

CURRICULUM GUIDE: COSTA RICA MIDDLE SCHOOL

All WorldStrides DiscoverNow! programs are developed following a rigorous educational process. This document highlights the standards we follow and the high educational goals we set for our programs. Our unique approach to education is recognized through our accreditation as a school by multiple regional accrediting bodies across the United States. We believe that, together, we make a world of difference through hands-on learning.

The Foundation of a WorldStrides DiscoverNow! Program

SUBJECTS	Students will use key questions of inquiry to learn concepts of life science, physical science, earth and space science, and ecology. The interrelatedness of these subjects is emphasized.
SKILLS	Students will develop tools needed to acquire, organize, and communicate knowledge. These include thinking, research, and self-management.
ATTITUDES	Students will be encouraged to make connections within their studies and learn to reflect on their experiences as they relate to the real world.
ACTIVITIES	Students will learn to take appropriate actions and become actively involved in their own education. Through this program, they will explore how they can make a difference in their school or community.

SUBJECTS: Learning About Science

Life Science	Students will study structures and functions of cells and viruses, biological taxonomy, ecosystems, plants and be able to discuss the connections between the study of life science and ecology.
Physical Science	Students will understand characteristics of matter and basic water chemical transformations. Lab work will involve the study of the properties and chemical reactions of water.
Earth Science	Students will study and compare characteristics and conditions of various geological locations and plate tectonics. They will make conclusions about investigations regarding atmospheric processes.
Space Science	Students will understand the earth's composition and structure, how the sun and atmospheric processes affect the water cycle, and how weather patterns affect the biodiversity of organisms.
Ecology	Students will evaluate how ecosystems are created and supported and how energy and biodiversity are important for conservation.

SKILLS: Learning How to Apply Knowledge

Reading	Students will practice reading skills in various scientific formats. Students will develop skills in comprehending lab manuals and scientific journals.
Writing	Students will give thoughtful insight and use reasoning to write about their experiences. They will practice writing lab reports and accurately taking scientific measurements.
Listening	Students will display sensitivity in hearing other people's viewpoints and ideas. They will deepen their respect for the traditions of others.
Research	Students' natural curiosity will be nurtured. They will acquire the skills necessary to pose well-formulated questions and to conduct purposeful, constructive scientific inquiry and research.
Communication	Students will express their ideas and information with confidence and clear articulation.

ATTITUDES: Learning Beyond the Textbook

Respect	Students will develop empathy and caring for others, animals, and nature.
Responsibility	Students will be equipped with the ability to apply knowledge appropriately.
Curiosity	Students will be stimulated to inquire, thus fostering the spirit of discovery and excitement in learning.
Cooperation	Students will be encouraged to develop diversity and flexibility of thinking, and develop sensitivity towards other people and events.
Confidence	Students will build and reinforce a sense of identity and independence.

COSTA RICA: BECOMING A SCIENTIST

A WorldStrides DiscoverNow! program is an inquiry-based travel program encouraging **critical thinking**. Students are engaged and stimulated through key **discovery questions** explored in their Discovery Journals and in the field. Students will **critically examine** scientific facts as they travel. It is **reflective thinking** that will lead students to responsible action, cultural awareness, and self-identity.

Site / Location (not all sites will be seen on your program)	SUBJECTS					ACTIVITIES Curriculum for Middle School Costa Rica (the following provides an overview of the educational activities included in a WorldStrides DiscoverNow! program – changes may be made by WorldStrides at its own discretion without notice)	SKILLS				
	Life Science	Physical Science	Earth Science	Space Science	Ecology		Reading	Writing	Listening	Research	Communication
Orientation	•				•	<i>The Tropic Tropical Rainforest:</i> Hola! Learn about Costa Rican ecosystems, the program itinerary, and the trophic levels of rainforests in this introductory game			•	•	
INBioparque	•				•	<i>Colorful Costa Rica:</i> team challenge to study the different Costa Rica ecosystems and the biodiversity within the country through a "color" scavenger hunt		•		•	
Tirimbina Rainforest Center Field Ecology	•				•	<i>You be the Scientist!</i> learn how to conduct meaningful field research by studying the different center habitats using plot sampling and biodiversity indexes		•		•	
Tirimbina Rainforest Center Bats	•				•	<i>Gone Batty:</i> learn about the bats of Costa Rica through lecture and hands-on bat collecting using mist nets			•	•	
Tirimbina Rainforest Center Birds	•				•	<i>A Bird's Eye View:</i> study of endemic species, bird identification, and migratory patterns of Costa Rican birds as seen from a canopy walk in the trees	•			•	
Tirimbina Rainforest Center Water Quality		•	•			<i>Hiking and H2O:</i> hike through the forest and over the canopy to the river to collect water samples and study the terrestrial and aquatic ecosystems of Costa Rica		•		•	
Costa Rican Culture					•	<i>Feast and Fun:</i> learn the art of Costa Rican cooking, dancing or art during this interactive, informative and fun evening adventure			•	•	
Sarapiquí River		•	•			<i>White Water River Rafting:</i> wild rafting adventure to take a biological inventory of water quality, birds, and animals along the river			•	•	
Arenal Volcanic Springs		•	•			<i>Relax in the Springs:</i> relax in the therapeutic springs, learn about geothermal heat and take water samples to compare with the other water samples from the rivers				•	
Arenal Volcano Hike		•	•	•		<i>Hike the Lava Flows:</i> study of wildlife adaptations, volcanic activity, soil chemistry, energy production, and lava rock on this hike up the base of an active volcano		•		•	
Arenal Lake	•	•				<i>Lake Logistics:</i> take a leisure boat ride across the lake for amazing views of the volcano, birds and other terrestrial wildlife		•		•	
Santa Elena Forest	•			•		<i>A Walk in the Clouds:</i> hike through this canopy forest to study the rainforest ecosystem, rainforest wildlife and birds, and use tools to study tree height	•	•		•	
Monteverde Frog Pond	•				•	<i>Amphibian Adventures:</i> study different types of frogs and their adaptation strategies and discuss endangered species during this night tour			•		
Monteverde Butterfly Gardens	•				•	<i>Butterfly, Butterfly:</i> discover tropical entomology and the taxonomy of many different butterflies. Learn about butterfly migration and conservation efforts	•	•			
Monteverde Canopy Forest		•		•		<i>Zip into Biodiversity!</i> take a zip-line tour of the rainforest canopy to study cloud forest ecosystems, species, and organism adaptation			•	•	