

YESTERDAY, TODAY AND TOMORROW - USING THE ALBERTA TOMORROW SIMULATOR

OBJECTIVES

Students will:

- explore the province of Alberta on satellite imagery
- identify which watershed they live in
- see how the landscape has changed in the past and the result on environmental and social economic indicators
- see a projected "business as usual" future.

MATERIALS

Projector and Speakers
Student Worksheets
Video Links
Internet Connection

OVERVIEW

Part A: Find your community and identify what watershed you belong to

Part B: How has the landscape changed in the past

Part C: How might the landscape change in the future?

Part D: Extension: Make your own plan - See Lesson "My Future Alberta" and "Climate Change in Alberta"

***** Prior to having your students sign up on Alberta Tomorrow, make sure you go and sign up as a teacher and create a class for your students to register under. *****



TIME REQUIRED

90 min

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PART A: Provincial Scan

NAME: _____

1. Goto www.albertatomorrow.ca and create an account
2. Go to "Explore" and find your community on the map.
3. Scan from the northernmost corners of the province to the Rocky Mountains and SW Grasslands. Zoom in and out with your mousepad. What do you notice?
4. List 5 pieces of evidence that the landscape has been altered by humans:
 - ie I can see cities and towns
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.

PART B:

5. Click on "Create new scenario"
6. Create a "Historic" scenario for your watershed.

Landscape Type/ Landuse	Color
Orange	Agriculture
Yellow	Natural Grassland
Blue	Water
Light Green	Wetland
Dark Green	Forest
Purple	Urban
Grey	Industry and Transportation
White	Alpine and Exposed

7. What watershed do you live within?

Definition: Watersheds are the sum of the streams that gather from heights of land and flow into a common water basin. Sometimes called catchment basins, watersheds are made up of many sub-basins, or tributary basins

I live within the _____ drainage basin, the
_____ watershed and the _____ sub
watershed (s)



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Where does the water in your watershed begin? Can you tell through which river the water in your watershed leaves the province?

Can you tell what ocean that water will eventually drain into?

8. Choose your study area. You may drill down to the subwatershed if you like, but remember you will see less change in a smaller study area. Once you have decided on your study area, click "Run Scenario! Press the PLAY button.

9. "Fill out Chart 1 and Chart 2 for 1910

10. List the top 3 changes you see on the map:

-
-
-

11. From Chart 1, complete these observations;

- when natural landscapes went down.....
- when oil and gas production went up
- when agriculture went up.....

Create 3 more observations:

-
-
-

Part C: Business as Usual Future.

Click +scenario

This time, choose "Business as Usual"

Complete Chart 1 and 2 for the year 2050

List 3 WOW's you have after seeing this projected future:

-
-
-

Part D: Extension - See Lesson Plan "My Future Alberta" and "Climate Change in Alberta"



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CHART 1: Indicator Dials	1910	2020	2050
Natural Landscape			
Grizzly Habitat			
Fish Habitat			
Water Quality			
Biotic Carbon Storage			
Greenhouse Gases			
Population			
GDP			
Oil and Gas Production			
Forestry			
Agriculture			
Water Consumption			

CHART 2: Area	1910	2020	2050
Agriculture			
Grassland			
Water			
Wetlands			
Forests			
Urban Area			
Industry			
Alpine			