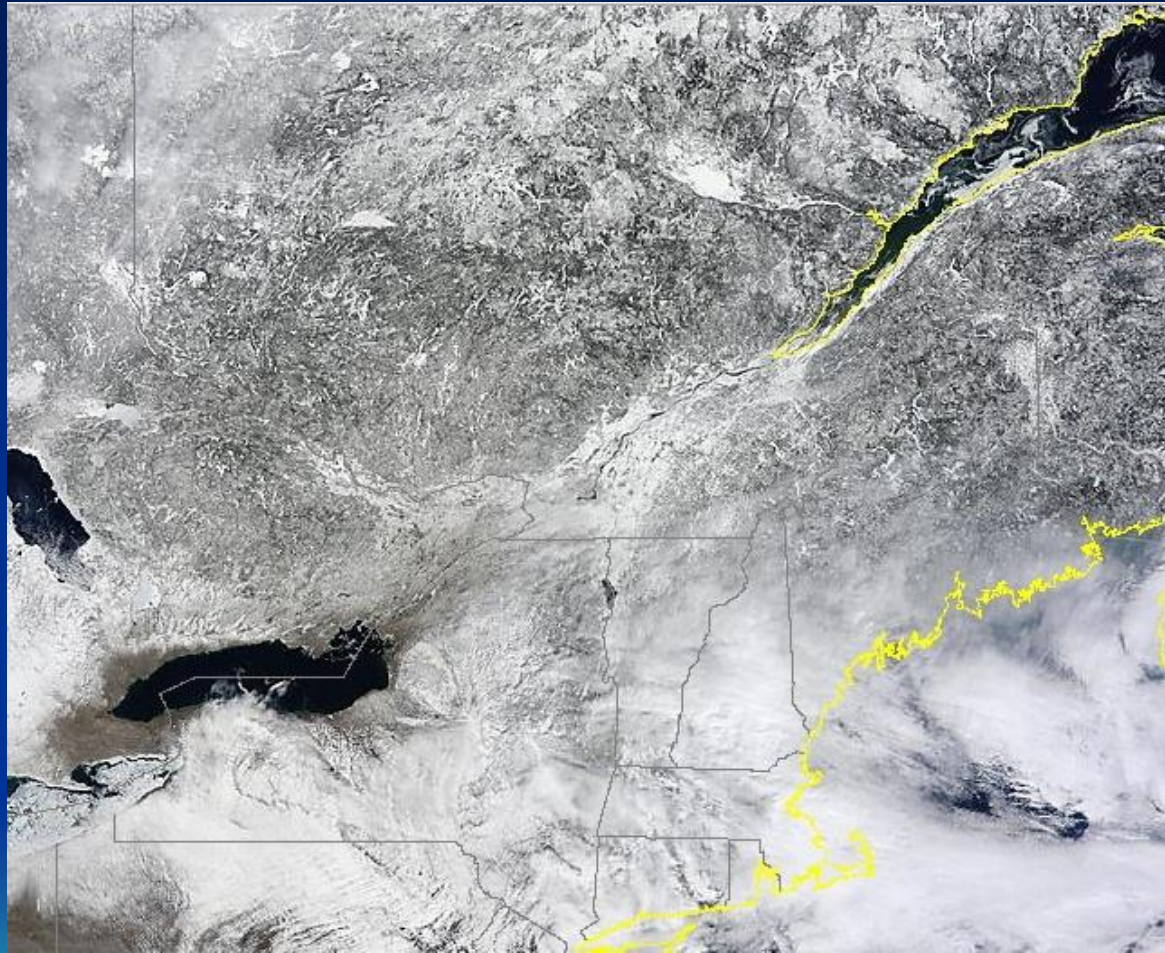


Satellites, Weather and Climate Module 10: *Land interpretation – working with photochips*



The
UNIVERSITY
of VERMONT



Elements (Clues)

Tone (aka hue or color) *...water vs. vegetation*
relative brightness or color of elements

Size *...pond vs. lake*
size must be considered relative to photo scale

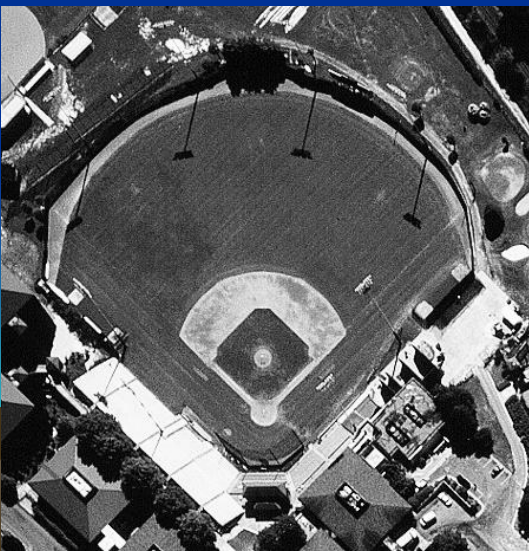
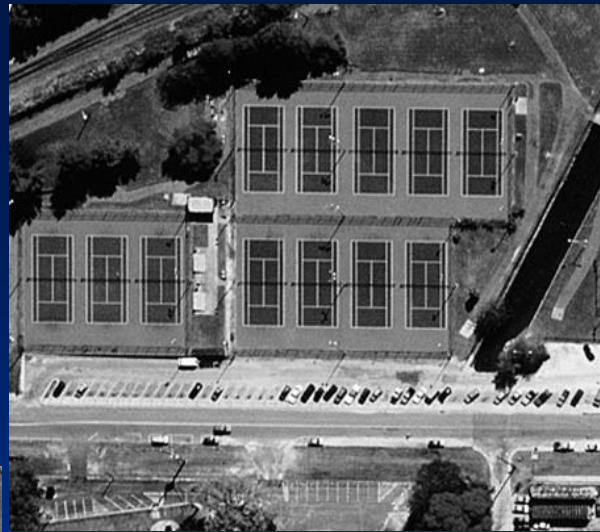
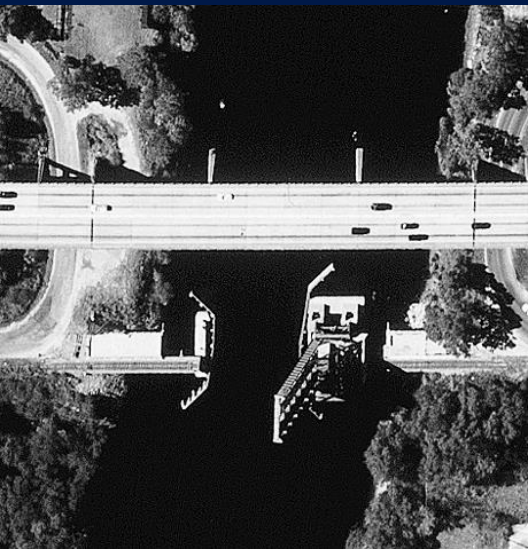
Shape *...airport, river*
general outline of objects
regular geometric shapes >> cultural features

Texture *...forests vs. fields*
apparent smoothness or roughness of image features
caused by the frequency of change of tone in photos

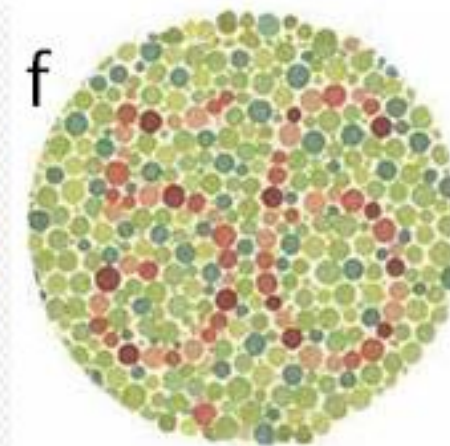
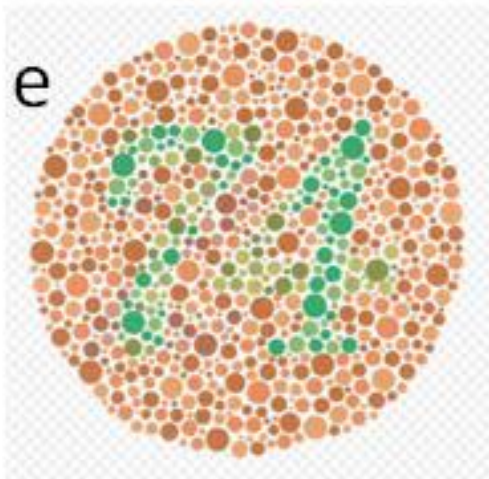
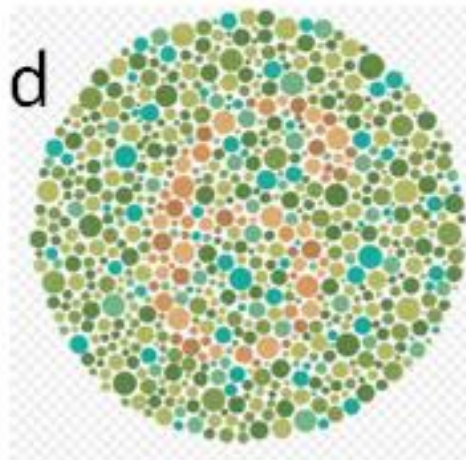
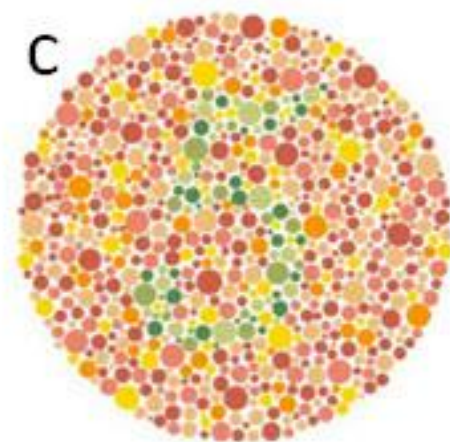
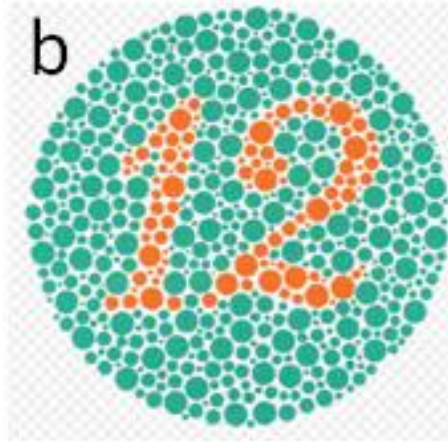
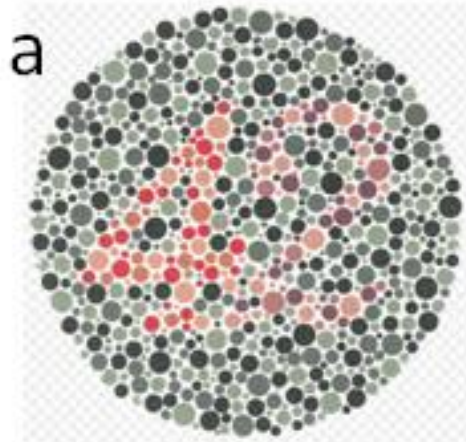
Pattern *...roads, fields*
spatial arrangement of features in photo

Shadow *...buildings, clouds*
used to calculate heights of objects

Site/Location *...dairy in town?*
topographic or geographic location



Color Vision Test





Test your Powers of Pattern Recognition



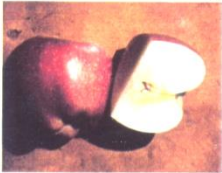
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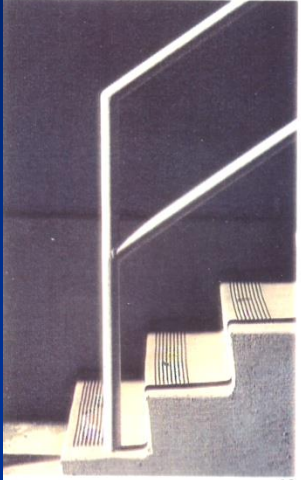
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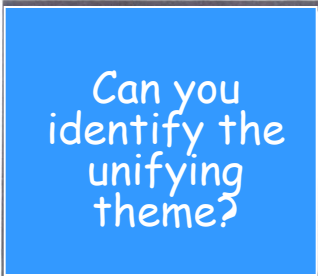
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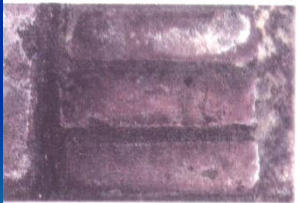
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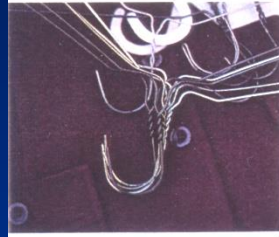
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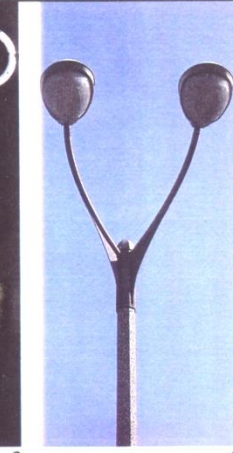
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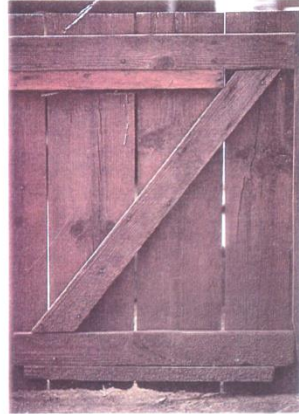
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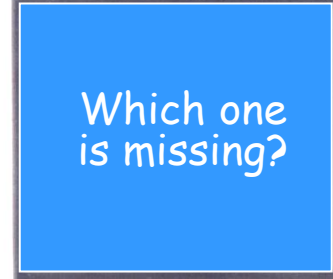
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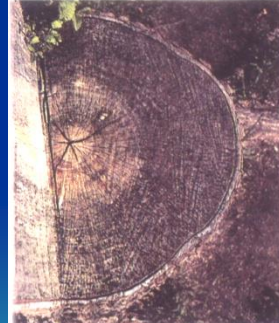
5



7



6



8



9



11

Your Task

- ❖ Form small groups (2-3 students)
- ❖ Photointerpret 12 B & W photo chips and answer the associated questions (handout)
- ❖ Compare answers at the end of class

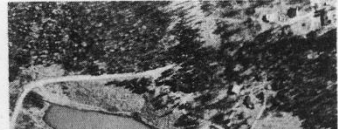
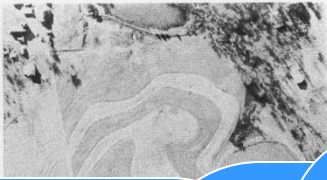
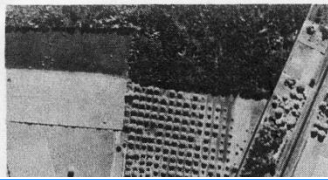


Photo #

Photo #6 What is this com
ow?

Photo #7: Check out this golf course. Can you identify putting greens, sand traps, fairways, and rough areas?

Photo #8: What is this feature? This type of use represents a feature that was common for several decades in the U.S., particularly the 50's and 60's.
What photo characteristics

What evidence s
answer?

Photo #5: What is this feature?

Photo #12: This is another unique signature of developed societies that may be identified even on satellite imagery. What is it?

Photo # Photo #11: Is this a facto
shopping mall? What evidence is present
to indicate this?

anspo
at is
evidence?



Photo #9: What is this feature?
Is this complex used by professionals or amateurs?

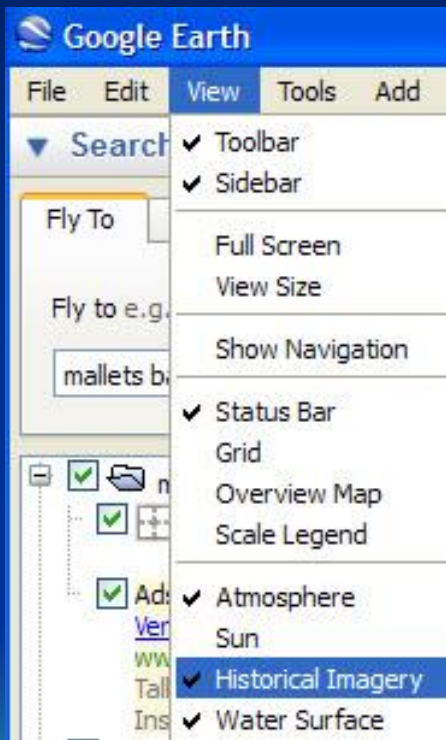


Module Sequence and Suggested Alternatives

1. Remote sensing lecture (ppt file included)
2. Photointerpretation Quiz of generic photo chips (students working in small groups)
3. Suggestions for quiz alternatives
 - a) Teacher collect local photo chips of your town/area from available imagery or Google Earth so the students will recognize features in the local area.
 - b) Have students collect their own photo chips from Google Earth and then compile all student photo chips (and answers) into a grand quiz for the class.
 - I. Photo chips based on the local area or a learning theme
 - I. (e.g. development, global change, disasters, streams)
 - c) Examine historical imagery of Vermont compared to recent imagery
 1. Instructor to provide a historical photo from the local area and compare to current imagery to identify changes on the land (Landscape Change Program and Google Earth)
 1. Based on a learning theme or historic event (e.g. flood)
 2. Have students locate a historical photo and a photo chip from recent imagery (Google Earth)
 3. Landscape Change Program (<http://www.uvm.edu/landscape/>)



Google™ earth



2008



2004



LANDSCAPE CHANGE PROGRAM

See Vermont as it was 200 YEARS AGO

A digital archive of historic and current
photo pairs, educational resources, and more!



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Learn

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[TUTORIALS](#) [PHOTO INTERPRETATION](#) [RESHOOTING PHOTOS](#) [DOWNLOADING PHOTOS](#) [DATING PHOTOS](#) [COPYRIGHT](#)

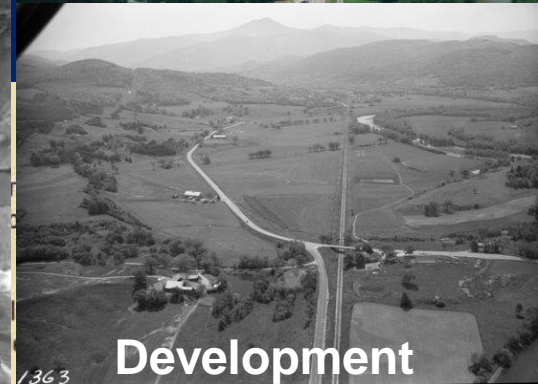
Educational Resources

Photo Archive

(Ground and Aerial Images)

Civil War
Streams
Geology
Disasters (historic floods)
Interpreting the landscape
Forestry
Mining

Landscape Change Program



Educational Resources

- [Thematic Photo Sets](#) Includes educational [modules](#) ("Learning Land History & Signboards, Shelburne Landscape Change, Dating Photos" topic (Floods, Mining, Trees), and student [scrapbooks](#) on various topics.
- ["Learning Landscapes" Rivers Curriculum](#) Link to an on-line module on rivers and fluvial processes. Developed for UVM's Geomorphology course.
- [Lesson Plans](#) Includes individual lesson plans, a larger Unit Plan, and links to accompanying materials and other resources.
- [Vermont Landscape History](#) Includes movies, podcasts, tutorials and handouts on geologic, landscape, and settlement history.
- [Bibliography](#) Includes citations for a wide range of relevant journal articles, books, and other media.
- [Links](#) Includes several categories of links, including, geology, cultural history, natural history, educational, and general.

Using Photos

- [Tutorials](#) Includes units on 1) Introduction to the LCP Archive, 2) Vermont Geology and Landscapes, 3) How People and Geology Shape the Landscape, 4) Describing Images, and 5) Dating Images.
- [Photo Interpretation](#) Offers some advice about what to look for and questions to ask about historic landscape images.
- [Reshooting Photos \(handouts\)](#)
- [Downloading Photos](#) Describes how to download images from this site and the quality of the photos that can be printed or downloaded.

Imagery Provided for your Town

National Agricultural Imagery Program (NAIP)



What Now?

- ❖ Select photo chips (features) of your town
 - Digital imagery provided today
 - Google Earth
- ❖ Select photo chips pairs (historical images)
 - Google Earth and/or Landscape Change Program
- ❖ Check out Landscape Change Program
 - Select imagery themes, places
 - Check out lesson plans

<http://www.uvm.edu/landscape/>



Landscape Interpretation with Aerial Imagery

Prepared by Leslie A. Morrissey,
RSENr/UVM