Complete the course survey.