

# ADVANCED LEARNING LABS

Collaboration between NC Department of Public Instruction and AIG Teachers across the state

TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES

6-7

## Interdependence



### ENGLISH LANGUAGE ARTS

Jataka Tales are stories that have been told in South Asia for more than 2000 years. They are meant to teach the values of honesty, morality, and self-sacrifice, but are told in an amusing way.

Read the Jataka Tale "Interdependence:" <https://docs.google.com/document/d/1oUeS5CBEV858yweSH5r3sdU2oTjtyy6eB983I5cCnLI/edit?usp=sharing>

Explain how the tale unfolds in a series of events. How do the characters react or develop as the plot comes to a conclusion?

Create a timeline of events from the tale. On the lines between each event, explain how one event leads to another.

What is the moral of this story?



### SOCIAL STUDIES

The 18th-19th Century Triangular Trade was an example of several countries/regions being interdependent on one another. Follow the link to learn more about the Triangular Trade: [http://abolition.e2bn.org/slavery\\_43.html](http://abolition.e2bn.org/slavery_43.html). How did this trade impact the lives of the enslaved Africans? Who benefited directly from the work done by the slaves? Who benefited indirectly from the work done by the slaves?

Research further to determine how the Triangular Trade impacted the U.S. colonies. How did NC benefit from this trade? What crops or manufactured goods were a part of this exchange? How did the competition for resources affect these economic relationships?

Design a presentation in a format of your choice, showing how NC was impacted by the Triangular Trade.



### SCIENCE

Agriculture and the environment are interdependent in several areas: soil conservation, water quality and conservation, food safety, wildlife protection, integrated pest management, and wetlands. Research one of these areas to determine how farmers are practicing land management in your local area. Possible sources of information are local farmers, agriculture extension agents, vocational agriculture teachers, district soil conservation offices, NC Department of Agriculture and Consumer Services, etc.

After you have completed your research, develop some recommendations for safeguarding the environment based on what you have learned.

Now investigate how historical farming practices were different. How did they impact the land? How did this impact settlement?



### MINDFULNESS

Interdependence is the connection of humans and nature as well as the connection to other people. Think about your pencil. Think about all the people who had a part of creating it.

- How did you come to own it?
- How was it created?
- Who made the items that helped create your pencil?

Think about the wooden part of the pencil. Where did it come from? What went into making the metal part of the pencil? Can you envision it being molded in a factory? What about the graphite and the eraser? Think about how the pencil traveled.

Create a timeline or concept map to understand all the people who helped get your pencil to you.

As you go about your day think about all the people who helped shape the things around you.



## LOGIC PUZZLE

I am a fruit.

Change one letter and I am a long narrow mark.

Change another letter and I am dry weather.

Change a further letter and I am a domestic appliance.

Change one final letter and I am thin metal.

What was I and what did I become?



## FIELD STUDIES

While there is some debate about all the factors that make Earth a friendly home for us, all scientists agree that without water and an energy source (the sun), humans would not survive here. This is not true interdependence, however, because while humans need water and energy, the Earth does not need us to exist.

It has long been of interest, however, to wonder if there is life on other planets. Science fiction books and movies love to explore this theme. As NASA and other space agencies send probes to farther and farther destinations, everyone waits to find out if water, for example, has been found.

Explore this idea in the format of your choice. Write a short story about a planet where it and its inhabitants are truly interdependent OR research what has been discovered so far about the possibility of life on other planets.



## RESEARCH EXPLORATIONS

People and soil have been interdependent since the beginning of time. Soil influences our air quality, regulates temperatures, and helps get rid of waste. Humans could not survive without soil. You can learn more about the human benefits of soil here: <https://www.soils4teachers.org/soil-and-environment>

Farmers know better than anyone about the importance of soil health. Use the links from the USDA website to learn more about how farmers conserve our soil: <https://bit.ly/3hjCCts>

Create a flyer for your neighbors on how they can protect the soil in your area. Include why it is important, data to support your claim, and suggestions on the types of plants that can be used, as well as how to prevent erosion.



## MATH

The interdependence of populations makes it important to keep track of the different populations in a given region. Grasshoppers are food for mice which are food for bald eagles. It is important to understand the population of grasshoppers if we want to continue to see a rise in the bald eagle population.

Use the directions on the linked site to use the Mark and Recapture technique to determine the population of a species: <https://www.panthercountry.org/userfiles/267/Classes/608/Population%20Density%20Labs%20-%20203%20Total%20Labs.pdf>

How did your sample populations relate to the actual population?

Create a line plot of each of your sample populations. What does the center and spread tell you about the actual population?



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## Interdependence Reference Guide

### **2-3 Field Studies:**

To learn more about ovenbirds: <https://www.audubon.org/field-guide/bird/ovenbird>

### **4-5 Math:**

Link for more math puzzles: <https://www2.stetson.edu/~efriedma/published/cross2/index.html>

### **6-7 Logic Puzzle:**

Answer: lime,line,fine,fire,wire\

### **6-7 Science:**

Based on a lesson written by the Kentucky Farm Bureau

### **8-9 Mindfulness:**

Use the link to learn more about Chief Seattle: <https://historylink.org/File/1427>

### **8-9 Math:**

Link to create a hexagon on Desmos: <https://www.youtube.com/watch?v=l6brztHaKIA>

Use function notation to describe transformations that would create economically efficient honeycombs.

### **10-12 Logic Puzzle:**

Solution: S is the father of T who is the sister of R, hence R and T are siblings. R is the brother of U, so R is male.  
Therefore R is the son of S.

Try additional problems on Smartkeeda! [https://www.smartkeeda.com/Reasoning\\_Aptitude/Verbal\\_Reasoning/Blood\\_Relations\\_Quiz/newest/all/passage/Blood\\_Relation\\_Quiz\\_4/page/2](https://www.smartkeeda.com/Reasoning_Aptitude/Verbal_Reasoning/Blood_Relations_Quiz/newest/all/passage/Blood_Relation_Quiz_4/page/2)

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## Interdependence NC Standards Alignment

Grade Span	English/ Language Arts	Social Studies	Science	Math
<b>K-1</b>	RI.1.5 RI. 1.6	K.G.1.3 <b>K.G.1</b>	1.L.1.2	NC.K.CC.5
<b>2-3</b>	RL.3.7	3.C&G.2.1 <b>3.I.1.8</b> <b>3.I.1.10</b> <b>3.I.1.11</b>	3.P.1.1	NC.3.MD.1
<b>4-5</b>	RL.5.7	5.C&G.2.2 <b>5.C&amp;G.2.1</b>	5.L.2.3	NC.5.OA.2
<b>6-7</b>	RL.6.3	7.E.1.1 <b>7.E.1</b>	6.E.2.4	NC.7.RP.3
<b>8-9</b>	RI.9-10.8	FP.C&G.3.4 <b>CL.C&amp;G.4</b>	8.L.3.2	NC.M2.IF.2
<b>10-12</b>	RL.11-12.6	CE.E.2.2	Bio.2.1.3	DCS.GT.1