

# Complexity Made Simple

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Bernie Dodge, San Diego State University

# Complexity...

- \* is complex,
- \* uncertain,
- \* hard to measure and yet....
- \* we know it when we see it.

# Complexity

Has been studied for the last 5 decades  
from the point of view of...

- \* Computer scientists
- \* Psychologists
- \* Artists

# Complexity is about...

- \* minds: cognitive complexity,

and

- \* the world: task complexity

# Low Cognitive Complexity

white ————— red  
expensive ————— cheap



# High Cognitive Complexity



# The connection?

- \* We develop minds with high cognitive complexity by guiding them through the completion of complex tasks

# Task Complexity Increases

1. When the **number** of bits of information increases

\* Example: It's harder to pick the best singer out of 10 than out of 2

# Task Complexity Increases

2. When the **variety** of information increases

- \* Example: It's harder to figure out what's going on when you read the New York Times, watch CNN and Fox, and read 5 political blogs than if you only watch Fox.

# Task Complexity Increases

3. When the **number of ways the information can be interconnected or arranged** increases
- \* Example: Writing a free verse poem about bats is harder than writing a book report about Stellanuna.

# Task Complexity Increases

4. When the ways the information can be interconnected or arranged is **not known at first and has to be learned or invented**

\* Example: It's harder to design a new playground than to create a poster

# So what?

- \* Can you take these ideas and look at the complexity of WebQuest tasks?