

# Rock Cycle Modeling Activity

## Materials:

Rocks (3 total /group of 3) 1-sedimentary, 1-igneous, 1 metamorphic  
 Individual Model Sheet (1 per student)  
 White Boards/Chart Paper (1 per group)  
 3 different colored sticky notes  
 Green pens (or any other color for model revision)  
 Hand lens - optional

## Steps to Developing a Consensus Model:

- 1) Students make observations of 1/3 rocks. Can use hand lens... (5-10 min)
- 2) Share observations with group (5 min)
- 3) **Individual Model** (5-10 minutes) Allow students to construct their own individual model of how these rocks may have formed. Develop a model to describe the transformation of the rocks from one to another and the flow of energy that drives this process. Be sure to label processes (e.g. metamorphism) include intermediate materials (e.g. magma). Your model should show connections/relationships between the rocks. Indicate visible and invisible processes. Show inputs and outputs.
- 4) **Small Group Consensus Model – 3 students** (15 minutes)  
 Allow each student to share their individual model with the group (1-2 minutes each).
- 5) **Peer Review Using Post-It© Protocol** (2-3 minutes per round)  
 Have students give feedback using the Post-It© Protocol. (see below)  
 Do this for about 3-4 rounds.
- 6) Provide students with reading, direct instruction. Emphasis is on the processes of melting, crystallization, weathering, metamorphism, and intermediate materials such as magma and sediment, that act together to form rocks through the cycling of Earth’s materials.
- 7) **Small Group Revision Model** (10 minutes)  
 Have students review peer feedback and use the feedback and reading or direct instruction to revise their group consensus model.
- 8) **Revise Individual Model** (5 minutes)  
 Have students use a different colored pen to revise their initial individual model.

<i>Clarification of Ideas</i>	<i>Build On Ideas</i>	<i>Agree/Disagree About Ideas</i>
<ul style="list-style-type: none"> <li>“What do you mean?”</li> <li>“Can you elaborate on how _____ supports the model?”</li> </ul>	<ul style="list-style-type: none"> <li>“I want to add to your idea on _____ BECAUSE _____.”</li> </ul>	<ul style="list-style-type: none"> <li>“I agree with your thinking on _____ BECAUSE _____.”</li> <li>“I disagree with your thinking _____ on BECAUSE _____.”</li> </ul>