

# Interdependence

## 1. Question & Research Task

Interdependence is when two or more people or things depend or rely on each other for survival. Dr. Charles Darwin was a well-known naturalist, geologist, and biologist who studied living organisms.

You have been asked to help Dr. Darwin research interdependent relationships found in different environments.

Your job is to choose one of the organisms that Dr. Darwin has provided you and research that organism.

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In this Slam Dunk, you will conduct brief, focused research to respond to the inquiry question:

Why are organisms interdependent?

## 2. Information Sources

To help you learn more about interdependence, Dr. Darwin wants you to check out these resources to make sure you have a full understanding of interdependence before you complete your project.

Using the resources below, identify 2 organisms that are interdependent. Be able to answer the following questions:

- How are those organisms interdependent?
- How does the relationship affect other organisms?

Digital resources:

- [Bill Nye](#)
- [Interdependence](#)
- [Interdependence and Living Things](#)
- [Interdependence in the ocean](#)
- [Interdependence on the coral reef](#)
- [Pollination](#)
- [Symbiosis](#)
- [Symbiosis A Surprising Tale of Species Cooperation](#)
- [The Crab and Coral Reef](#) (YouTube video to be presented by teacher/librarian)
- [Interdependence in an aquarium](#)
- [Animal Parasites](#) (article)
- [Friends 4-Ever](#) (article)



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# 3. Student Activity

Choose from one of the following organism pairs to study for Dr. Darwin.

- 1. Oxpecker and Rhino/Ox
- 2. Shark and Remora
- 3. Human and Human
- 4. Bees and Flowers
- 5. Your own (must be approved by Dr. Darwin)

You need to answer the following tasks or questions:

- 1. Identify the two organisms.
- 2. Explain how their interdependent relationship works.
- 3. Is it a mutualistic (positive for both) or parasitic (positive for one and negative for the other).
- 4. How does their relationship effect other organisms?

Use the **document to the right** to record your answers.

**Slam Dunk  
Interdependence  
Student Record Sheet**

Organisms	
Explain their relationship	
Is it a mutualistic relationship (positive) and how?	
Is it a parasitic relationship (positive for one and negative for the other) and how?	

# 4. Assessment Activity

## Why are organisms interdependent?

A good ecologist shares their findings with the world. Now you can share all the information you have learned !

Your final question that you must answer is:

If one of these organisms was eliminated, how could it change the life of the other organism and the environment?

Your choice:

- Newsletter:

1. Use your student activity sheet to help you write your newsletter.
2. Use [this form](#) to create your final copy that will be printed with the monthly newsletter

- Video:

Using Wixie or the digital tool suggested by your teacher, create a video to share on your local morning announcement program.

Scoring Tool:

Look at the [scoring tool](#) to see what is expected for the project.



Click on this image to access Wixie through the Apps Portal

# 5. Enrichment Activities

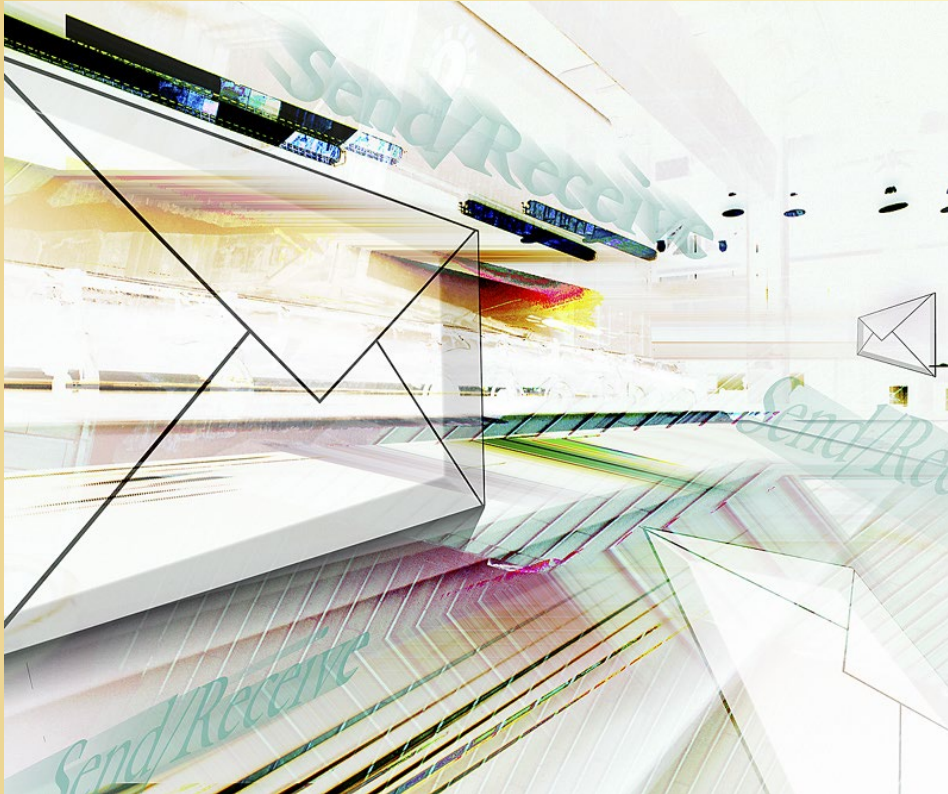


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**Write an email to the Governor of Maryland explaining your findings.**

**You will want to include:**

- 1. What you found out about your organisms' interdependent relationship.**
- 2. Explain what will happen if one of the organisms is eliminated.**
- 3. Propose ideas about what the Governor can do to keep this from happening.**

**Use these resources to help you write your letter.**

- **[Brain Pop JR Sending a Letter](#)**
- **[Letter Generator](#)** (for the final draft of your letter)

# 6. Teacher Resources

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## Learning Standards Alignment

### Content Learning Standards

3.F.1.a Investigate familiar and unfamiliar habitats describe how animals and plants found there maintain their lives and survive to reproduce.

3.F.1.c Explain that animals and plants sometimes cause changes in their environments.

### Common Core State Standards for English Language Arts & Literacy

**Reading: 1.** Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

**Writing: 7.** Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

**AASL Standards Framework for Learners** Inquire: Build new knowledge by inquiring, thinking critically, identifying problems, and developing strategies for solving problems.

Think: Learners display curiosity and initiative by:

I.A.2 Recalling prior and background knowledge as context for new meaning.

Create: Learners engage with new knowledge by following a process that includes:

I.B.1 Using evidence to investigate questions. I.B.3 Generating products that illustrate learning.

Share: Learners adapt, communicate, and exchange learning products with others in a cycle that includes:

I.C.1 Interacting with content presented by others.

Grow: Learners participate in an ongoing inquiry-based process by:

I.D.2 Engaging in sustained inquiry.

### P21 Framework: 21<sup>st</sup> Century Student Outcomes

**3. Information, Media & Technology Skills: Information Literacy:** Access information efficiently and effectively; Use information accurately and creatively for the issue or problem at hand.

**ICT Literacy:** Use technology as a tool to research, organize, evaluate and communicate information.

Grade 2 Accelerated group

**Objective:** Students will research two organisms that are interdependent in order to explain if they can be truly interdependent.

**Time Frame:** Two 50 - minute lessons in the computer lab.

### Differentiation strategies for this lesson:

- Have students use learning supports provided in BCPS Digital Content found in the [Apps Portal](#). Refer to [Digital Content Snapshot/Support pages](#) as needed.

### Notes to the teacher:

- Collaborate with your school library media specialist to plan and implement this lesson.
- Provide students with login information as needed to authenticate BCPS Digital Content. Login information is available on the **BCPS Digital Content** page found via the [Apps Portal](#)
- Slide #4 may require teachers to model voice recording using Wixie accessed through the [Apps Portal](#).
- Most of the resources on page 2 require teacher guidance.
- You will need to review what an organism is prior to assigning this project.