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Sustainable Development Projects

Overview of SDG Projects

Sustainable Development Projects are:

- A way for students to explore and understand what is happening in the world locally, regionally, and globally
- An opportunity to engage in hands-on projects with real-world applications and implications
- Connected to local organizations who are working on the challenges posed by the UN SDGs
- An opportunity for students to participate in projects that affect their communities
- A conceptual guideline for course development
- An intentionally designed progression through SDGs that are deeply relevant to the local context (in this case, Belize)

Learning Objectives

- Gaining confidence in and learning to work through the design process
- Documentation and iteration
- Effective collaboration
- Developing ideas and concepts into projects
- Gaining technical skills
- Connecting learning at school to what is happening in the real world

Mapping the Local Ecosystem for Student Engagement

Where do projects come from?

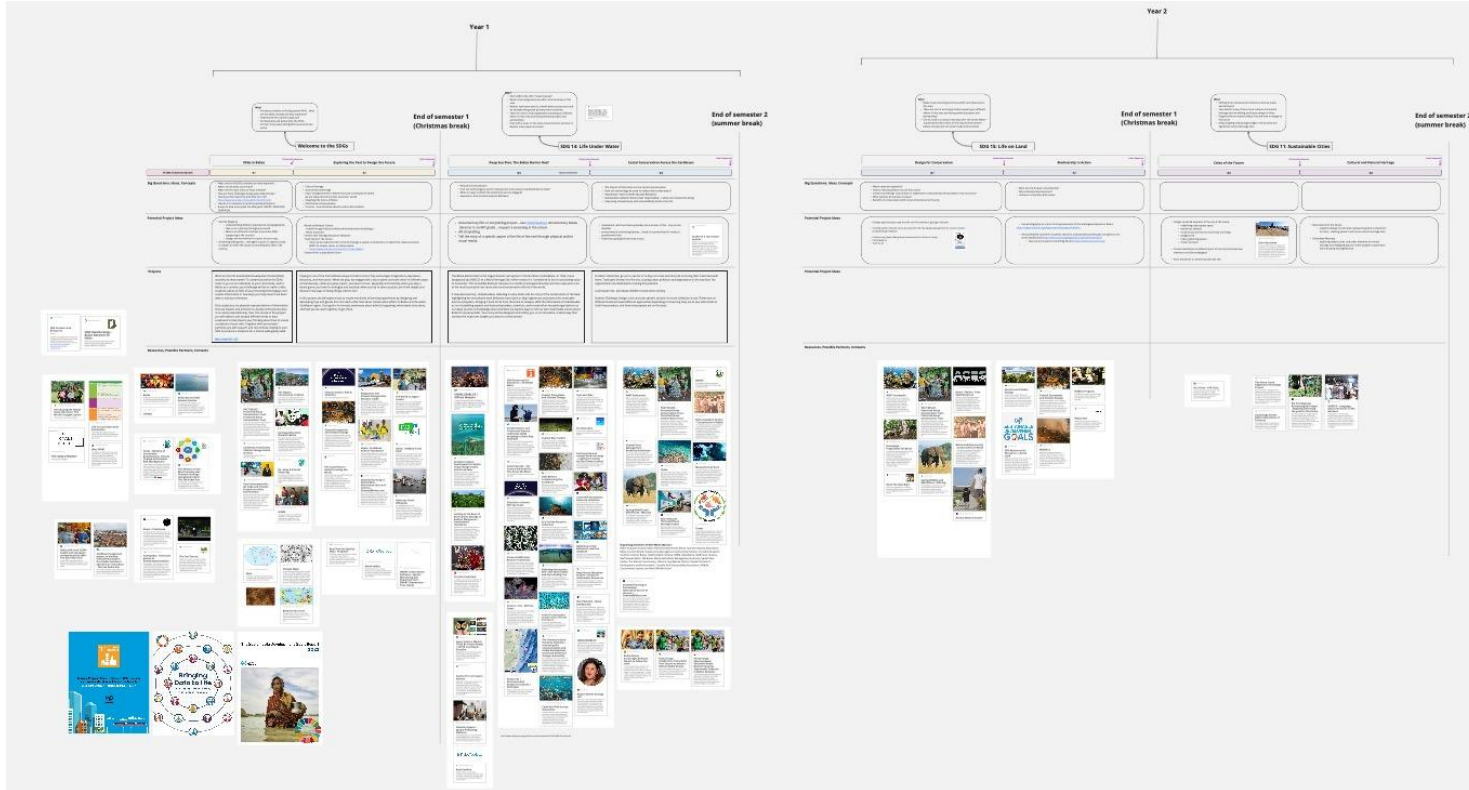
- Understanding important local, regional, and national issues
- Researching and mapping the ecosystem to understand how issues are being approached by different stakeholders, organizations, and individuals
- Learning about specific problems from people with a particular insight or expertise
- Understanding where students can have a direct impact with the knowledge they have now or can learn as they develop their project– some problems or topics are too big or require too much prior knowledge for students to engage. Likewise, some problems are too narrow and do not offer enough creative white space for students to pursue unique project ideas.

Where do projects come from?

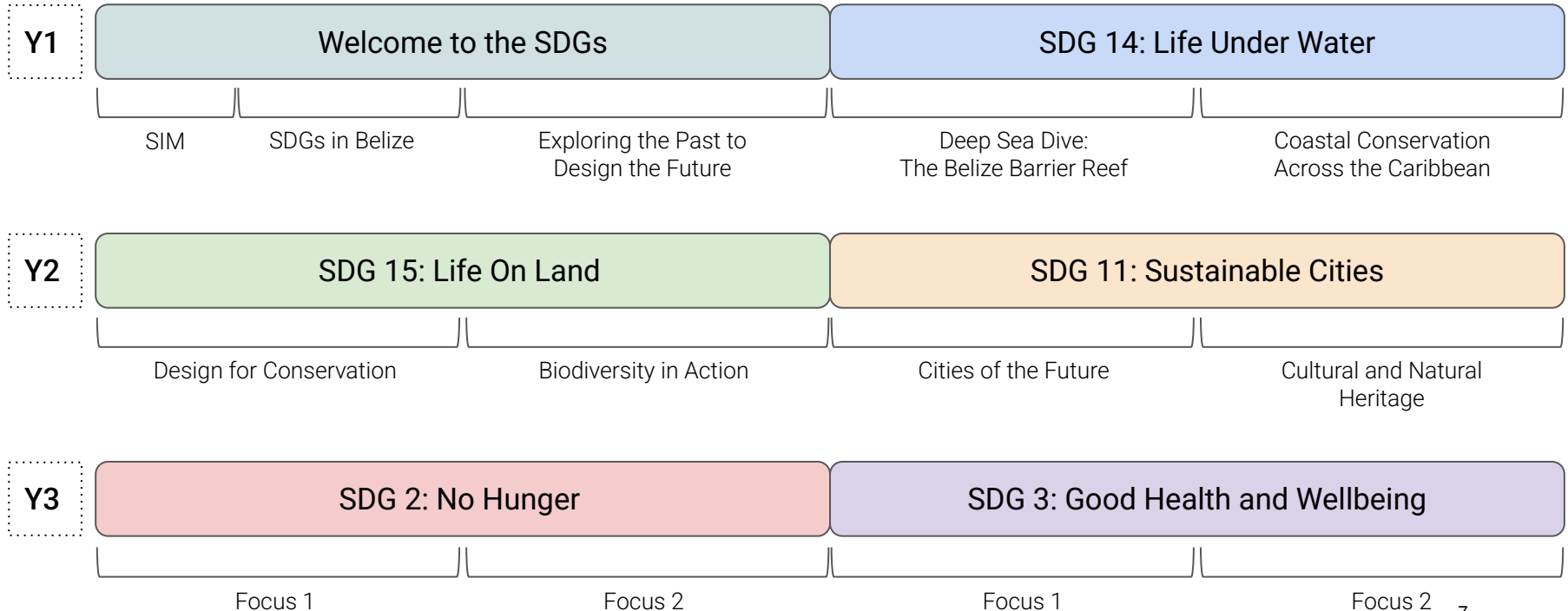


Courtesy of United Nations Sustainable Development Goals (<https://www.un.org/sustainabledevelopment>). The content of this publication has not been approved by the United Nations and does not reflect the views of the United Nations or its officials or Member States.

Where do projects come from?



Proposal: A Three Year Arc



Project Focus: Student Development Over Time

Educator Perspective: *Learning goals for students*

First Form Focus: brainstorming, fostering collaboration, building design skills, considering how students are approaching the project

Second Form Focus: building on the quality of idea, greater focus on the product students are creating, developing sophistication in the students' ideas

Third Form Focus: building independence, especially in project development, community involvement, and student research

Year 1: Four Projects

**Data
Sculptures**

**Play to
Protect**

**Stories of
the Reef**

**Trash at
Sea**

Welcome to the SDGs

SDG 14: Life Under Water

Q1: SDGs in Belize

Data Sculptures

What are the UN Sustainable Development Goals (SDGs) and why do they matter? To understand what the SDGs mean to you as an individual, to your community, and to Belize as a country, your challenge will be to create a data sculpture about an SDG of your choosing that displays and reveals information in new ways you may never have been able to envision otherwise.

Data sculptures are physical representations of information that use objects and artifacts to visually communicate data in an easily accessible way. Over the course of this project, you will explore and analyze different kinds of data sculptures to help inspire your thinking about how to create a sculpture of your own. Together with your project partners, you will research and record data relating to your SDG to produce a sculpture for a school-wide gallery walk.

Q2: SDGs in Belize, part 2

Play to Protect

Play is one of the most effective ways for kids to learn. Play encourages imagination, expression, discovery, and interaction. When we play, we engage with toys, games, and each other in different ways simultaneously— when you play a sport, you have to focus physically and mentally; when you play a board game, you have to strategize and socialize; when you try to solve a puzzle, you think deeply and discover new ways of doing things. And it's fun!

In this project, we will explore how to create new kinds of learning experiences by designing and developing toys and games that can teach other kids about conservation efforts in Belize and the wider Caribbean region. Conservation is a serious and complex issue, but one that needs to be understood by everyone. Through your design, your goal is to increase awareness about what is happening, what needs to be done, and how we can work together to get there.

Q3: Life Under Water (SDG 14)

Stories of the Reef

The Belize Barrier Reef is the largest barrier reef system in the Northern Hemisphere. In 1996, it was designated by UNESCO as a World Heritage Site, which means it is “considered to be of outstanding value to humanity.” This incredible Belizean treasure is a model of ecological diversity and also represents one of the most successful reef restoration and conservation efforts in the world.

A new documentary, *Unbelizeable*, debuting in early 2024, tells the story of the conservation of the Reef, highlighting the remarkable work Belizeans have done to help regenerate and protect this invaluable marine ecosystem, bringing it back to life from the brink of collapse. With the filmmakers of *Unbelizeable* as our storytelling experts and local policymakers, scientists, and conservation-focused organizations as our deep sources of knowledge about the Reef, we explore ways to tell our own multimedia (audio, visual, sculptural, etc.) stories about Belize’s natural wonder. Your story will be designed and told by you, in an innovative, creative way that conveys the important insights *you* want to communicate.

Q4: Life Under Water (SDG 14)

Trash at Sea

Fishing is a significant industry in Belize, bringing in approximately 28 million BZD per year. The impact of fishing, however, goes beyond dollars and cents-- it supports whole communities, is an essential part of tourism, and represents a cultural way of life for many Belizeans. However, there are many issues facing the marine ecosystem and consequently, the overall fishing economy. Promoting sustainable fishing and keeping the oceans clean for healthy fish and plants is essential to maintaining this vital industry. Trash at sea is a major issue facing the ecosystem. Fishermen go out to sea for 4-15 days at a time and most do not bring their trash back with them. Trash gets thrown into the water, causing ocean pollution and degradation of the sea floor. No organizations are dedicated to solving this problem, so you will be taking on this challenge.

In this course, students will work directly with fishermen to design site and user specific solutions for trash collection at sea. Fishermen on different boats will need different approaches depending on how long they are at sea, what kinds of trash they produce, and how many people are on the boat. How will you approach your solution? Some groups may choose to create physical objects, while others may design awareness and behavior change campaigns or systems.

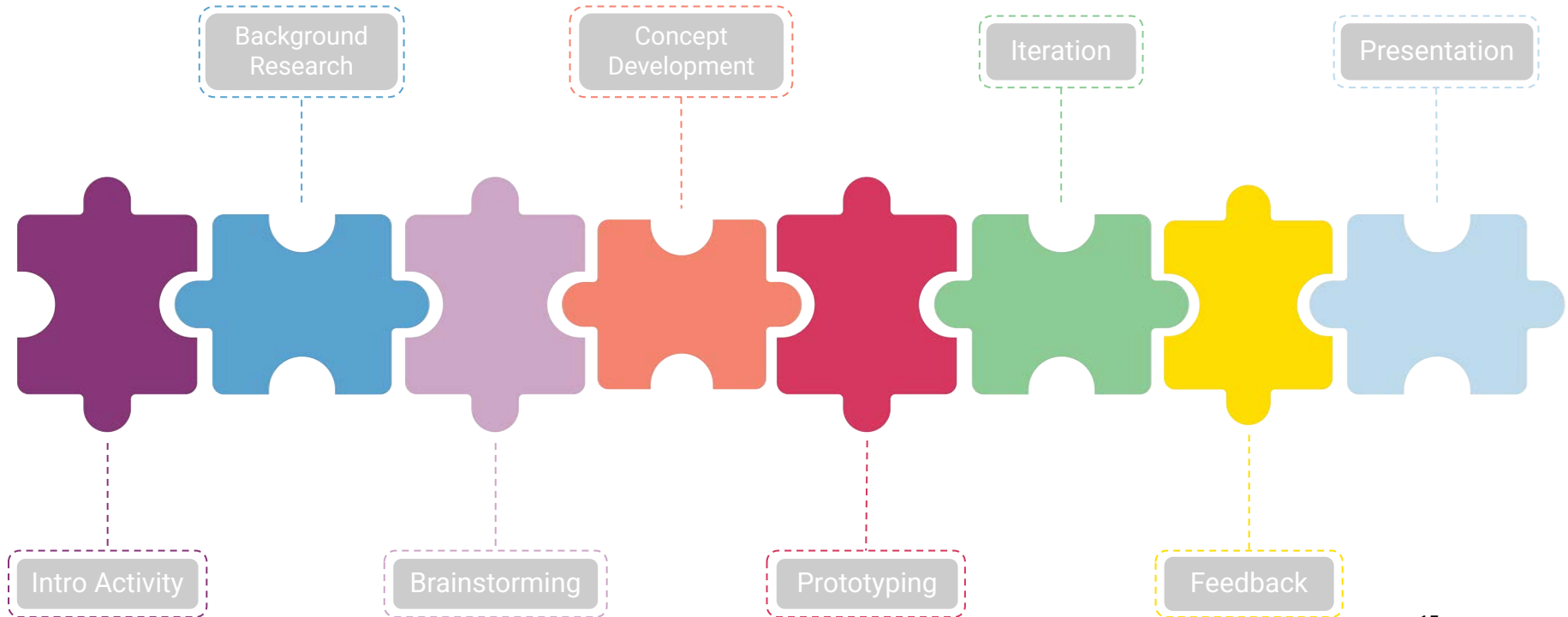
Project Trajectory

Checkpoints to help guide teachers and students through project development:

- Project introduction with opening activity
- Initial research/ prep (*equipping students with enough knowledge to begin brainstorming*)
- Brainstorming (*lots of ideas!*)
- Initial Project Concept (*what idea will your group pursue first?*)
- Research (*students pursue interests independently in groups*)
- Iteration 1
- Iteration 2.... (*extend number of iterations as needed for the duration of the project*)
- Presentation

Frequent documentation and reflection throughout the project through portfolios, feedback sessions, and presentations (formal and informal).

Project Design Puzzle Pieces



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