



# Looking for Space

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**Theme:** Adaptation

**Big Idea:** Adaptation is necessary for survival.

**Standards:**

1. Native Americans/Polar Study
2. Ocean Study/Bird/Rainforest
3. Virginia History/Settling in the New World
4. Immigration/Westward Movement

**Need to Know Questions:**

1. What problems or dangers cause people or animals to feel the need to adapt?
2. What problems or dangers do they face while attempting to adapt?
3. How do they decide their best options when deciding on solutions?
4. How do they overcome these dangers or solve these problems?
5. What happens if they do not adapt?

Note: I would like to give credit to Carol Thomson for this facilitating event idea. It is part of a unit on adaptation she does with her 4<sup>th</sup> grade Life Science class. [http://rbc1.rbcm.gov.bc.ca/end\\_species/pdf/grade4final2.pdf](http://rbc1.rbcm.gov.bc.ca/end_species/pdf/grade4final2.pdf)

**Learning Outcomes:**

It is expected that students will relate the growth and survival of organisms to a conditions in the environment.

**Materials:**

1. Fluorescent marking tape
2. Construction sign
3. Internet access
4. Word processing software
5. Multimedia software
6. Digital camera
7. Community newspaper
8. Local resource people

### **Mission:**

- Inform students that after recess you will be conducting an experiment. (The .experiment. will be somewhat disruptive so a contained time allotment is desired.)
- When students are out for recess string fluorescent marking tape across half of the classroom and post a large sign:



- In the crowded section which remains have the returning children sit and discuss what happens when land is taken for development purposes. Discuss the crowding, loss of personal space, loss of home and personal effects, etc.
- During the discussion have some older students arrive (pre-arranged), dressed in work attire and carrying shovels, tape, signs, etc. These workers/students cordon off another portion of the classroom (preferably one which contains the students. lunches), and post another Development sign, one which indicates that a parking lot for the high-rise will be built there. All students are now in 1/4 of the room, crowded and without access to their food.
- Further discussion will focus on what happens when spaces are encroached upon. Discussion should draw out the following points:
  - 1) loss of home
  - 2) loss of food and possibly water sources
  - 3) crowding; loss of personal space
  - 4) feelings engendered by this experiment.
- Summarize the effects of changes in, or loss of ones environment.

### **Mapping to Intelligences:**

1. Verbal/Linguistics
  - ✓ Read
  - ✓ Research
  - ✓ Write
    - ✓ Make a brochure
    - ✓ Keep a journal (real or imaginary)
  - ✓ Interview

- ✓ Create a game to show process of adaptation
  - ✓ Create a dictionary or glossary of terms
  - ✓ Write a newspaper article to discuss the problem and express your opinion pro or con
  - ✓ Publish online
  - ✓ Invite in a guest speaker
2. Mathematical/Logical
- ✓ Map key – scale, size
  - ✓ Estimating
  - ✓ Using a formula
  - ✓ Brainstorm strategies or procedures for problem solving
  - ✓ Timeline events
  - ✓ Decide on criteria-set up a rubric as a way to measure
  - ✓ Analyze money or costs
  - ✓ Predicting – make a hypotheses about adaptation
3. Visual/Spatial
- ✓ Webbing reasons animals or people might need to adapt
  - ✓ Take digital pictures of themselves and make changes with graphic editor
  - ✓ Use graphic editor to import each image and manipulate/resize
  - ✓ Diagram changes which prompt adaptation
  - ✓ Imagine some new adaptation that could be necessary in the future based on changes in the environment
  - ✓ Slide shows
4. Musical/Rhythmic
- ✓ Identify patterns of survival (behaviors)
  - ✓ Identify unique attributes of survivors (personality traits)
  - ✓ Listen to songs about animals, people heading West, immigration
  - ✓ Note similarities and differences
  - ✓ Poetry – write about experiences of adaptations or find poems already written on the topic
5. Bodily/Kinesthetic
- ✓ Physical games-games of skill
  - ✓ Take a walk or tour a neighborhood
  - ✓ Visit community landmarks
  - ✓ Create a prototype of an animal that adapts
  - ✓ Act out an animal that adapts
6. Interpersonal
- ✓ Pairing/sharing

- ✓ Problem-solving teams
  - ✓ Interviewing with experts online
  - ✓ Email/snail mail correspondence
  - ✓ Persuasive arguments
  - ✓ Share your presentations with an audience
  - ✓ Bringing in parents and local experts
  - ✓ Stay in character...pretend to be a certain person or animal. Invite in guests, tell your story and then answer questions about how you had to adapt.
7. Intrapersonal – could be done as a group or as an individual-teacher choice
- ✓ Allow child to express his opinion and then back up the opinion with facts to support it. Share with others so it can be discussed with others who may or may not agree ...higher level thinking
  - ✓ Self-assessment – could ask them to assess themselves based on a rubric you give them, or they could write a paragraph
  - ✓ Preferences- why would this be the best course for this animal or person to choose when attempting to adapt
  - ✓ Show change over time in this adaptation...what criteria was used to decide the course of adaptation
8. Naturalist
- ✓ Sorting
  - ✓ Categorizing
  - ✓ Create something new based on old data...new adaptation...look at an old adaptation and then think about a new adaptation
  - ✓ Build a database on adaptations
  - ✓ Ranking things...most important to least important traits of a survivor (hierarchies)
9. Existential
- ✓ Study a local lot or area of land which is being considered for development; what will the ramifications be on your community?
  - ✓ Study the animal's life cycle and survival techniques (ex-camouflage)
  - ✓ Study problems causing people to have to adapt

### **Culminating Activity**

Have students create multimedia proposals on how to redesign the classroom so that everyone can successfully adapt to the new environment. Invite parents and local media in to hear student presentations. Included in the presentation should be the answers to these questions:

- ✓ What problems or dangers caused your person or animal to feel the need to adapt?

- ✓ What problems or dangers did he face while attempting to adapt?
- ✓ How did he decide on his best options when searching for ways to adapt?
- ✓ How do he overcome dangers or solve problems while in the process of adapting?
- ✓ What would have happened if he was not able to adapt?

## Resources

### Books

#### Fiction

Dandelions by Eve Bunting and Greg Shed

<http://www.carolhurst.com/titles/dandelions.html>

In an ox-drawn covered wagon, their cow walking behind. For this family, the children and father adapt quickly, but the pregnant mother is overwhelmed by the loneliness. When Papa declares they are "here ...

Sami and the Time of the Troubles by Heide, Florence Parry

<http://www.carolhurst.com/titles/samiandthetime.html>

This is the story of a likable boy and his family and the way they adapt to conditions and survive during the civil war in Lebanon. Sami tells us how, when the bombs are dropping ...

Changes for Molly: A Winter Story (American Girls Collection by Valerie Tripp

[http://www.amazon.com/exec/obidos/ASIN/0937295493/qid=1078681892/sr=2-2/ref=sr\\_2\\_2/102-4063336-2733740](http://www.amazon.com/exec/obidos/ASIN/0937295493/qid=1078681892/sr=2-2/ref=sr_2_2/102-4063336-2733740)

This is another in the American Girls series about Molly McIntire, a ten-year-old girl living on the home front during World War 2. Molly gets the good news that the U.S. Army is reassigning her father stateside.

#### Non-Fiction

Chicken Soup for the Preteen Soul - 101 Stories of Changes, Choices and Growing Up for Kids, ages 10-13 by Jack Canfield

[http://www.amazon.com/exec/obidos/tg/detail/-/1558748008/qid=1078682092/sr=1-7/ref=sr\\_1\\_7/102-4063336-2733740?v=glance&s=books](http://www.amazon.com/exec/obidos/tg/detail/-/1558748008/qid=1078682092/sr=1-7/ref=sr_1_7/102-4063336-2733740?v=glance&s=books)

Numerous short pieces of verse and prose, as well as pithy quotations selected as lead-ins to some of the pieces.

10-Minute Life Lessons for Kids : 52 Fun and Simple Games and Activities to Teach Your Child Honesty, Trust, Love, and Other Important Values by Jamie C. Miller

[http://www.amazon.com/exec/obidos/tg/detail/-/0060952555/qid=1078682618/sr=1-7/ref=sr\\_1\\_7/102-4063336-2733740?v=glance&s=books](http://www.amazon.com/exec/obidos/tg/detail/-/0060952555/qid=1078682618/sr=1-7/ref=sr_1_7/102-4063336-2733740?v=glance&s=books)

An inspirational, upbeat and practical guide to teaching our children powerful principles needed for lifetime success.

What Do You Stand For?: A Kid's Guide to Building Character by Barbara A. Lewis

[http://www.amazon.com/exec/obidos/tg/detail/-/1575420295/ref=pd\\_sim\\_books\\_4/102-4063336-2733740?v=glance&s=books](http://www.amazon.com/exec/obidos/tg/detail/-/1575420295/ref=pd_sim_books_4/102-4063336-2733740?v=glance&s=books)

Ideas, activities, and resources, helps young people explore who they are and develop positive traits such as caring, good citizenship, empathy, respect, peacefulness, and responsibility.

### **Music/Songs**

Against the Wind – Bob Seeger

America – Neil Diamond

Big Yellow Taxi – Joni Mitchell

Blowing in the Wind- Bob Dylan

Both Sides Now- Judy Collins

The Boy in the Bubble – Paul Simon

A Change is Gonna Come - The Band

Day is Done- Peter, Paul and Mary

House at Pooh Corner – Kenny Loggins

I Know an Old Woman Who Swallowed a Fly (traditional)

If I had a Hammer - Peter, Paul and Mary

Looking for Space – John Denver

My City was Gone - The Pretenders

New Year's Day – U2

Ohio – Crosby, Still, and Nash

Reeling in the Years – Steely Dan

Shiloh – Neil Diamond

Teach your Children Well – Crosby, Stills and Nash

Time Passages – Al Stewart

The Times They are a Changin' – Bob Dylan

Turn! Turn! Turn! – The Byrds

### **Web Resources**

American West

<http://www.americanwest.com/>

Animals A-Z: Hyena

<http://www.oaklandzoo.org/atoz/azhyena.html>

Eyewitness

<http://www.ibiscom.com/index.html>

If You Can't Run You've Got to Hide!

<http://oncampus.richmond.edu/academics/as/education/projects/webunits/adaptations/camou1.html>

The Old Timer's Page

<http://waltonfeed.com/old/index.html>

Our Wild Neighbors

<http://www.nps.gov/aplic/forkids.htm>

Radio Days

<http://www.otr.com/index.shtml>

Rainforest Biome

<http://mbgnet.mobot.org/sets/rforest/plants/>

You Be the Historian

<http://americanhistory.si.edu/hohr/springer/>

## Assessment

<b>Participation</b>	<b>Needs Improvement 1</b>	<b>Satisfactory 2</b>	<b>Exemplary 3</b>
Participates in class activities.	Occasionally when interested in the task.	Regularly whenever prompted to join.	Consistently with interest and enthusiasm.
Cooperates with peers.	Depends on whom he or she is working with.	Shares and works cooperatively.	Serves as a role model for sharing and cooperating.
Is a collaborative partner.	Does not share ideas or does not listen to others.	Collaborates to successfully complete tasks.	Is a class leader in forming collaborative partnerships.
Demonstrates characteristics of an explorer.	Does not like to take risks or explore unknown subject matter.	Takes risks and seeks support to explore the unknown.	Takes risks, seeks support and uses critical thinking skills to explore the unknown.
Demonstrated mastery of skills specified in state standards.	Did not meet the minimum requirements for state standards targeted in this unit.	Met the minimum requirements for state standards targeted in this unit.	Exceeded the minimum requirements for state standards targeted in this unit.



<b>Project</b>	<b>Needs Improvement 1</b>	<b>Satisfactory 2</b>	<b>Exemplary 3</b>
Is done neatly with attention to detail.	Project is incomplete or lacks sufficient depth.	Project is neat and shows attention to detail.	Project is neat, shows attention to detail and exhibits craftsmanship that goes beyond grade level expectations.
Is based in an identified content area of the unit.	Is not related to any content area being studied under the theme of changes.	Is based in one identified content area.	Is based in two or more identified content areas.
Applies skills and concepts in a new or different way.	Project imitates objects or examples studied in class.	Project demonstrates mastery of skills and concepts in a unique way.	Project demonstrates mastery of skills and concepts in a unique way at the highest levels of thinking.
Adds to the class study of frontiers.	Does not add to the class experience or understanding of frontiers.	Adds to the class understanding of frontiers or explorers.	Adds to the class understanding of frontiers or explorers by elevating the level of discussion or activity.
Demonstrates high personal standards for work.	Does not demonstrate high personal standards in the completion of the project.	Demonstrates high standards for work as outlined by the teacher and/or class.	Demonstrates high personal standards for work that exceeds teacher expectations.