

How do we teach for  
*understanding* in Earth  
system science?



How do we design  
appropriate *assessments* to  
evaluate understanding  
in Earth system science?



How do we move students  
from their strongly held  
*misconceptions* toward more  
enduring understandings  
in Earth system science?



How do we use scientific  
*visualizations* to build  
understanding in Earth  
system science?



How do we use  
*reflection* to understand  
and improve teaching?



What are the  
characteristics of an  
*Earth Science by Design*  
teacher?

