**MSU Extension - Plan-It Marsh Program Overview**

**Themes:** Environmental Science/Ecology/ Foundations of Science Literacy

**Goal:** To provide Mississippi high school students opportunities to meaningfully reconnect…

* With the ecosystems that matter most to them
* Using scientific and experiential perspectives to expand their minds
* By providing a service to their communities
* To inspire the next generation of wetland stewards (and beyond)

**Target Audience:** 9th-12th grade **Class Size:** 10-30 students **Date Prepared/Modified:** August 12th, 2022

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**\*Additional teaching aids / materials included in the full lesson plans\***

* **Lesson 1 - Intro**
  + Introduction to program by MSU Extension Agent
* [Lesson 2 - Updated](https://docs.google.com/document/d/1YLPp6yPpK0WymOzek8WFS-m1_HWVDVKml0yOxwt7efM/edit?usp=sharing)**(1.5 hours)**
  + Introduction / Engagement
  + Review [Step 2 - Energy Transfers In a Gulf Salt Marsh](https://docs.google.com/presentation/d/12l8f_yCf9v4_Jzu1d_CN6KsDc6tH9rzYsUN_7DOIxAc/edit#slide=id.p1) PPT
  + Conduct Energy Transfer Activity using [Step 3 - Energy Transfer Food Webs Worksheet](https://docs.google.com/document/d/166DRDPJbZx9Ej27DHmttVqsSOCuHw8gOKESwHWBcUZk/edit?usp=sharing)
  + Share results of Energy Transfer Activity
  + Evaluation - Group Discussion / Homework
* [Lesson 3 - Updated](https://docs.google.com/document/d/10gzDtWn4FzNyUc-XHAfi4L3aFihO2h6pfv3m4takl-4/edit?usp=sharing)(**1.5 hours)**
  + Introduction / Engagement
  + Review [Step 2 - Ecosystem Stability](https://docs.google.com/presentation/d/1eAqlhYzm-FuCsDiUy2F8lxG5i9-qBKUUzxSsCpTd4bs/edit#slide=id.p6) PPT
  + Conduct optional 3 Ball (Resistance and Forces) Activity
  + Conduct Ecosystem Stability Activity [Step 3 - Ecosystem Stability Activity](https://docs.google.com/presentation/d/1BumLFsnMEhyyGJ-siqZemsg6QwY6ChOTYpXrGShQ86c/edit#slide=id.p3)
  + Evaluation - Worksheet / Discussion

* [Lesson 4 - Updated](https://docs.google.com/document/d/1_ZZQucseyWthwmvx3HoB5_EqRv3DSkZE6KkokKa3A40/edit?usp=sharing)**(1.5 hours)**
  + Introduction / Engagement
  + Review [Step 2 - Scientific Design in Practice](https://docs.google.com/presentation/d/1uiKzzv59gYo05Boz_r4ov3SQ3leXqb4r6IGzXe-VTsI/edit) PPT
  + Complete [Step 3 - Scientific Design in Practice Student Sheet](https://docs.google.com/document/d/1D7e0JHAelmnbzmDM0Ija38724YOMya_K1TOE35ac2MU/edit)
  + Share results of worksheet
  + Evaluation - Formulate experiment by following [Step 4 - Experiment\_guidelines](https://docs.google.com/document/d/1ORwEIfVtCfhGLfOQWtWqL8pj3q1rg1cZJEBuRrYOWaU/edit)
* [Lesson 5 - Updated](https://docs.google.com/document/d/1HrAAVx1r8x1Rr0YRp_0WFJ-9eJ7SkGtJJNCJ4dgd1AU/edit?usp=sharing)(**1.5 hours)**
  + Introduction / Engagement - Wetland Sponge Activity[Sponge Wetlands Description](https://docs.google.com/document/d/1dKQqXYL33K6SiVs-LDi8r4tRW4X036iEl_ceiLXvHyo/edit?usp=sharing)
  + Review [Step 2 - 5\_Reference Slides](https://docs.google.com/presentation/d/1laC8aILlw9Q6wYs7-fAps_Jj9K4LwbGg_SwSo275NCQ/edit?usp=sharing)PPT
  + Conduct Ecosystem Connectivity Activities: Carbon & Nitrogen
    - **\*SEE LESSON PLAN FOR ALL MATERIALS\***
  + Share results of Ecosystem Connectivity Activities: Carbon & Nitrogen
  + Evaluation - Essay Prompts
* [Lesson 6 - Updated](https://docs.google.com/document/d/1-pGIRHnUesgJVYRuaDN028w79y6zNsY10UlwfxFX4iw/edit?usp=sharing)**(1.5 hours)**
  + Introduction / Engagement
  + Conduct Tragedy of the Commons Activity [Step 2 - Tragedy of the Commons activity](https://docs.google.com/document/d/1Sd0qxVnLQaeWGHUhhku14TLnfFfAkI_ihtXy8plfnHQ/edit?usp=sharing)& [Step 3 - Tragedy of the Commons Fishing Log](https://docs.google.com/document/d/1YwvayGi3a_He2T3T8E0wxzbeeCr_BVvC5HWdWtuaKyk/edit?usp=sharing)
  + Review [Step 4 - Marsh Conservation and Restoration](https://docs.google.com/presentation/d/1hYr-OPV9v_AXgLRIxbg9X8yunq1uApD_bTw-Rpsa6yc/edit?usp=sharing)& Create groups to discuss env. dilemmas
  + Evaluation - Group Discussion / Homework