

ADVANCED LEARNING LABS

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

TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES
10-12

Interactions



ENGLISH LANGUAGE ARTS

"I am lonely, yet not everybody will do. I don't know why, some people fill the gaps and others emphasize my loneliness." – Anaïs Nin

When people think about human interactions, very few pay attention to social isolation and loneliness. Imagine a friend or loved one writing the quote. Write a letter to him/her addressing loneliness and offer support. While you are composing your letter, consider the following:

- How do you explain the importance of social interactions?
- Does the person find comfort in his/her loneliness?
- How will the person feel about receiving the letter?
- What resources can you provide?

If you know someone personally who is experiencing loneliness, share the letter with him/her.



SOCIAL STUDIES

The United States has interactions with countries all over the world, forming bilateral relationships. A bilateral relationship is when two sovereign states agree to diplomacy to conduct various relations. Visit the archived (<https://bit.ly/32s9Anh>) and current (<https://bit.ly/30jQ9KF>) U.S. Bilateral Relations Fact Sheet.

Select a country and compare its relationship with the U.S. in 2016 and 2020. Make a two-column list to answer the following questions:

1. What was the nature of the relationship between the U.S. and your selected country (allies, adversaries)?
2. What were the U.S. objectives vis-a-vis this country in 2016 and in 2020?
3. How have both countries impacted each other culturally and economically?
4. What was the role of the U.S. in offering assistance and national security?



SCIENCE

Viruses are the most common biological entities on Earth. Viruses contain nucleic acid, which can be either single- or double- stranded RNA or DNA. Viruses can only survive in the environment for a period of time, therefore they rely on the cells of other organisms to mutate and reproduce.

Select a viral disease from the site: <https://www.healthline.com/health/viral-diseases>

Create a flowchart explaining how the virus interacts with the human body from initiation to vaccination. Include a description of each phase and the effects on the host.

- What part of the body does your virus interact with and what happens once it is infected?
- Is there a vaccine? If yes, how does it impact the virus?
- How can we prevent contact with the virus?



MINDFULNESS

Being around people who make us happy is relatively easy. What about being around those who are a bit challenging? They too, deserve our best selves. It's easy to get frustrated, but it's harder to calm down and forgive. Take a moment to practice some mindful meditation with this video, which includes an exercise to practice compassion with difficult people: <https://youtu.be/oEplqZYUUVk>

Reflect on a negative interaction you've had with someone. How could the exercise from the video have helped you handle it differently? In your journal, write 3 other scenarios that often happen during high school.

How can you use this and other mindful meditation strategies to increase the odds of having more positive interactions with others?



LOGIC PUZZLE

The Antisocial Club meets every week at Jim's Diner. Since they are so antisocial, however, everyone always sits as far as possible from each other, and no one ever sits right next to another member. Because of this, the 25-stool diner counter is almost always less than half full and unfortunately for Jim, the members who don't sit at the counter don't order any appetizers.

Jim, however, is pretty smart and makes up a new rule to maximize his profits:

The first person to sit at the counter has to sit at one of two particular stools. If this happens, then the maximum number of members will sit at the counter. Which stools must be chosen?

Assume the stools are numbered 1 to 25 and are arranged in a straight line.



FIELD STUDIES

Meet The BLT. Not bacon, lettuce, and tomato. The bear, lion, and tiger known affectionately as Baloo, Leo, and Shere Khan at Noah's Ark Sanctuary: <http://www.noahs-ark.org/animals/?category=1>

Discovered by Atlanta authorities during a raid in 2001, they continue to thrive together, but individually, they have an interesting story to tell. Baloo, Leo, and Shere Khan interact with each other as a family unit despite their differences. The relationship formed between a bear, tiger, and lion doesn't happen naturally in the real world.

After you visit the sanctuary, consider these questions:

1. What does this interspecies interaction say about wild animals versus domestic animals?
2. How did human interaction impact the animals' survival?
3. What can humans learn from this interaction?



RESEARCH EXPLORATIONS

Social distancing has become the norm to prevent the spread of COVID-19. The world is now looking for innovative ways to connect again. What is your proposed solution (product, service, or combination) to reintroduce human interaction while social distancing? Research the CDC guidelines about social distancing: <https://bit.ly/2OSvrwe>

Propose a written plan that will allow people to safely interact again. Your plan should include each of the following:

- Overview
- Purpose
- Targeted audience
- Design and development
- Financial factors

Present your plan to community officials.



MATH

The world runs on water for daily survival, but due to human interactions, water stress levels have become a national crisis. According to the World Resources Institute, "more than a billion people currently live in water-scarce regions, and as many as 3.5 billion could experience water scarcity by 2025." Overpopulation, along with climate change, reduces the availability of freshwater and impacts once thriving ecosystems.

Study the graph provided by NewYorkTimes about water stress levels in populated areas around the world: <https://bit.ly/3fEnwyf>

- What can you determine about the water stress levels from analyzing the graph?
- Predict water levels in 5 years. 10 years.
- What factors contribute to some countries having lower levels?

List 3 solutions for highly populated areas to lower their water stress levels. Explain the impact.



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Interactions Reference Guide

K-1 English/Language Arts:

Ideas for great picture books:

Where the Wild Things Are- written and illustrated by Maurice Sendak

Hair Love- written by Matthew A. Cherry illustrated by Vashti Harrison

Miss Rumphius written and illustrated by Barbara Cooney

A Big Mooncake for Little Star written and illustrated by Grace Lin

K-1 Logic Puzzle:

Odd plus an even = odd (silly)

Even plus an even = even (serious)

Odd plus an odd = even (serious)

10-12 English/Language Arts:

Additional information on loneliness: <https://www.healthline.com/health/how-to-deal-with-loneliness>

10-12 Logic Puzzle:

Solution: The first person must take either stool 9 or 17 (because of symmetry, it doesn't matter which). Assume they pick seat 9. The next person will pick seat 25, since it is the furthest from seat 9. The next two people will take Seats one and 17. The next three will occupy 5, 13, and 21. The next six will occupy 3, 7, 11, 15, 19, and 23. This seats the maximum of 13 people, and no one is sitting next to another person. If a seat other than 9 or 17 is chosen first, the total diner patrons will be less than 13.

<https://www.braingle.com/brainteasers/teaser.php?op=2&id=5159&comm=0>

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Interactions NC Standards Alignment

Grade Span	English/ Language Arts	Social Studies	Science	Math
K-1	RL.K.7	1.G.2.1	K.P.2.1	NC.1.OA.4
10-12	W.11-12.2 I.SE.2	USH.H.6.1	BIO.1.1.1	NC.M4.SP.1.4