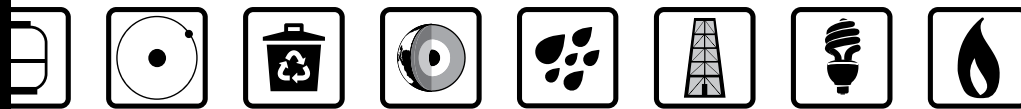
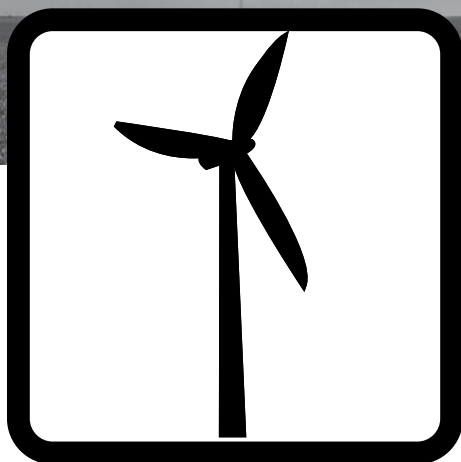


Wind is Energy

Student Guide



Name _____



National Energy Education Development Project

The *Wind is Energy* was developed by The NEED Project, with funding and technical support from the American Wind Energy Association.

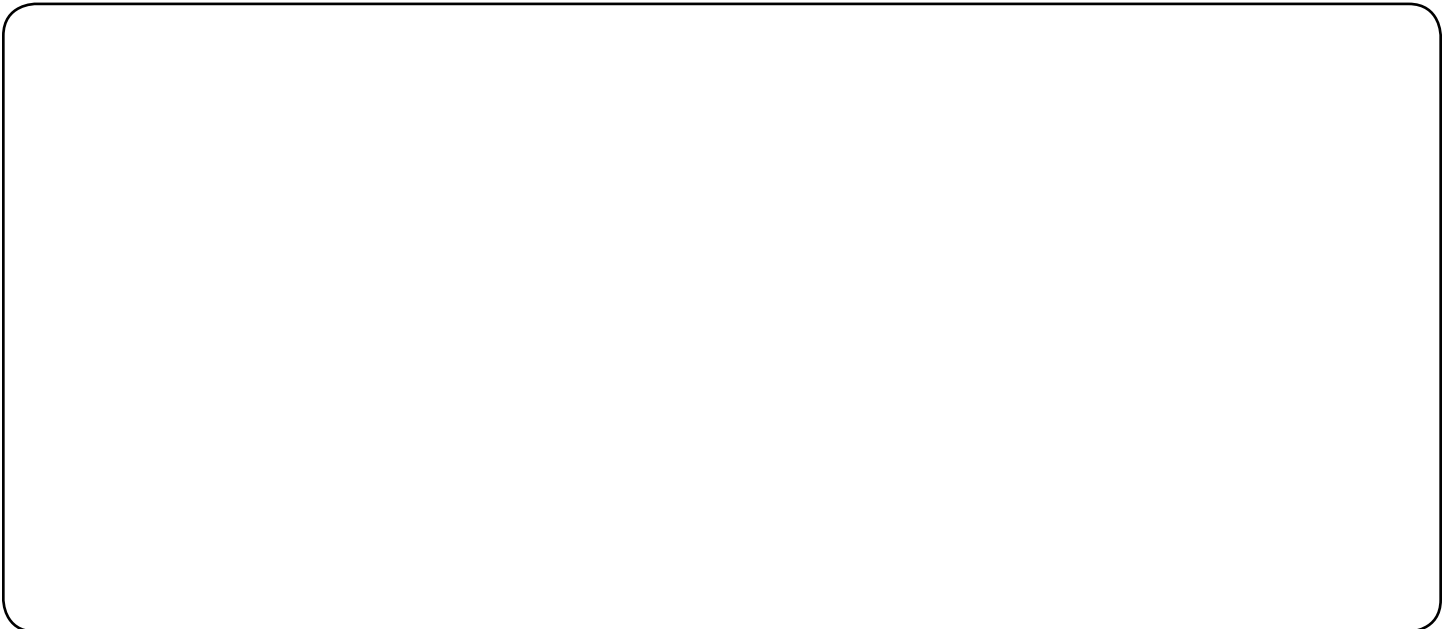


Date: _____

Wind

Question: What evidence is there that the wind is blowing?

Observe the wind. Draw pictures of evidence that the wind is blowing.

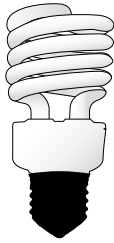


Date: _____

Energy

Question: How do we use energy at school?

Energy is light.



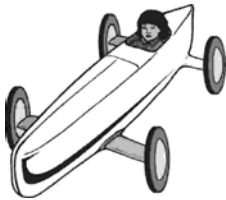
Energy is sound.



Energy is heat.



Energy is motion and growth.



Energy runs machines.

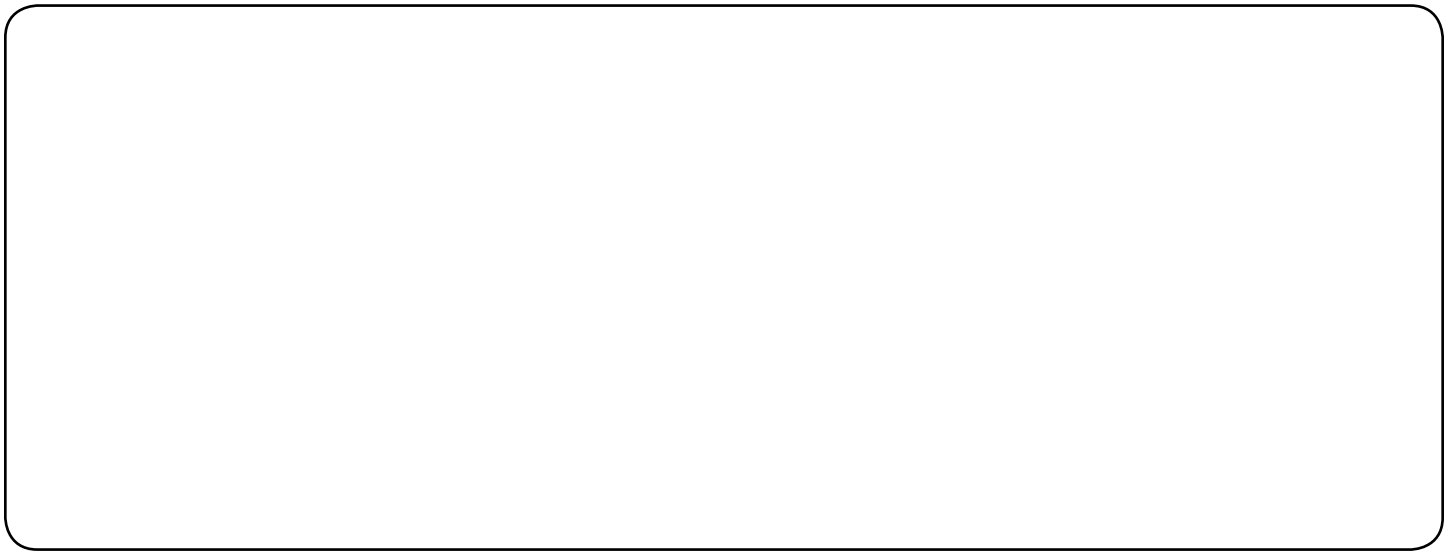


Date: _____

I predict _____

because _____

Draw a picture and use words to explain what happened.



Date: _____

Wind Can Do Work

1. Make your windmill.
2. Draw a diagram of the windmill below and label the parts.

Windmill Diagram

Date: _____

I predict _____

because _____

Trial	Number of Paper Clips	Lifted to the top? (Yes or No)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Date: _____

Question: _____

Weightlifter Turbine Diagram

Date: _____

Blade Design Ideas

Draw some ideas you have for what the blades could look like.

My blade design ideas...

My group's blade design will be...

Date: _____

Question: _____

I predict _____

because _____

Data:

Date: _____

Data and Observations Continued:

Date: _____

Wind Measurement Tools

Draw diagrams of the wind measuring tools you will be using. Label the name of each one and tell what it measures.

Date: _____

Measuring the Wind

Question: Will the wind blow the same speed in different locations around the school?

I predict _____

because _____

Data and Observations: From what direction is the wind blowing from?

Date: _____

Location	Revolutions in 10 Seconds	Speed

NEED National Sponsors and Partners

American Association of Blacks in Energy
American Chemistry Council
American Electric Power
American Electric Power Foundation
American Solar Energy Society
American Wind Energy Association
Appalachian Regional Commission
Areva
Arkansas Energy Office
Armstrong Energy Corporation
Association of Desk & Derrick Clubs
Robert L. Bayless, Producer, LLC
BP
BP Alaska
C&E Operators
Cape and Islands Self Reliance
Cape Cod Cooperative Extension
Cape Light Compact–Massachusetts
L.J. and Wilma Carr
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Chevron
Chevron Energy Solutions
ComEd
ConEd Solutions
ConocoPhillips
Council on Foreign Relations
CPS Energy
Dart Foundation
David Petroleum Corporation
Desk and Derrick of Roswell, NM
Dominion
Dominion Foundation
DTE Energy Foundation
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East Kentucky Power
El Paso Foundation
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Encana
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Energy Education for Michigan
Energy Training Solutions
Energy Solutions Foundation
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First Roswell Company
Foundation for Environmental Education
FPL
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GenOn Energy–California
Georgia Environmental Facilities Authority
Government of Thailand–Energy Ministry
Guam Energy Office
Gulf Power
Halliburton Foundation
Hawaii Energy
Gerald Harrington, Geologist
Houston Museum of Natural Science
Hydro Research Foundation
Idaho Department of Education
Idaho National Laboratory
Illinois Clean Energy Community Foundation
Independent Petroleum Association of America
Independent Petroleum Association of New Mexico
Indiana Michigan Power
Interstate Renewable Energy Council
iStem–Idaho STEM Education
Kansas City Power and Light
KBR
Kentucky Clean Fuels Coalition
Kentucky Department of Education
Kentucky Department of Energy Development and Independence
Kentucky Oil and Gas Association
Kentucky Propane Education and Research Council
Kentucky River Properties LLC
Kentucky Utilities Company
Lenfest Foundation
Littler Mendelson
Llano Land and Exploration
Los Alamos National Laboratory
Louisville Gas and Electric Company
Maine Energy Education Project
Maine Public Service Company
Marianas Islands Energy Office
Massachusetts Division of Energy Resources
Lee Matherne Family Foundation
Michigan Oil and Gas Producers Education Foundation
Midwest Energy Cooperative
Mississippi Development Authority–Energy Division
Montana Energy Education Council
The Mosaic Company
NADA Scientific
NASA
National Association of State Energy Officials
National Fuel
National Grid
National Hydropower Association
National Ocean Industries Association
National Renewable Energy Laboratory
Nebraska Public Power District
New Mexico Oil Corporation
New Mexico Landman’s Association
New Orleans Solar Schools Initiative
New York Power Authority
NSTAR
Offshore Energy Center
Offshore Technology Conference
Ohio Energy Project
Pacific Gas and Electric Company
PECO
Petroleum Equipment Suppliers Association
PNM
Puerto Rico Energy Affairs Administration
Puget Sound Energy
Rhode Island Office of Energy Resources
RiverWorks Discovery
Roswell Climate Change Committee
Roswell Geological Society
Sacramento Municipal Utility District
Schneider Electric
Science Museum of Virginia
C.T. Seaver Trust
Shell
Snohomish County Public Utility District–WA
Society of Petroleum Engineers
SolarWorld USA
David Sorenson
Southern Company
Southern LNG
Southwest Gas
Space Sciences Laboratory–University of California Berkeley
Tennessee Department of Economic and Community Development–Energy Division
Tennessee Valley Authority
Toyota
TXU Energy
United States Energy Association
University of Nevada–Las Vegas, NV
U.S. Department of Energy
U.S. Department of Energy–Hydrogen Program
U.S. Department of Energy–Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy–Office of Fossil Energy
U.S. Department of Energy–Wind for Schools
U.S. Department of Energy–Wind Powering America
U.S. Department of the Interior–Bureau of Land Management
U.S. Department of the Interior–Bureau of Ocean Energy Management, Regulation and Enforcement
U.S. Energy Information Administration
U.S. Environmental Protection Agency
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