Volume 2 Activities Indexed by National Science Education Standards: Grades 5–8

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Science as Inquiry—Abilities Necessary to Do Scientific Inquiry																											
Identify questions that can be answered through scientific investigations.			•		•	•		•	•		•	•	•		•		•	•	•	•			•	•			•
Design and conduct a scientific investigation.			•	•	•	•	•	•	•		•	•	•		•		•	•	•	•		•		•			•
Use appropriate tools and techniques to gather, analyze, and interpret data.	•	•						•								•		•	•	•	•	•	•	•			•
Develop descriptions, explanations, predictions, and models using evidence.	•	•	•	•	•		•	•	•	•			•	•	•	•	•	•		•		•	•		•	•	
Think critically and logically to make the relationships between evidence and explanations.	•	•		•	•		•	•		•	•		•	•	•	•	•	•		•		•					•
Communicate scientific procedures and explanations.					•			•	•	•	•		•					•		•	•		•				•
Use mathematics in all aspects of scientific inquiry.	•												•					•	•	•	•			•		•	
Physical Science																											
Properties and changes of properties in matter		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Motions and forces				•	•			•						•													
Transfer of energy	•	•				•	•					•										•			•		•
Science in Personal and Social Perspectives																											
Personal and community health	•															•											
Life Science																											
Structure and function in living systems															•												

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Science as Inquiry—Abilities Necessary to Do Scientific Inquiry																											
Identify questions that can be answered through scientific investigations.			●		●	●		●	●		●	●	●		●		●	●	●	●			●	●			●
Design and conduct a scientific investigation.			●	●	●	●	●	●	●		●	●	●		●		●	●	●	●		●		●			●
Use technology and mathematics to improve investigations and communications.	●												●					●	●	●	●			●		●	
Formulate and revise scientific explanations and models using logic and evidence.	●	●	●	●	●		●	●	●	●			●	●	●	●	●	●		●		●	●		●	●	●
Recognize and analyze alternative explanations and models.	●				●								●	●				●					●				
Communicate and defend a scientific argument.					●		●	●	●	●	●		●			●		●		●			●				●
Understandings about scientific inquiry	●	●			●			●	●				●						●			●					●
Physical Science																											
Structure and properties of matter		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●		●	●	●
Chemical reactions	●	●					●	●														●	●	●	●	●	●
Motions and forces				●	●			●						●													
Conservation of energy and the increase in disorder	●	●				●	●																				●
Interactions of energy and matter																											●
Science in Personal and Social Perspectives																											
Personal and community health	●															●											
Life Science																											
Matter, energy, and organization in living systems															●												
The cell																				●							