

Name: _____ Date: _____ Hour: _____



Collective Learning - Guided Notes

Social Studies - Tappan Middle School - Zheutlin & McNally

LEARNING TARGET(S):

1. **I CAN** define collective learning.
2. **I CAN** explain why humans were able to move out of their original habitats, while chimpanzees were not.

You don't say?!

Reflections Questions:

- 1) How did the chosen student communicate these two ideas using gestures but not words?
- 2) Why is it difficult to explain these ideas without symbolic language involving words?
- 3) Are gestures and facial expressions part of symbolic language?

The Spread of Modern Humans

Look at the map up on the board and tell me, what do you:



See:



Think:



Wonder:

The Spread of Modern Humans

Look at the map up on the board and tell me, what do you:



See:



Think:



Wonder:

Read Aloud



As we read, we will do the following:

- 1) Underline anything that helps us understand “collective learning”**
- 2) Every couple of paragraphs we will turn and talk, chunk, and summarize in the margins.**

Collective Learning: Pass It On

The chimpanzee is our nearest relative and capable of doing many things that we view as proper to humans. They learn, they use tools, and they communicate. Yet, when comparing Map 1 (The Spread of Modern Humans) to Map 3 (Current Chimpanzee Habitat), it is clear that humans have been able to leave their African homeland while chimps have not. Humans have been able to acquire entirely new skills so that they can adapt to environments very different from those in which they first evolved. Why is it that humans have been able to do this—to make the world their habitat and even move into outer space, while chimps are stuck at home?

In his book *Maps of Time: An Introduction to Big History*, world historian David Christian theorizes that the key to human adaptability is the ability to pass on knowledge through the use of symbolic language—language that uses words to symbolize abstract ideas. It is true that chimps are able to pass on knowledge to their offspring; but, because they don't have symbolic language, they can only do so by demonstration. A chimp, for example, may poke a stick in a termite mound to show its offspring how to get to the termites. Chimps can teach only what can be shown. They cannot describe things that are not present. They are also stuck in the present. They can't discuss the past or imagine the future. Humans, on the other hand, because of symbolic language, can pass on knowledge about what happened yesterday (“A lion ate the canoe.”) They can imagine the future (“Tomorrow it will be your turn to wash the camel.”). And they can describe things that are out of sight (“There is quicksand in the river at the edge of the yellow cliffs.”).

Symbolic language allows humans to describe things precisely and in great detail. As a result, humans can pass on huge amounts of information from generation to generation. That means that the human species' store of information about hunting, making tools and weapons, gathering food, using plants for healing, organizing themselves, and a thousand other topics, grew and increased in complexity as humans passed it from one generation to another. The human species was developing the equivalent of a giant, communal brain. Christian refers to this ability to learn and transfer the knowledge learned—the ability to build this giant brain, as “collective learning.”

Because they share knowledge, humans have access to the ideas of other humans, both living and dead. This gives them a huge advantage over chimps and other animals. Christian theorizes that it is collective learning that allowed humans to leave their native biome and to populate, eventually, even inhospitable corners of the earth. If he is right, it is collective learning that explains why the history of humans is so different from that of all other animals.

Collective learning enabled humans to adapt to new environments by allowing them to share ideas about how to cope with their surroundings. Over time, this enabled them to adapt to more and more varied environments. Animals can adapt to new biomes only by changing genetically. Elephants moved into Siberia, but they had to evolve into a new breed, the woolly mammoth. Humans, on the other hand, did not need genetic alteration to move to frigid climates. Humans made the move relatively quickly by adopting warm clothing of skins and furs, building houses of skins or sod, and eating musk ox steak! Humans exhibited their capacity for

collective learning before they left Africa.

They began by moving out of their original habitat and into new environments within Africa. They developed new tools and used new materials. For example, some living near sea shores learned how to fish and to consume shellfish. Individual groups developed their own distinctive lifeways, passed on from generation to generation, and displayed distinctive styles in the making of their tools. Exchange systems were created, sometimes between groups a hundred miles apart. Each of these innovations (new ideas) was built on an accumulating backlog of knowledge, a store of collective learning.

So, how did we humans do it? How did we learn collectively? We did it through symbolic language. Unlike grunts or chirps, symbolic language (mainly the use of words) is capable of transferring information of every kind. Not only can words refer to things but to ideas and even other words. New words can be invented as needed. The system is efficient and flexible. It is the system that we humans still use today as we continue to enlarge our collective brain and adapt to increasingly complex environments, even including the environment of the moon!

In your own words

Define:

1) Symbolic language -



2) Collective learning -

Imagine...

There has been a disaster which killed every human on earth except you and your family, and it disintegrated all books and computers. Fortunately, it didn't kill any animals or leave any harmful after effects like radiation or giant roaches.

Using pencil and your guided notes, make an inventory (a list) of the knowledge and skills possessed by the members of your family in the space below.

- How could you best use them?
- How many of the things that you use every day would you be able to maintain (water, lights, machinery)?
- How would your life change?

What if...

...the disaster left the members of your town, say one thousand people, still alive. Would that change the picture?

... the disaster left your town and its library. How does that change things?

What if everything was the same except...

...we had no language? No talking, no writing?

1. What difference would it make in our lives?

2. What kinds of things could we still do?

3. What kinds of things would we be unable to do?