

# IB Inquirer 4

I Spy an  
Ecosystem!



## Eco-Explorers - Unit 1

### Transdisciplinary Theme:

How the World Works - the interaction between the natural world and human societies

### Central Idea:

Organisms depend on living and non-living features of the environment for survival.

A study into (lines of inquiry):

- Connections between biotic communities and abiotic factors (*connection*)
- Human impact and natural changes can alter the ecological balance (*causation*)
- Our responsibility to care for ecosystems (*responsibility*)

### Background:

Students will study the relationship between biotic (living) and abiotic (non-living) factors in an ecosystem. Included in this study will be a review of the water cycle, and its importance to all ecosystems. Much of the learning in this unit will take place through field experiences provided by the town.

### Student Final Project:

Student groups will choose an ecosystem or the water cycle. After doing research, they will create an email reflection to teach their classmates about their chosen topic. Students will also work collaboratively to showcase their learning through their Water Wars performance.

### Technology Tie-In:

During this unit, students will be working on establishing their gmail accounts and learning about digital citizenship in the Media Center. They will learn how to compose an informational email to share their learning.

### **Field Experiences:**

During the unit, students will visit Westmoor Park to learn about the field, thicket and forest. They will travel to Hammonasset State Park to investigate the rocky shore, sandy beach and the salt marsh. They will spend time at the MDC Reservoir to discover how our water is treated; and learn about fresh water at Spicebush Swamp. They will also participate in a week-long dance workshop which focuses on the water cycle and water consumption.

### **Learner Profiles & Attitudes:**

Students will cooperate with their groups, and be confident communicators as they present their findings to the class. They will be accountable as attentive audience members. Students will be curious about ecosystems, and committed to becoming knowledgeable about the different facets that comprise an ecosystem, and how they function together.

### **Key Concepts:**

Students will examine connections when they investigate the interdependence of biotic and abiotic factors in an ecosystem. They will discover how the impact of natural events and human actions can cause the ecological balance to change. They will become aware of taking responsibility for their own actions in relation to the ecosystems in which they live.

### **Approaches to Learning:**

Throughout the unit, students will use their research skills as they plan, gather information, record & organize data, and develop questions for their presentation. They will utilize their communication skills when they read, write, speak and listen during field trips and their oral presentations to the class.

#### **TRY THIS!**

- When you're eating dinner, talk about where the food comes from. What is the food chain that brought the food to your table? Clue: any food chain has to start with a plant and the sun!
- The water we drink has been around forever. Write a story about the adventures of a drop of water. Where has it been, and what has it seen?
- Keep a water use chart at home. How much do you use? When do you use it? Then find ways that you can conserve water around the house.

**Websites:** <http://library.thinkquest.org/11353/ecosystems.htm> (A webquest about the ecosystems)  
[http://www.harcourtschool.com/activity/food/food\\_menu.html](http://www.harcourtschool.com/activity/food/food_menu.html) (Fun with Food Webs game)

*PARENTS: Additionally, on the Media Center webpage, for each unit there will be suggested titles for more reading on the topics and ideas in the units. These books are available in the school library.*

# IB AT HOME

Name \_\_\_\_\_

Teacher \_\_\_\_\_

*Parents: please fill out any that apply and return to your child's teacher.*

My child is displaying the **learner profiles** from his/her IB unit (communicator, knowledgeable). Here are some examples:

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Here is how my child is showing the IB **attitudes** (confidence, cooperation, commitment, curiosity):

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My child has been demonstrating the **approaches to learning** (research, communication) by:

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My child has taken **action** (additional investigations, trying to make a difference, reading more about the subject, doing an independent project, teaching others, etc.) regarding this unit. Here's how:

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IB Elements that Grade 4 students are focusing on during Unit 1/How the World Works:

Approaches to Learning

**Communication Skills**



Listening  
Speaking  
Reading  
Writing  
Viewing  
Presenting

Non-verbal Communication

**Research Skills**



Formulating Questions  
Observing  
Planning  
Collecting Data  
Recording Data  
Organizing Data  
Interpreting Data  
Presenting Research Findings

Attitudes



**Curiosity**

We are curious about the nature of learning. We also wonder about the world, its people, and cultures.



**Commitment**

We are committed to learning, persevering, and showing self-discipline and responsibility.



**Cooperation**

We cooperate, collaborate, and either lead or follow as the situation demands.



**Confidence**

We are confident in our abilities. We have the courage to take risks, apply what we have learned, and make appropriate choices/decisions.

Learner Profiles

**COMMUNICATOR**  
*I share my ideas with others.*



I am confident when I share my thinking and I listen to the ideas of others. I communicate in various ways, both verbally and non-verbally. I am able to express myself in more than one language.

**KNOWLEDGEABLE**  
*I try to learn about a variety of things.*



I explore many different ideas. I can tell you about/show you what I've learned. I am interested in issues that have local and global significance.

Key Concepts

**CAUSATION**  
**Why is it the way it is?**

Things do not just happen. There are causal relationships at work and actions have consequences.

How did this begin?  
What caused this to happen?  
How did \_\_\_ lead to \_\_\_?  
What influenced...?  
How did \_\_\_ affect \_\_\_?

**CONNECTION**  
**How is it connected to other things?**

We live in a world of interacting systems in which the actions of any individual element affects others.

How is \_\_\_ connected to \_\_\_?  
How is \_\_\_ related to \_\_\_?  
How does \_\_\_ help us understand \_\_\_?  
What are the similarities or differences between \_\_\_ and \_\_\_?

**RESPONSIBILITY**  
**What is our responsibility?**

We are not passive observers of events. We can and must make choices and, by doing so, we can make a difference.

Why is it important to ...?  
Why should we respect ...?  
What might be the consequences of ...?  
Does everyone have the right to ...?  
How does \_\_\_ influence our view of \_\_\_?