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Introduction

- This project involves creating & using short content-oriented geoscience videos.

- Characteristics of Videos
  - 5-7 minutes long
  - Accessible topics (suitable for introductory geoscience classes)
  - Tied to learning objectives
GeoScience Videos

Relatively straight forward and students can use them on their own.

http://www.youtube.com/c/GeoScienceVideos

Broadly suitable for a variety of classes (geology, oceanography, et cetera)
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- Video format supported by multimedia and pedagogical research
  - Learning objectives
  - Supported by Geoscience Video blog – includes quiz for each video
  - GeoScience video rubric
Why watch our videos?

- Multiple ways to display content
- Speaking fairly fast & enthusiastically
- Formative & summative assessments
- Reflection Activity
- Creative Commons

Personal feel

Learning Objectives

Shorter videos

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• How we use videos
  • Use videos as pre-class activity
  • Shifts content out of class
  • Free up time for more student-centered exercises
INTRODUCTORY CLASS CONUNDRUM

Students need to learn the basics and build a conceptual framework.

Rock vs. Mineral
Interpreting a landscape

Lots of material to teach
Instructors have limited time in and out of the classroom

Shift some of the responsibility for mastering basic content outside of the classroom onto the student.
FLIPPED CLASS AT NC STATE

• Physical geology students at NCSU learn basic lecture material in online preclass “learning journals”
  • Complete low stakes online quiz questions
• Frees 10-15 minutes of class for challenging concepts
  • Fall 2012 began with reading assignments
  • Fall 2014 began using short videos
  • Lesson begins with ‘clicker’ review questions

http://www.youtube.com/c/GeoScienceVideos
GeoScience Videos YouTube Channel

1 year old this October! Happy Birthday!

- Today: All videos have >500 views (except 1) and 16 videos with >1000 views
- Today: >43,000 views for all 21 videos
- Almost 400 subscribers

Videos shared with ~7000 geoscience faculty

Started making videos

Distributed to department and 150 faculty

Everyone is on vacation
GeoScience Videos YouTube Traffic Source

- **Blue**- Embedded Link
- **Red**- YouTube Search
- **Yellow**- YouTube Channel
- **Green**- Direct URL entry/Bookmark
- **Orange**- Suggested video view
Provide information on viewer demographics such as:

- **Gender**
  - Male: 52%
  - Female: 48%

- **Age range**
- **Geographic Location**
YouTube Geographic Location

- Total Views- 43,000
  - U.S. – 79% (30,026: Cali, Texas, NC)
  - International – 21% (11,453: Canada, Philippines, UK, Australia)
# GeoScience Video Rubric

## Qualities of High Scoring Videos
- Worthwhile concept
- Accurate & error free
- Learning objectives
- narration & pictures are synced
- Multiple modes of communication
- Organized display
- Minimal redundancy
- High quality images

## Geoscience Concept

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<thead>
<tr>
<th>Score</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
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<tbody>
<tr>
<td><strong>1. Concept Significance.</strong></td>
<td>X</td>
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<tr>
<td><strong>2. Scientific Accuracy.</strong></td>
<td>X</td>
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<tr>
<td><strong>3. Alignment of objectives, activity and assessment.</strong></td>
<td>X</td>
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<td><strong>4. Robustness.</strong></td>
<td>X</td>
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<td><strong>5. Activity Description.</strong></td>
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## Multimedia Design

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<td><strong>1. Syncing visuals and narration.</strong></td>
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<td><strong>4. Scene, layout, sequence and transition.</strong></td>
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<td><strong>5. Lighting and image quality.</strong></td>
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**Sub-total:** 34
# GeoScience Video Rubric

## Qualities of Low Scoring Videos
- Concept is not clear
- Inaccurate content
- No learning objectives
- Narration & pictures are poorly synced
- Minimal modes of communication
- Disorganized
- Little or no special effects
- Poor quality images

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Sub-total: 14
Summary & Questions

GeoScience Videos
- Video format supported by multimedia and pedagogical research
  - 5-7 minutes long
  - Accessible topics (suitable for introductory geoscience classes)
  - Tied to learning objectives
- Supported by Geoscience Video blog
- GeoScience video rubric

GeoScience Videos YouTube Channel-
- 43,000 views
- Viewers- 50/50 Male/Female
- Age Range of Viewers- Primarily 18-24 and 25-34
- Geographic Location-
  - 80% Views- U.S.
  - 20% Views- International

http://www.youtube.com/c/GeoScienceVideos