

Power Up Indiana Field Trip

Kinetic & Potential Energy and Heat Transfer

Name: _____

Date: _____

Circle the best answer for 1 and 2. Answer 3 in complete sentences.

1. Which energy transformation happens in a solar panel?

- (A) Chemical -> electrical
- (B) Radiant -> electrical
- (C) Kinetic -> chemical
- (D) Thermal -> radiant

2. Which is a renewable energy source?

- (A) Coal
- (B) Natural gas
- (C) Wind
- (D) Oil

Read: A student tested three pot handles on a hot stove for 5 minutes: metal handle = 58 °C, wooden handle = 29 °C, plastic handle = 31 °C. The room was 22 °C.

3. Which handle material should a cook choose, and why? Use the data and a type of heat transfer.

Use Claim-Evidence-Reasoning: Claim, Evidence, Reasoning.

Power Up Indiana Field Trip: Exit Ticket

Total: 5 points. Mastery: 4 or more.

#	Answer	Points
1	(B) Radiant -> electrical	1 point
2	(C) Wind	1 point
3	Claim: The cook should choose a wooden handle. Evidence: After 5 minutes the wooden handle was only 29 °C, while the metal handle reached 58 °C. Reasoning: Heat moves from the hot pot into the handle by conduction. Metal is a good conductor, so heat travels through it quickly. Wood is an insulator, so it slows conduction and stays safe to touch.	3 points: Claim: wood (or plastic) handle; Evidence: compares temperatures; Reasoning: conduction; conductor vs. insulator.