Modeling the Learning Process

James Zull. *The Art of Changing the Brain*  
(Sterling, VA: Stylus Publishing, 2002)
4 Basic Functions the Brain
Uses for Learning

- Getting Information
- Making Meaning of Information
- Creating New Ideas
- Acting on Those Ideas
Learner *Begins* as 

**Receiver** of Knowledge
Gathering
Information Enters through Senses

- Can you remember four things that influence this gathering?
  - Interest
  - Intent
  - Basic Background (prior knowledge)
  - Understanding
Gathering takes place in the sensory cortex
You gathered information both about what causes stress and ways to deal with stress.
Analyzing to Make Meaning

REFLECTION

• Try to make personal
• Try to determine connection to past experiences
• Try to discover relevance and usefulness
• Try to discover what it's like that we already know.
Analyzing takes place in the Back Integrative cortex
Strategies for dealing with STRESS

Analyzing

• You analyzed your situation and strategies we have learned in previous chapters and tried to determine how to best manage your personal stress
Creating
Convert comprehension to

- Ideas
- Hypothesis
- Plans
You predicted some things that might work for you in preventing and relieving stress.
Creating Takes Place in the front integrative cortex
Acting
Testing Ideas

- Writing
- Speaking
- Drawing
- Can you think of other ways?
Acting Takes Place in the Motor Cortex
Stress

Acting

Your response to your predictions

• You made a plan to deal with your stress and put it into practice to see if it worked.
Learner becomes

**Producer of Knowledge**