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Title of Lesson: R U a Geo-Techie? Digital Tools for Geographic Learning

Author/Designer(s): Pam Merrill

Grade Level (s): 6 and 7 grades

Time Recommended: 2-3 class periods

Overview: *(Brief paragraph describing the major goals and activities of the lesson.)*
Students of the 21st century live and breathe via information provided and shared using informational technology that is constantly changing. Students can and should grasp multiple opportunities throughout the school year to produce digital products, demonstrating and publishing their own geographic understandings of the world. This lesson offers teachers information and resources for assisting students in this process, while examining the topic of informational technology's impact on developing nations, the cultural diffusion such technology has brought, and the political/social issues involved in determining access to information. This overview of the possibilities of producing digital learning products can be used anytime during the year.

Geography for Life **National Standards:**
1. How to Use Maps and Other Geographic Representations, Tools, and Technologies to Acquire, Process, and Report Information From a Spatial Perspective.
3. How to Analyze the Spatial Organization of People, Places, and Environments on Earth's Surface.
17. How to Apply Geography to Interpret the Past.
18. How to Apply Geography to Interpret the Present and Plan for the Future.

Oklahoma State Academic Standards:

OAS 2012	OAS 2019
C.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts. C.9 Analyze the relationship between a primary and secondary source on the same topic.	**4.A.6-8.2** Integrate the use of visual information (e.g. maps, charts, photographs, videos, political cartoons) with textual information from primary and secondary sources.
2. The student will develop and demonstrate Common Core Social Studies writing literacy skills.	Engage in Evidence-Based Writing - Students will apply effective communication skills by developing a variety of evidence-based written products designed for multiple purposes and tasks, in order to demonstrate their understandings of social studies concepts, ideas, and content.

B.6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.	**5.A.6-8.2** Compose informative essays and other written products about social studies topics, incorporating evidence (e.g. facts, examples, details) from multiple sources, maintaining an organized, formal structure.
B.7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration	**5.B.6-8.1** Refine and formulate viable research questions related to social studies investigations, using well-developed theses or claims.
B.8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	**5.B.6-8.2** Quote, paraphrase, and summarize findings, avoiding plagiarism.
B.9. Draw evidence from informational texts to support analysis reflection, and research.	**5.A.6-8.2** Compose informative essays and other written products about social studies topics, incorporating evidence (e.g. facts, examples, details) from multiple sources, maintaining an organized, formal structure.

Resources and Materials Needed: *(List of all special materials, print resources, etc.)*

Livebinder internet collection of resources (http://goo.gl/29OrzA)
Student mobile devices, if available, or access to computer lab with internet access
Maps of Informational Technology (TV and Internet), one set per pair of students
T-Chart/Venn Diagram Map Analysis Guide, one per pair of students
Censorship Political Cartoons, one set per pair of students
Censorship of Information World Maps, one per pair of students
Web-Based Tool Evaluation Guide, one per pair of students
Concept Connection Assessment, one per student

Procedures:

ENGAGE
This introductory step of the lesson should stimulate the students' curiosity and activate prior student knowledge. The activity should be a problem or an event that raises questions and motivates students to discover more about the concept. Guiding

Questions:
• How will the teacher capture students' interest?

1. Note: Prior to using this lesson, the teacher should preview the resources collected in the Livebinder

online collection, located at http://goo.gl/29OrzA.)

2. Using the powerpoint presentation "Technology & Geography Introduction" ("Welcome" tab) guide the class through a brief discussion of the role technology plays in the lives of humans both in developed and developing regions. Using the link provided in the powerpoint, watch a short videoclip about the ingenious and innovative way simple technology has brought significant changes to the poorest communities in Vietnam ("Plastic Bowl Wind Power" can also be found on You Tube, https://www.youtube.com/watch?v=T6IrvRYxQAM). After viewing the film, ask students to work in pairs to develop what they believe to be a definition of the term "technology". Ask volunteers to share their definitions. Draw attention to common elements in definitions, pointing out that many of us assume technology to be related to computers and the use of the internet, but that humans have been developing and using technology for centuries to improve their standard of living.
3. Continue using the introductory powerpoint to guide student pairs into brainstorming a brief list of the ways they use technology in their daily lives. Ask volunteers to share selected items from their list to create a classroom list.

EXPLORE

Students need the opportunity to actively explore concepts in a hands-on activity. This establishes a commonly shared classroom experience while students are actively engaged with little explanation from the teacher. Students help each other understand the concept through social interaction.

Guiding Questions:

• What hands -on/minds -on activities will students be doing? • What are the "big idea" conceptual questions that the teacher will use to encourage and/or focus students' exploration?

1. Using the introductory powerpoint from the first step, inform students that they will be exploring how special types of technology used in the 21st century can provide necessary information in order to better understand the world around us. If students have access to mobile devices, ask students to use the following link and code provided by you in order to explore a few selected informational technology artifacts that teachers used in the 20th century to produce and share information with students (Nearpod link http://goo.gl/SoqTRl). During the Nearpod exploration, students will use their device to answer short questions or polls about the artifacts. Option: Should mobile devices not be available, use the four photographs included in this lesson. Cut apart the four photographs and give a set to each student pair for analysis, using the guided questions provided in the introductory powerpoint presentation.
2. Ask the class, "How do you gather information about the world when they are not in school?" Draw attention to the fact that most students rely on television and the internet as the two most commonly used types of informational technology used by both themselves and all humans in the modern age. Give each pair of students copies of the World Television Access maps and the World Internet Access maps, included in this lesson. Ask students to examine the maps and what they can tell us about the changing

uses of both television and the internet in both developed and developing regions of the world over time. Ask students to use the provided T-chart and Venn diagram to note their observations. Volunteers from each partnership should share theif findings with the class. Are their notable patterns in the changes? What are the similarities of tv and internet access in specific regions?

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EXPLAIN

Teachers present or lead student discussion of information discovered during the "explore" stage. Teachers introduce new terms and explanations at appropriate times during the discussion.

Guiding Questions:

• What questions or techniques will the teacher use to help students connect their exploration to the concept(s)? • What are the higher order thinking questions that teachers will use to solicit student explanations?

1. Conduct a brief whole-class instruction about the role of informational technology in the world today by using the powerpoint presentation "Informational Technology and Interdependence" (Livebinder "Welcome" tab). Note, the focus includes an overview of how informational technology has impacted cultural diffusion, the significance of globalization in the rapid spread of informational technology, and contemporary issues surrounding attempts by some governments to censor and/or the restrict access to informational technology.
2. Pause during the formal instruction for guided analysis, providing student pairs with their own printed copies of the two Censorship political cartoons and the Censorship World Maps, included in this lesson. Elicit responses to the following questions,
   "What form of censorship is depicted in each cartoon?"
   "What is the artist's message regarding the goal and effectiveness of government censorship?" "What are the similarities in place location where different forms of censorship are being attempted recently?"
   "What do you know about the economic conditions and the political stability of regions where government censorship have been attempted?"

"Is there a reason why some regions provide open access to information while other regions have restricted access?"
"What more would you like to learn about specific regions where information is being restricted?"

EXPAND

Students apply, extend, and enhance the new concept and related terms during interaction with other students.
Providing additional active opportunities for students to apply the concept(s) allows them to expand their understanding.

Guiding Questions:

• How will students develop a more sophisticated understanding of the concept?
• What vocabulary will be introduced and how will it connect to students' observations?

• *How is this knowledge applied in our daily lives?*

1. Remind students that all humans can serve as both consumers and producers of information; in other words, we use technology to learn about geographic concepts and places, but we also can share what we have learned or discovered using modern forms of informational technology. Inform students that they will be working independently in pairs to analyze selected digital tools (web-based programs) and their effectiveness for learning about geographic concepts, as well as their ease of use to produce digital products to demonstrated and share geographic learning. 2. Assign each partnership one of the recommended web-based programs included in the Livebinder collection. (Note: Top Ten most highly recommended: Livebinders, Thinglink, Prezi, Tourbuilder, EdPuzzle, Quizlet, Moovly, StoryJumper, Weebly, ScribbleMap.)
3. Give each pair of students a copy of the evaluation guide included in this lesson. Advise students to use the guide to note their observations while exploring the recommended online tools. Provide 10 minutes for students to access the internet and explore the advantages of using their assigned web-based program for geographic learning.
4. Allow time for student volunteers from each web-based tool to explain how the tool can work, demonstrating with one of the examples provided. Conduct a brief class discussion to elicit their interest in using such technology as alternate methods for future assessment of their learning.

EVALUATE

Students demonstrate their understanding of the concept.

Guiding Questions:

• *How will students demonstrate that they have achieved the lesson objective(s)?*

• *How will evaluation be embedded throughout the lesson as well as at the end of the lesson?*

Provide each individual student with the Concept Connection assessment included in this lesson. Remind students that the terms found here should be recalled from the lesson. Instruct each student to select a pair of terms that have a relationship to one another. Instruct students to draw a line between these two terms and compose a sentence explaining their relationship. Write the sentence on the line drawn, connecting the two terms. Repeat this process for a second pair of terms. If time, share conclusions with fellow students.

Enrichment and/or Extension of the lesson

(Optional):

Using their understanding of the web-based tools they have explore in step 4, provide opportunities for interested students to create a digital product demonstrating what they learned about the changes informational technology have brought to both developed and developing countries. Offer class time, when available, for students to share their products with the class.

References:

The Cultural Landscape, by James Rubenstein
OpenNet Initiative https://opennet.net/
Cagle Cartoons, http://www.caglecartoons.com/
Information technology, *The Guardian*, https://www.theguardian.com/global-developmentprofessionals-network/2012/dec/05/information-technology-connecting-developing-world The Importance of Technology in Economic and Social Development, *Fair Observer*, http://www.fairobserver.com/region/africa/importance-technology-economic-and-social-development/

Resources:

OKAGE's geography resources:

http://www.okageweb.org/resources/ http://www.okageweb.org/member-resources/

http://www.okageweb.org/helpful-links/

Oklahoma Council for the Social Studies (OCSS) and Oklahoma Social Studies Supervisors Association (OSSSA) Geography Resources for Grades 6 and 7 World Geography. http://okcss.org/whats-new.html

The study of Geography takes us to many places in the world. We'll examine how people live day-to-day, altering their environment to meet their needs, and facing the challenges of the future.

And for grasp a better understanding of the world around us, we'll depend on TECHNOLOGY in many, many ways.

Let's take a quick look at how TECHNOLOGY is impacting the lives of people in the southeast Asian nation of Vietnam...

https://www.youtube.com/watch?v=T6IrvRYxQAM

So what IS TECHNOLOGY?

- If we agree with this statement, *"Technology has significantly changed the lives of many people in Vietnam"* then how would we define "TECHNOLOGY"?

How do *you* USE technology?

Have you considered how technology has helped us learn in our own classrooms?

Let's examine how TECHNOLOGY has changed how we learn…

We're going on a visual tour of some of the most significant technology that has impacted learning!

4-Group Analysis

- ***For what purpose do you think this technology was used?***

Typewriter (interchangeable) ball

- Allowed a typist to change the font and size of on a typed document

Floppy Disk

- Stored information on early computers

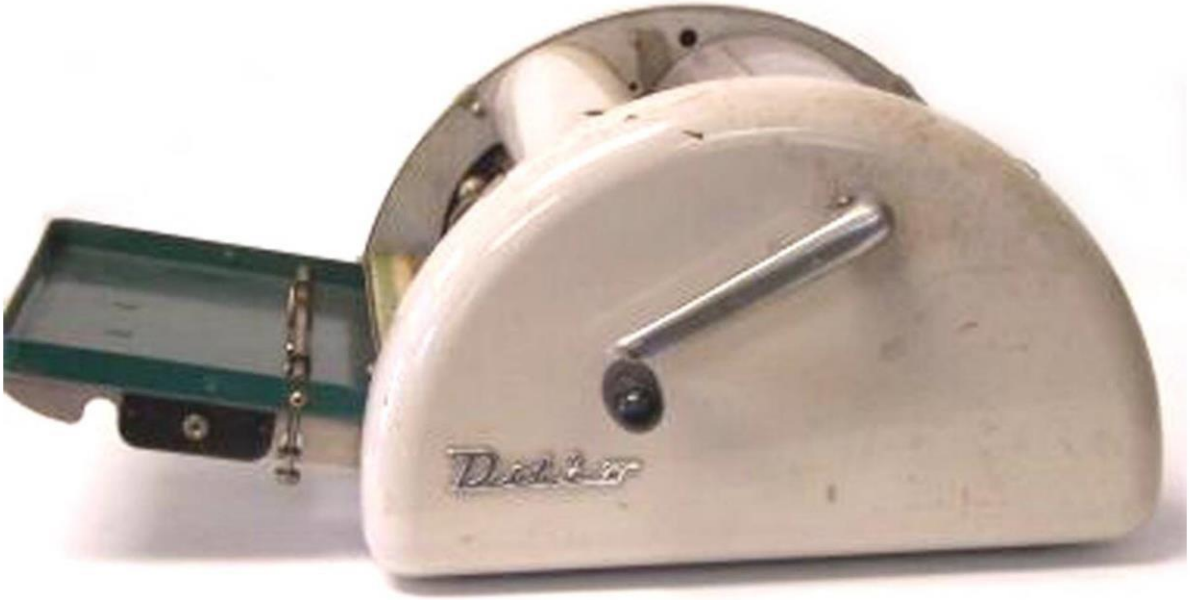
Mimeograph machine (ditto machine)

- Created multiple copies of one handout or worksheet

Overhead projector

- Displayed images and written text on a large screen

So, how does technology help us learn today?



394
3M

PRESTIGE
PICA 72

1954
ARCTIC OCEAN
ATLANTIC OCEAN
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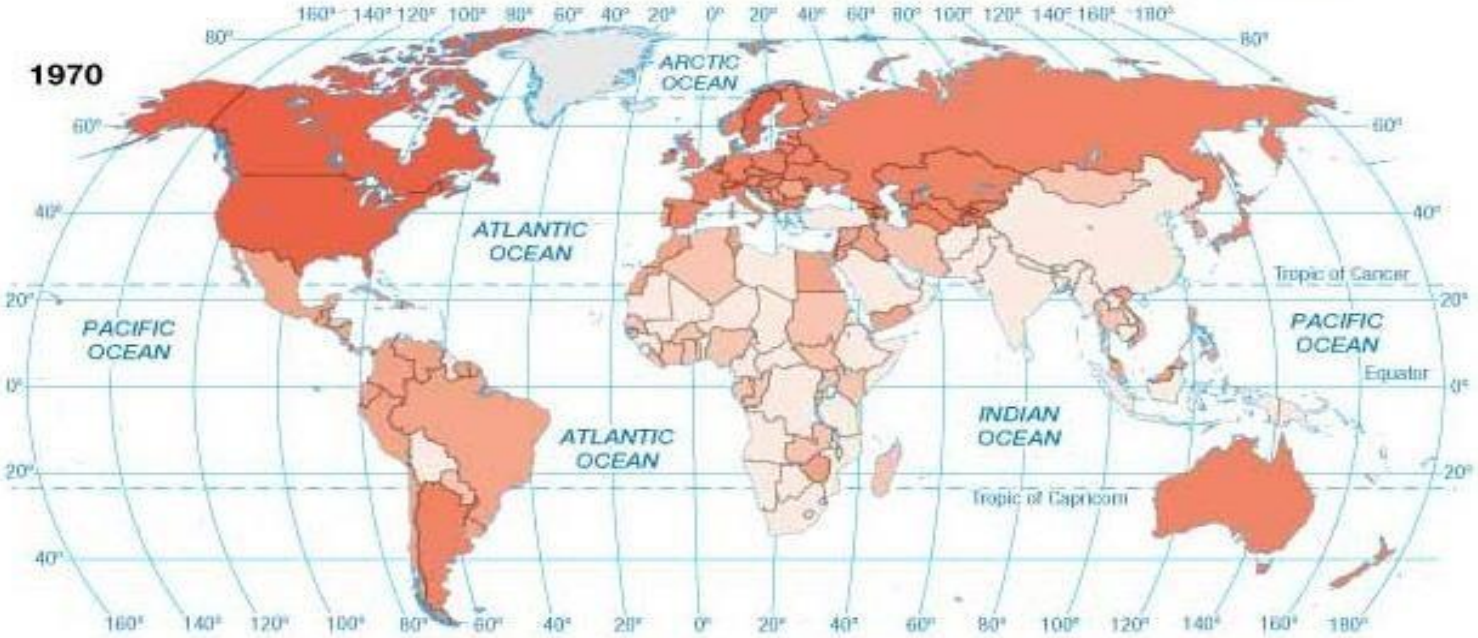
INDIAN OCEAN
PACIFIC OCEAN
Tropic of Cancer
Equator
Tropic of Capricorn


1970
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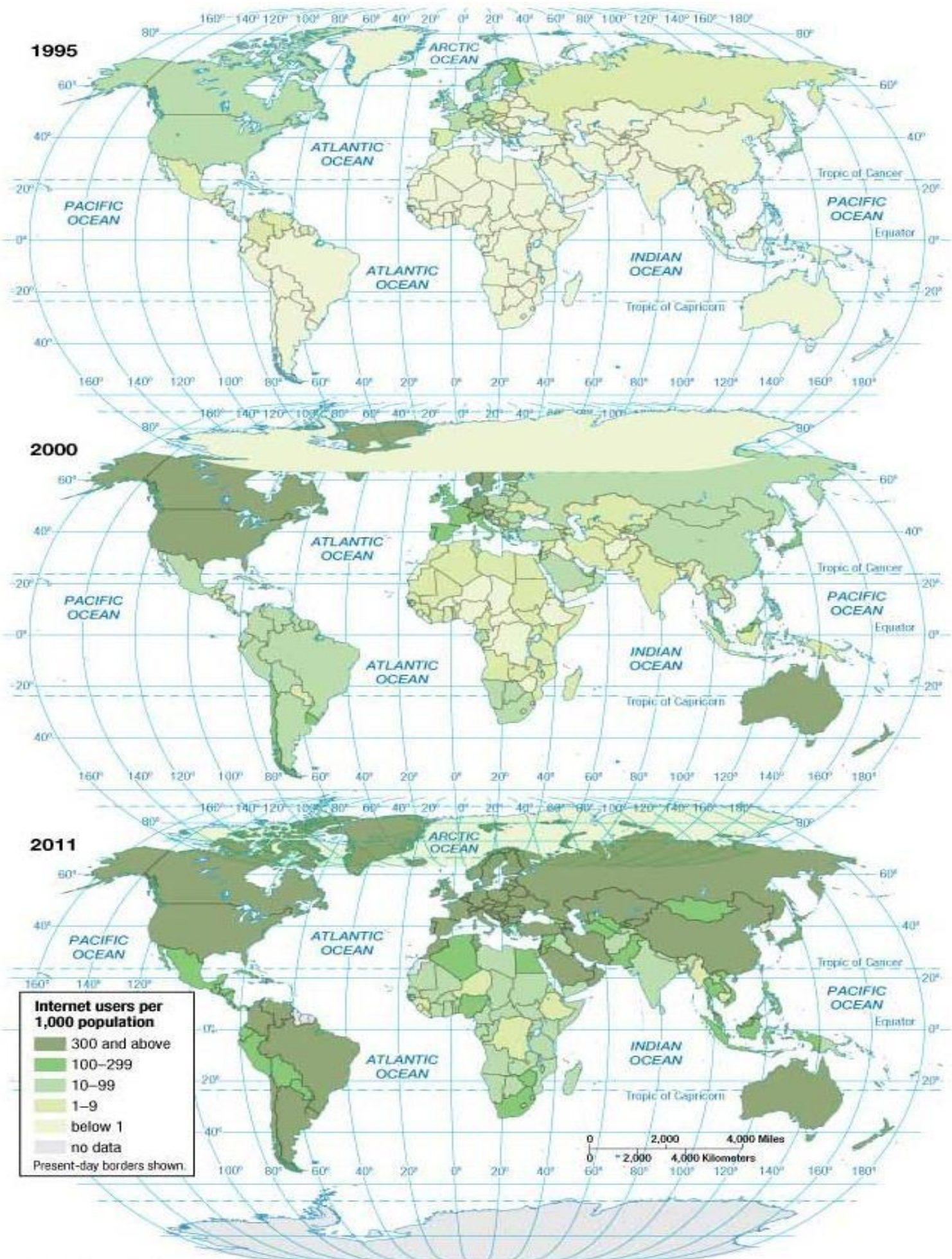
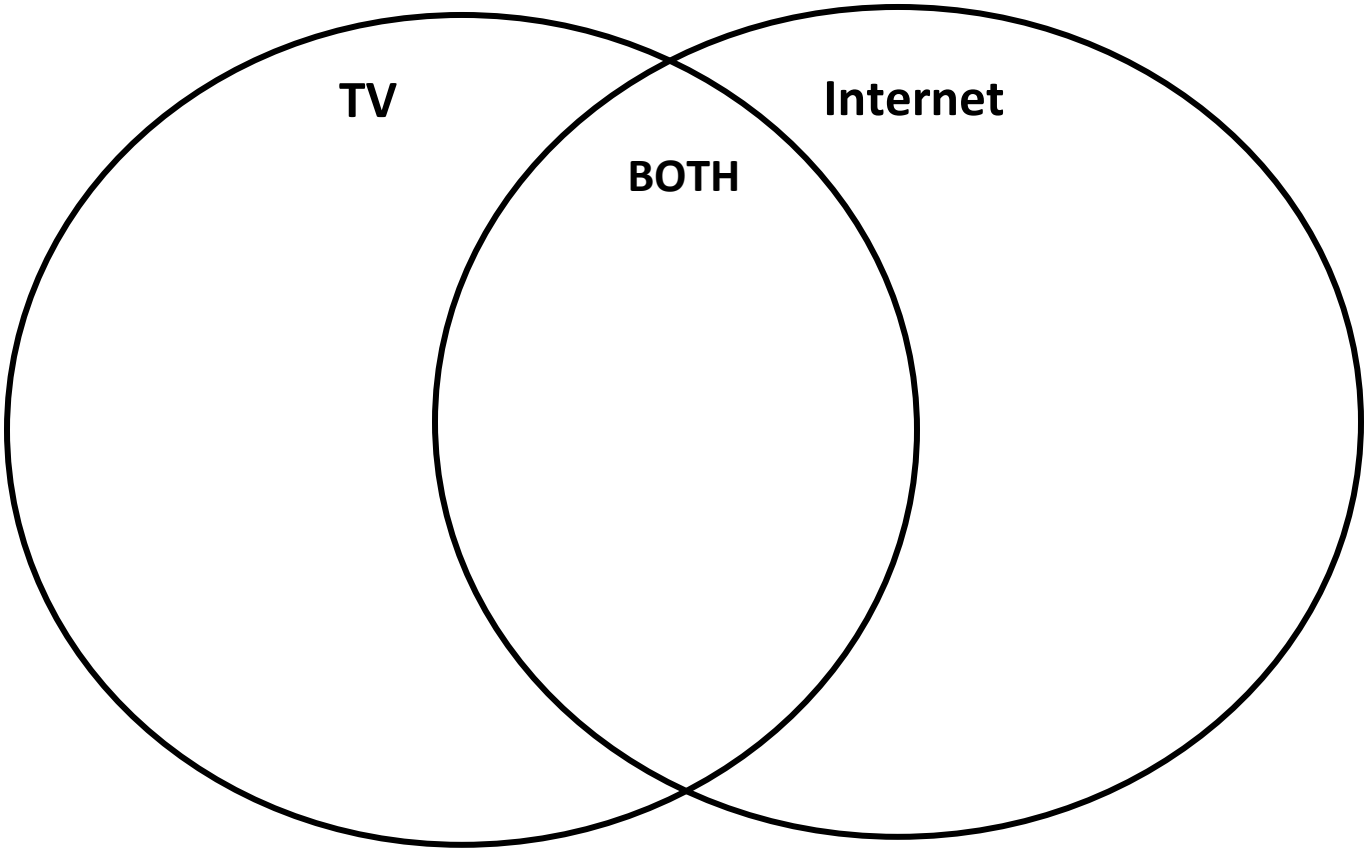
INDIAN OCEAN
PACIFIC OCEAN
Tropic of Cancer
Equator
Tropic of Capricorn

2005
ARCTIC OCEAN
PACIFIC OCEAN
ATLANTIC OCEAN
ATLANTIC OCEAN
INDIAN OCEAN
PACIFIC OCEAN
Tropic of Cancer
Equator
Tropic of Capricorn
TVs per 1,000 population
300 and above
100–299
10–99
1–9
Below 1
no data
0 2,000 4,000 Miles
0 2,000 4,000 Kilometers


1995
2000
2011
ARCTIC OCEAN
ATLANTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
Tropic of Cancer
Equator
Tropic of Capricorn
Internet users per 1,000 population
300 and above
100–299
10–99
1–9
below 1
no data
Present-day borders shown.
0 2,000 4,000 Miles
0 2,000 4,000 Kilometers

Informational Technology

Television	Internet
What changes do you observe?	
☐ ☐ ☐	☐ ☐ ☐
What could explain these changes?	
☐ ☐ ☐	☐ ☐ ☐


TV
Internet
BOTH

Informational Technology

Creating an Interdependent World…

What is Informational Technology?

- It is the use of **computers** and the **internet**;
- **Goal** = retrieve, transmit, or share information among businesses, students, scientists, etc.
- We can be both "**consumers**" of information OR "**producers**" of information.

When we think about globalization and cultural diffusion, we often think about businesses or products that spread from their "hearths" to new regions, where they are often adapted by the culture there.

But we might forget about the diffusion of information. Like a product, information is spread faster and faster in the 21st century due to new developments in technology.

Cultural Diffusion

- *What role has Informational Technology played toward greater Cultural Diffusion?*

Globalization

- *How has globalization impacted the development of Informational Technology?*
- *In turn, how has Informational Technology impacted the rise of globalization?*

A Look at Recent Changes & Challenges…

Did you know?

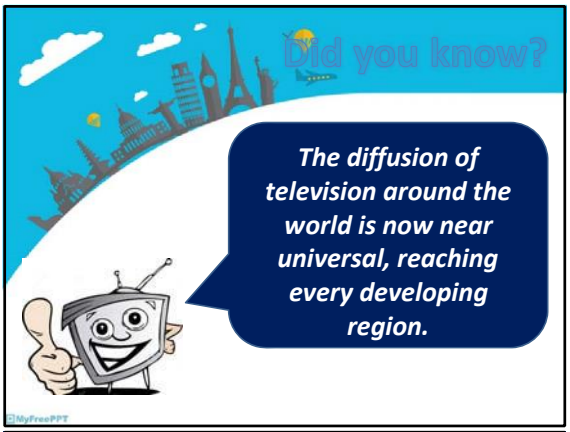
The world's most important electronic source for consumers to receive information is the television?

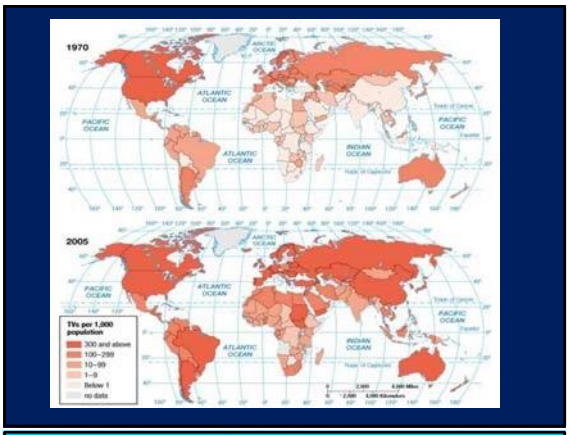
Did you know?

The diffusion of internet access followed the same pattern as tv?

Did you know?

The diffusion of tvto developing regions took a half-century; the diffusion of the internet took about a decade!


Did you know?
The diffusion of television around the world is now near universal, reaching every developing region.
MyFreePPT


1970
2005
ARCTIC OCEAN
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INDIAN OCEAN
TVs per 1,000 population
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10–99
1–9
Below 1
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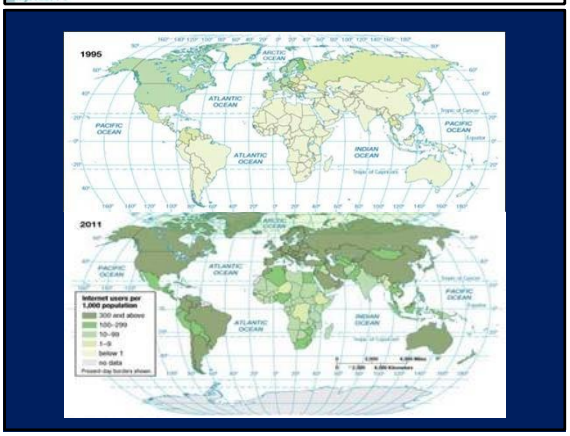
1995
2011
ARCTIC OCEAN
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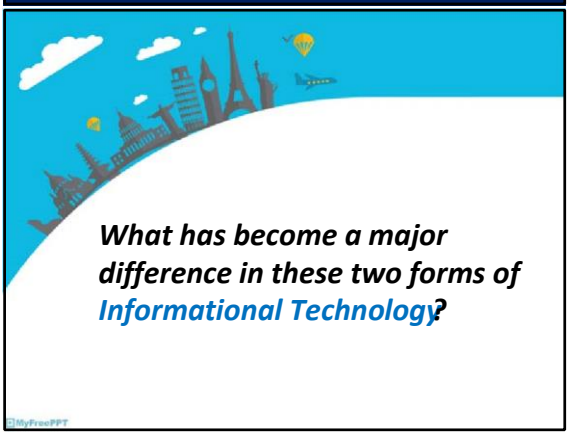
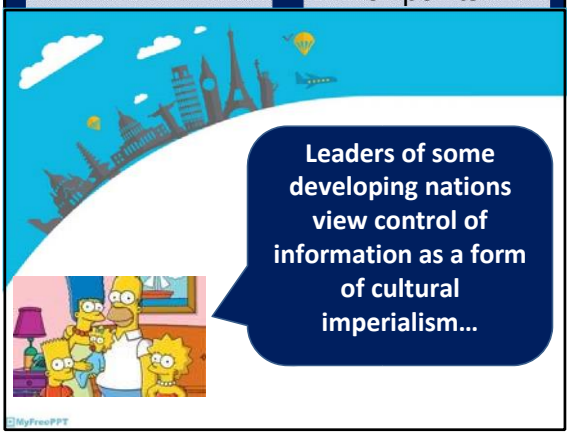
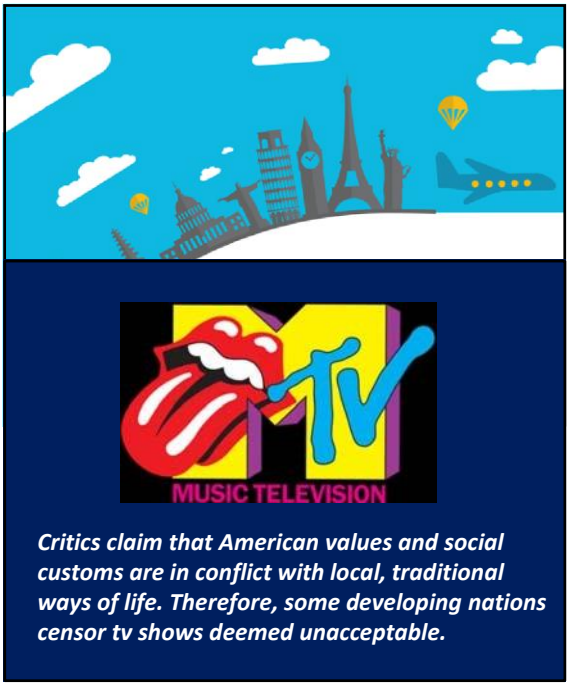
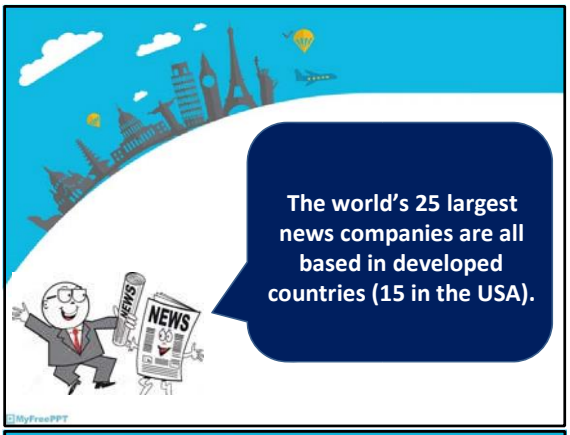

What has become a major difference in these two forms of Informational Technology?
MyFreePPT

Television	Computers/ Internet
•Consumers of •Dominated by and Information nations	•Both information Consumers Producers developed of •Inclusive of all viewpoints

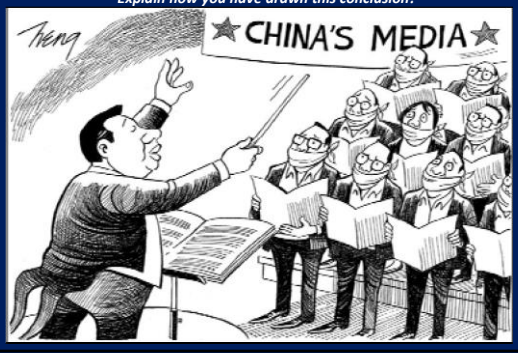


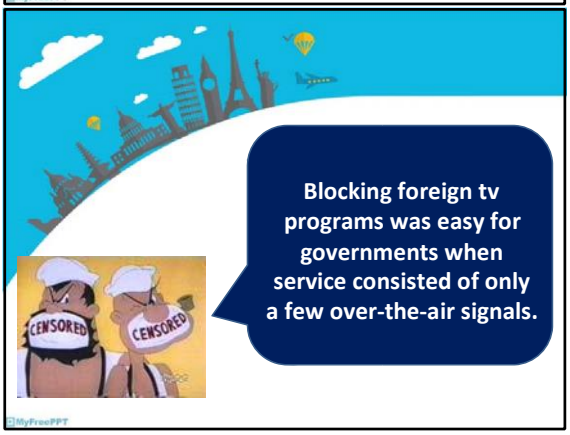


Critics claim that news dominated by developed nations can be biased, provide unbalanced, inaccurate views, or merely ignore events in developing regions.



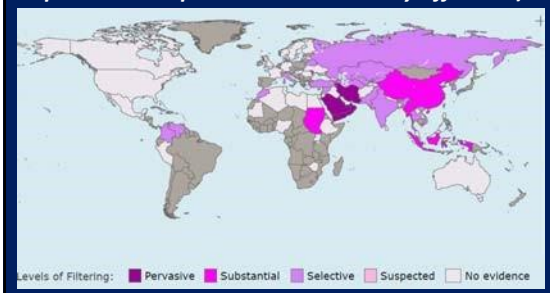
Examine this cartoon. What is the artist's opinion about the validity of information provided by the news media of China? Explain how you have drawn this conclusion?



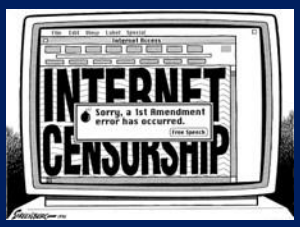


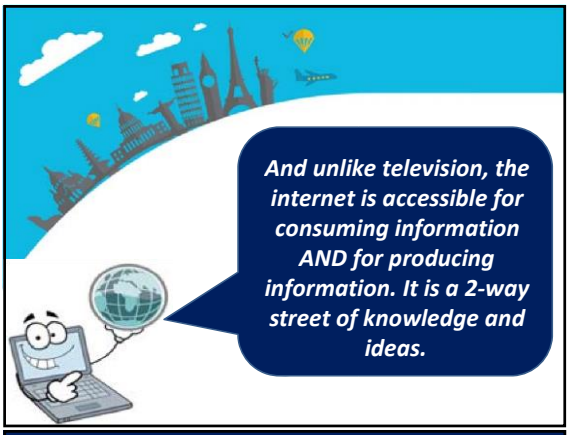
Some countries continue to attempt censor political content (views in opposition to the current government, related to human rights, freedom of expression, and religious movements).

Nations also attempt to filter social content (related to sexuality, drugs, alcohol, and other topics that are perceived as culturally offensive).

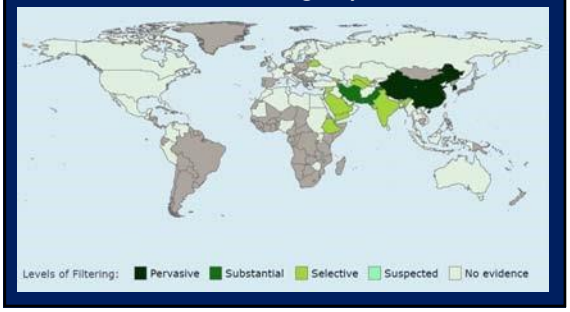


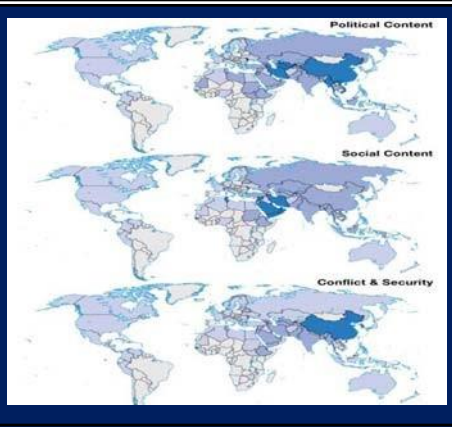
But satellites and the internet enable people to choose from a wide variety of informational sources…And governments have had limited success in censoring what citizens could learn.

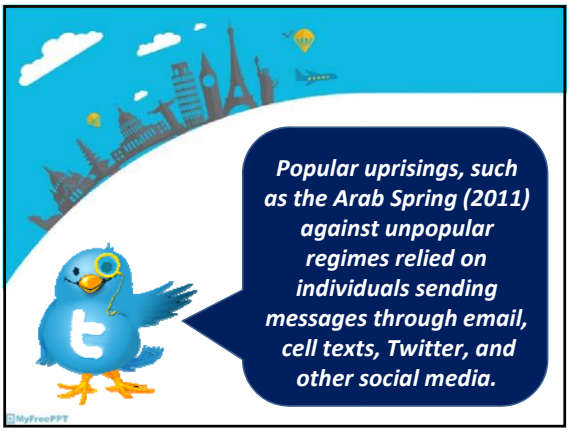


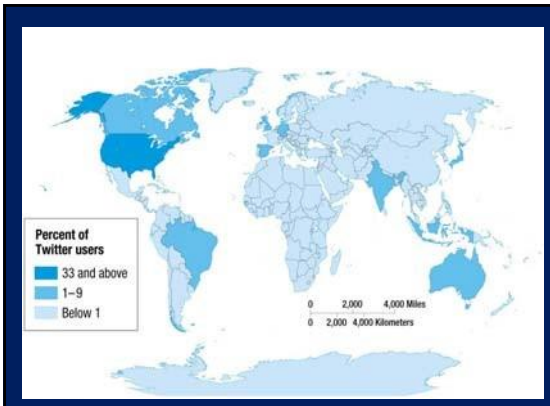


Still other nations censor content related to security, such as armed conflicts, border disputes, movements, and militant groups.

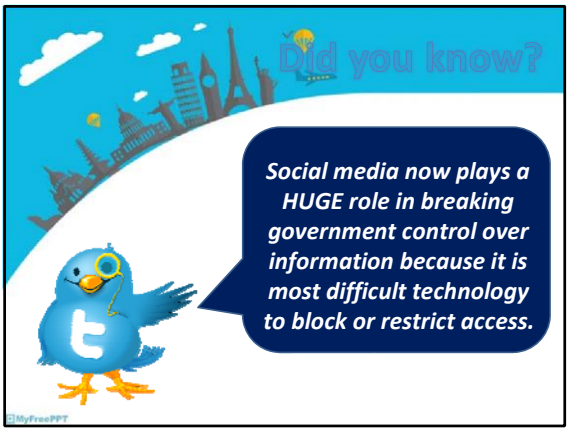




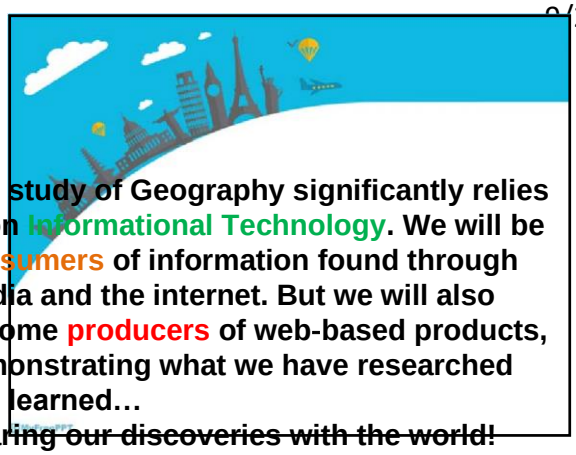




Social Media:
New Role for Diffusion of Information


Did you know?
Social media now plays a HUGE role in breaking government control over information because it is most difficult technology to block or restrict access.

Examine this cartoon. What is the artist's opinion about government censorship in some Arab nations?
Explain how you have drawn this conclusion?



The study of Geography significantly relies upon Informational Technology. We will be consumers of information found through media and the internet. But we will also become producers of web-based products, demonstrating what we have researched and learned…
Sharing our discoveries with the world!

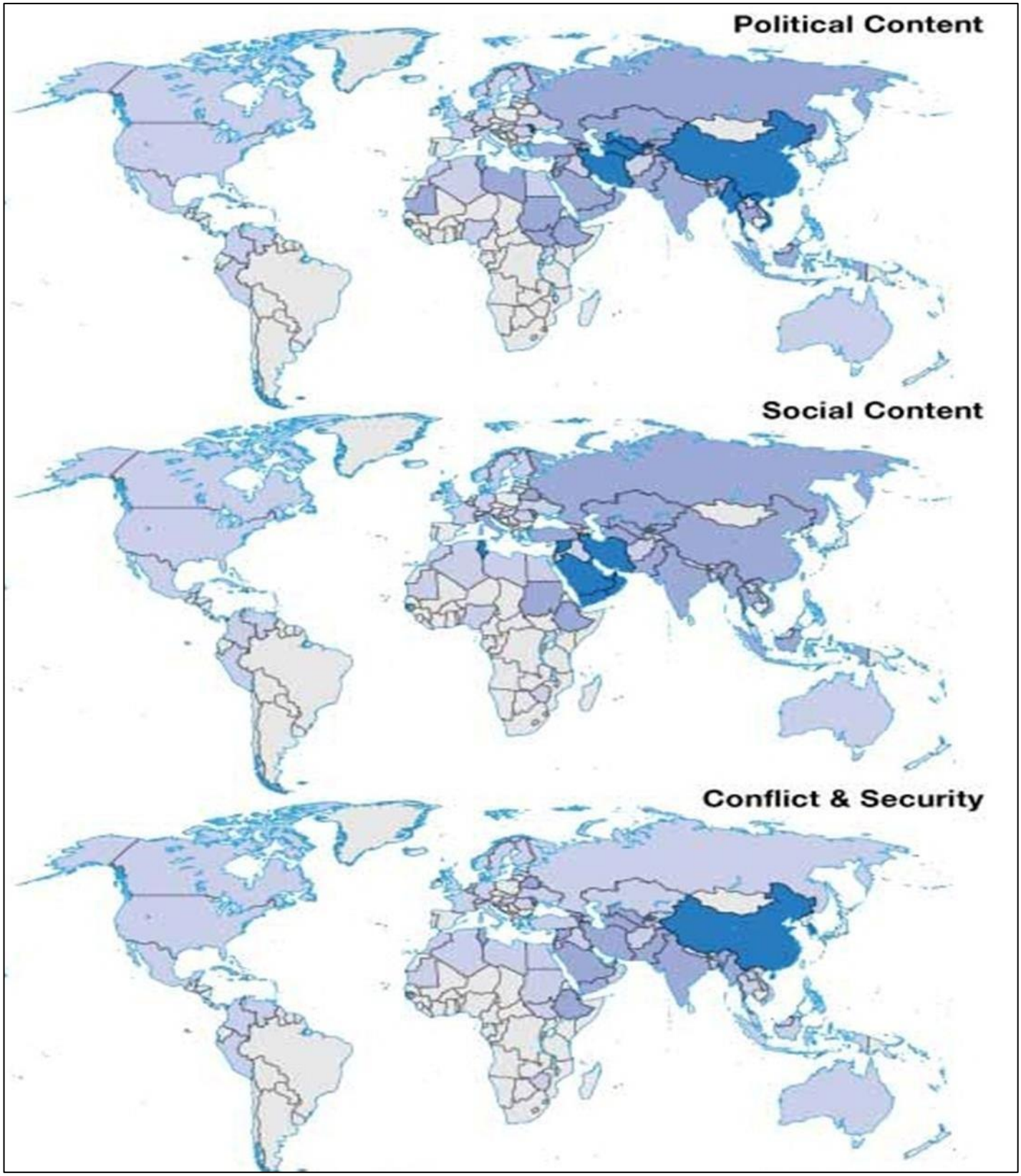
Sources:

The Cultural Landscape, by James Rubenstein
OpenNet Initiative https://opennet.net/
Cagle Cartoons http://www.caglecartoons.com/
Information technology, *The Guardian*, https://www.theguardian.com/global-developmentprofessionals-network/2012/dec/05/informationtechnology-connecting-developing-world
The Importance of Technology in Economic and Social Development, *Fair Observer*, http://www.fairobserver.com/region/africa/importance-technology-economic-and-social-development/

Teng
CHINA'S MEDIA

...AND THEY SAID IT COULDN'T BE DONE:
FOR THE FIRST TIME IN THE ARAB LEAGUE'S HISTORY, 22 COUNTRIES ACTUALLY AGREE ON SOMETHING:
CENSOR
AL JAZEERA! AND GIVE ALL ARAB STATES THE POWER TO CLOSE BROADCASTERS WHO ARE CRITICAL OF THEIR REGIMES!
...BECAUSE LOOSE LIPS SINK DICTATORSHIPS...
'9'08
MUSLIM OBSERVER

Government Censorship of Information



Pervasive filtering	Substantial, selective, or suspected filtering	No evidence of filtering	no data

Informational Technology for Geography	
Name of the Web-Based Program:	
Internet Address:	
What I enjoyed? (STRENGTHS)	**What I found difficult or confusing? (WEAKNESSES)**
How it Works: (explain briefly how the program operates, its goals, etc.)	

I would recommend this for ☐ **Consuming geographic information (learning new things about regions of the world)**

☐ **Producing geographic information (sharing my research or showing what I have learned)**

☐ **Both**

I would enjoy using this program to demonstrate what I have learned about geography because….
I would hesitate using this program to share my geographic learning because…

Information

Technology

Interdependence

Censorship

Consumer

Producer

Diffusion

Globalization

Internet

Directions: Select a pair of terms that have a relationship to one another. Draw a line between the 2 terms and write a sentence explaining their relationship on the line you have drawn to connect the 2 terms. Repeat this process for a second pair of terms. Share your conclusions with a fellow student.