Make & Play

This issue of MUSE magazine discusses how game designing strategies and new inventions are working together to provide the best gaming experience for all players. From board games to adrenaline-pumping sports, the ultimate goal is creating a high-interest adventure that encompasses fair play and gratifying entertainment.

CONVERSATION QUESTION

What contributes to a player's positive experience?

TEACHING OBJECTIVES

- **Students will learn the criteria for creating a good gaming experience.**
- **Students will learn about the sport of ice climbing.**
- **Students will learn how video games are becoming more accessible to players with alternate needs.**
- **Students will synthesize information from the article with personal knowledge.**
- **Students will examine the structure and function of various ice climbing supplies.**
- **Students will analyze problem and solution relationships.**
- **Students will use suggestions from the article to create an alternate version of a familiar game.**
- **Students will plot geographical locations on a map.**
- **Students will investigate the meaning and consequences of implicit bias.**

In addition to supplemental materials focused on core STEAM skills, this flexible teaching tool offers vocabulary-building activities, questions for discussion, and cross-curricular activities.

SELECTIONS

• What's in a Game?
Expository Nonfiction, ~900L
• Ice Climbing
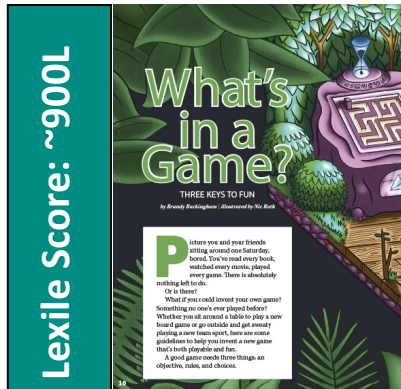Expository Nonfiction, ~700L
• So We Can All Play
Expository Nonfiction, ~1300L

What's in a Game?

pp. 11-15, Expository Nonfiction

Game On! This article will take the reader inside the mind of a game designer and teach students how to create an exciting, playable game.

Lexile Score: ~900L

RESOURCES

Synthesizing Information

OBJECTIVES

- Students will learn the criteria for creating a good gaming experience.
- Students will synthesize information from the article with personal knowledge.
- Students will use suggestions from the article to create an alternate version of a familiar game.

KEY VOCABULARY

- *objective* **(p. 11)** an aim, goal or end of action
- *competitive* **(p. 12)** a situation in which people try to win or be more successful than others
- *playtest* **(p. 15)** the process by which a game designer tests a new game for bugs and design flaws before releasing it to market

ENGAGE

Conversation Question: What contributes to a player's positive experience?

Consult the textbox on the bottom of page 13 that discusses what happens when a game doesn't have an objective, clear rules or meaningful choices. Choose the simple game of Go Fish or Tic Tac Toe, and tweak the rules as indicated in the text. Discuss how the variations changed the game.

INTRODUCE VOCABULARY

Post the key terms and discuss the definitions. Inform students that these words will appear in the article and challenge them to predict the topic. Then display the title, "What's in a Game?", and guide students to notice that the vocabulary words are all related to the gaming world. As a post-reading activity, have them review the article and highlight other words that belong in this category.

READ & DISCUSS

Post and discuss the questions prior to reading. Read the article aloud, pausing when answers to the questions are revealed and encourage students to elaborate.

1. List the three components of a good game.
2. What are some of the different ways that a game can be won?
3. Explain the difference between a cooperative goal and a competitive goal. Give examples of each.
4. How do choices that players make affect the game?
5. What are the benefits of playtesting a game?

SKILL FOCUS: Synthesizing Information

INSTRUCT: Review the three elements that are essential when creating a good gaming experience (an objective, clear rules and meaningful choices). Have students reread the article with a partner and use sticky notes to mark where in the article corresponding information is found. Emphasize that they will be using information from the article, as well as their own thoughts to complete the graphic organizer, *Game On!*.

ASSESS: The objective of this lesson is to help students practice the skill of making connections. Review answers on the graphic organizer orally. Be sure that students were able to add their own information in addition to the examples given in the article (synthesize information).

EXTEND

Game Design Build on the motivational activity in the introductory section of this guide page. Instruct students to choose any familiar game. This can be a board game such as 'Sorry!', or a physical game such as 'Tag'. Arrange the students into small groups and have them work together to change the objective, rules, and/or choices. Invite students to share their new version and allow time for the class to play. Discuss how the changes affected the game play.

Game On!

Synthesizing Information: Consider the 3 components of a good game. Complete the chart for the two games listed below, and then choose a third game to deconstruct.

Game	Objective	Rules	Player's Choices
Battleship			
Trouble			
_____			

Ice Climbing

pp. 22-23, Expository Nonfiction

Bundle up and grab your ice pick! Students will be introduced to the beautiful sport of ice climbing and learn how two specific inventions made the possibility of scaling a frozen waterfall an attainable goal.

Lexile Score: ~700L

RESOURCES

Structure and Function

OBJECTIVES

- Students will learn about the sport of ice climbing.
- Students will examine the structure and function of various ice climbing supplies.
- Students will plot geographical locations on a map.

KEY VOCABULARY

- *brittle* **(p. 23)** hard but likely to break or shatter easily
- *crampons* **(p. 23)** spikes that attach to boots to help gain traction on a slippery surface
- *torrent (*p. 23)** a strong and fast-moving stream of water

ENGAGE

Conversation Question: What contributes to a player's positive experience?

Display the title of the article, "Ice Climbing". Read aloud the sentence from page 23 that states, 'Waterfall ice climbing leaves no trace on the Earth.' Discuss what this means and why it makes this sport even more appealing to some people. What other sports leave no trace on the Earth?

INTRODUCE VOCABULARY

Post the key terms and discuss the definitions. Then display the following questions and have students supply the correct answers:

- What word refers to a condition of the ice? (brittle)
  What other words could describe ice?
- What word refers to the movement of the water? (torrent)
  What other words can describe the water's flow?
- What word refers to a necessary supply for ice climbers? (crampon)
  What other supplies do ice climbers need?

READ & DISCUSS

Read the article aloud with the class. Have students reread the article in small groups to answer the questions below. Share responses.

1. What is ice climbing?
2. What two inventions changes how ice can be climbed?
3. Why is ice climbing a dangerous sport?
4. How do people prepare and train to become ice climbers?
5. Why is waterfall ice climbing considered a low impact, high gain sport?

SKILL FOCUS: Structure and Function

INSTRUCT: Elicit from students that the main idea of the article is to provide information that details the exciting sport of ice climbing. Present the graphic organizer, *Freezin' for a Reason,* and tell students that they will be using information from the article to record the function of various supplies that are necessary for creating a safe and exciting ice climbing experience.

ASSESS: Circulate and discuss content with students. Collect graphic organizers to assess their ability to understand the **structure and function** relationship.

EXTEND

Geography Have the students locate Ouray, Colorado on a map--home to the world's premier Ice Park. Discuss why this location is optimal for such a park. Challenge students to suggest other places in the world that would be suitable for ice climbing. In addition, have students consider where ice climbing would be impossible. Have students support their answers with details about the terrain and climate of a particular location.

Freezin' for a Reason

Structure and Function: Use information from the article to define the function of each of the supplies listed. In the last row, add a modern invention and describe how it would be helpful for ice climbers.

Structure	Function
crampons	
curved ice pick	
ropes	
axes	
Modern Invention: _____	

**Refer to the article to see the years in which crampons and curved ice picks were invented. How many years passed between the two inventions? _____

So We Can All Play

pp. 38-43, Expository Nonfiction

Although video games can be rated "E" for Everyone, this educational article brings to light how many players are excluded from gaming for a variety of reasons. Students will become aware of implicit bias as well as the steps being taken to create solutions.

Lexile Score: ~1300L

RESOURCES

Problems and Solutions

OBJECTIVES

- Students will learn how video games are becoming more accessible to players with alternate needs.
- Students will analyze problem and solution relationships.
- Students will investigate the meaning and consequences of implicit bias.

KEY VOCABULARY

- *accessible* **(p. 40)** able to be used (by everyone)
- *closed captions* **(p. 41)** a process of displaying text and sound on a video screen
- *perception* **(p. 41)** the ability to see, hear or become aware of something through the senses

ENGAGE

Conversation Question: What contributes to a player's positive experience?

Display the equation from page 40: Games = Action + Reaction. Generate a discussion to explain the meaning. Then, introduce the title of the article, "So We Can All Play" and have students predict the content and focus of the article. Revisit predictions after reading the article.

INTRODUCE VOCABULARY

Post the key terms and discuss the definitions. Instruct students that they will be creating a word search puzzle using those three words, in addition to another 17 gaming-related words. Suggest that they highlight topical words as they read for use in the word search. Share the puzzles with another class for use as a pre-reading exercise for this article.

READ & DISCUSS

Reinforce comprehension of the concepts in the article by using the following prompts to direct discussion.

1. Why are many players excluded from video gaming?
2. Explain how 'AbleGamers' and 'Special Effects' are customizing gaming setups.
3. In what ways have books and movies already made their content more accessible to all?
4. What are some of the reasons that implicit bias may exist in the video gaming world? How is this being addressed?

SKILL FOCUS: Problem and Solution

INSTRUCT: Inform students that they will be rereading the article with a partner and highlighting passages that depict how problems regarding equal accessibility of game play is being solved. Distribute copies of the graphic organizer, *Fair Play,* and tell students that they will be responsible for recording the problem/solution relationships from the article. Pairs should discuss their findings as they complete their work and make changes as necessary.

ASSESS: Review the information that the students listed on their charts. Evaluate the thoroughness and accuracy of their statements.

EXTEND

Sociology Guide students to reread the section on pages 42-43 with the heading, 'Implicit Bias'. Discuss the significance of this phenomenon. Have students work in small groups to brainstorm situations other than the gaming world where implicit bias is evident. How can we raise awareness and create solutions to overcome these biases? Invite groups to share the focal points of their discussion.

Fair Play

Problems and Solutions: Refer to the article to identify and record problems of accessibility among video gamers. Use the 'solutions' column to explain how these problems are being addressed.

Problems (List the specific challenges excluding some gamers.)	Solutions (Explain how these problems are being solved.)
Visual Challenges: 1. 2.	
Auditory Challenges: 1. 2.	
Physical Challenges: 1. 2.	