Strategies to Create a Coherent Science Content Storyline

Analysis Guide D1:
Selecting and Using Content Representations

Main learning goal: Earth's surface has many different types of landforms.

Description of content representation: photograph of valley landscape

Part 1: Selecting the Content Representation

Is the Content Representation …	Yes	No
1. Scientifically accurate?		
2. Closely matched to the main learning goal?		
3. Presenting science ideas in ways that are comprehensible to students?		
4. Reinforcing or introducing student misconceptions?		
5. Addressing common student misconceptions?		
6. Distracting students from the main learning goal with too many details or new terms?		

Part 2: Engaging Students in Using the Content Representation

Is the Content Representation Used in a Way That Involves Students In …	Yes	No
1. Modifying or creating the content representation?		
2. Analyzing the meaning of the content representation?		
3. Critiquing the content representation?		

Part 3: Suggestions for Improvement

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Strategies to Create a Coherent Science Content Storyline

Analysis Guide D2:
Selecting and Using Content Representations

Main learning goal: Earth's surface has many different types of landforms.

Description of content representation: raised relief map of the United States

Part 1: Selecting the Content Representation

Is the Content Representation …	Yes	No
1. Scientifically accurate?		
2. Closely matched to the main learning goal?		
3. Presenting science ideas in ways that are comprehensible to students?		
4. Reinforcing or introducing student misconceptions?		
5. Addressing common student misconceptions?		
6. Distracting students from the main learning goal with too many details or new terms?		

Part 2: Engaging Students in Using the Content Representation

Is the Content Representation Used in a Way That Involves Students In …	Yes	No
1. Modifying or creating the content representation?		
2. Analyzing the meaning of the content representation?		
3. Critiquing the content representation?		

Part 3: Suggestions for Improvement

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Strategies to Create a Coherent Science Content Storyline

Analysis Guide D3:
Selecting and Using Content Representations

Main learning goal: Flowing water can change landforms over time.

Description of content representation: stream-table model (The model is tilted and covered with a flat surface of sand or soil. When water flows over the model, it slowly carves out a canyon and carries the sand/soil down the slope to the bottom.)

Part 1: Selecting the Content Representation

Is the Content Representation …	Yes	No
1. Scientifically accurate?		
2. Closely matched to the main learning goal?		
3. Presenting science ideas in ways that are comprehensible to students?		
4. Reinforcing or introducing student misconceptions?		
5. Addressing common student misconceptions?		
6. Distracting students from the main learning goal with too many details or new terms?		

Part 2: Engaging Students in Using the Content Representation

Is the Content Representation Used in a Way That Involves Students In …	Yes	No
1. Modifying or creating the content representation?		
2. Analyzing the meaning of the content representation?		
3. Critiquing the content representation?		

Part 3: Suggestions for Improvement

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