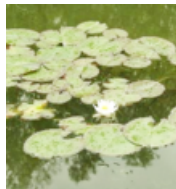


Is It Abiotic (Living) or Biotic (Non-Living)?

Deeper Learning Postcard



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Highlights

Vetted Project: The students were to identify and research various biotic and abiotic factors found in our school's retention pond. Each group would then choose one factor, research and write a brief informational paragraph describing it. Their paragraph, along with an illustration was laser cut into a wooden plaque. These plaques were conditioned and then hung on the fence surrounding the pond. The students then held a ribbon cutting ceremony to open the area to the public.

Sustainability: The students established a walking circuit describing selected biotic factors that inhabit the pond. Future students will be able to continue to investigate the various factors interacting within the ecosystem.

Driving Question: Is everything living or non-living? How are these biotic and abiotic factors vital to the success of an ecosystem?

Student Reflection: Students enjoyed being outside and exploring the retention pond. They enjoyed working with one another and finding out facts about their biotic factor. Students loved working with the laser cutter.

Teacher Reflection: Working outside was impactful. Also, seeing the kids knowledgeable and excited during their presentations was rewarding. It was exciting to watch the students working together, debating, compromising, and accepting input from all members of the group.

On a scale of 1 to 5, this project is a 5 (I would definitely recommend it).

Lessons Learned: It would have been better to have done the research and trips to the pond during the spring when there was a greater variety of the biotic factors visible.

WANTS

I. Authenticity

Demonstrating

Event

Lab Activity

Producing / Revising

Execute Multiple Drafts

Model or Prototype

Product

Presenting

Utilize Visuals

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II. Media Produced

Other included: Computer-based - Laser cutter

Digital Content

Digital Arts / Graphics

Print Media

Signage

Technical Writing

Lab / Research Report

Physical Drawings & Fine Arts

Product Drawing or Sketch

III. Challenging Problems

Questions

Assist Others

Build a Better World

Compassion for the Unknown

Themes

Community Outreach

Environmental

Research-based

Topics: Physical World

Animals, Pets & Wildlife

Climate, Nature & Natural Resources

Topics: Humans in the World

Habitation & Population

Topics: Of the Mind

Implications of Decisions

IV. Achieved Literacy Skills

Information / Technology

Master Uses of Technology

Project / Work

Adapt to Ambiguity / Changing Priorities

Adjust to Schedules / Contexts

Balance Various Roles / Responsibilities

Learn / Develop Expertise

Manage Time / Workload

Take Initiative for Personal Success

Leadership

Balance Diverse Views

Influence through Leadership not Authority

Lead with Respect

Leverage Strengths of Others

Present a Professional Appearance

NEEDS

I. Parameters & Feasibility

Project Timeframe

More than 8 Weeks

Assessment Timeframe

More than a Class Period

of Project Members

Small Group

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Grade Level

Middle School (Grades 6-8)

Authentic Audience / Evaluators

Peers

Parents

Teachers & Administrators

Community Members

Government Officials

II. Intended Learning Outcomes

Creativity

Brainstorm

Change

Design / Create

Elaborate / Expand

Envision / Invent

Improve / Refine

Recognize Limits

Communication

Argument / Debate

Engage Creatively

Technical Presentation

Collaboration

Assume Shared Responsibility

Develop Trust

Encourage Others

Exercise Flexibility

Ignore Distractions

Incorporate Feedback

Manage People / Team

Respond to Failure

Value Contributions Made by Others

Work with Diverse Teams

Critical Thinking

Clarify Meaning

Negotiate

Overcome Obstacles

Persuade

Quantify

Rational, Objective Decision-making

Reflect Critically on Learning

Instilled Citizenship Values

Community & Public Issues

Habits of Mind & Heart

Personal Responsibility

III. Success Skills & Depth of Knowledge

Other included: Assessment Structures/Resources - Group Presentations

Cognitive Demand

Identifying / Remembering

Comprehending / Understanding

Applying

Analyzing

Evaluating

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Creating

Social & Emotional Skills

Self-awareness

Self-management

Group-awareness

Group-management

Learning Styles / Intelligences

Interpersonal / Social

Naturalist

Assessment Structures / Resources

Checklists

IV. CTEs & Disciplines

Career & Technical

Energy, Environmental & Natural Resources

Information Technology

Multimedia

Sciences

Biology

Maritime / Marine Sciences