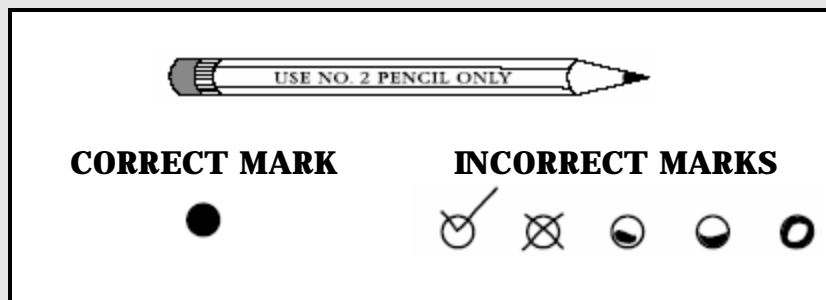




Grade 4
Science
Jenny Schuler and Rachel Brown

WHEN ANSWERING QUESTIONS IN THIS TEST BOOKLET



- Use only soft black lead pencil (No. 2).
- Do NOT use ink or ball point pen.
- When marking your answers to multiple-choice questions, mark heavy, dark marks that completely fill the circle. Mark one answer for each question.
- Erase completely any marks you wish to change.
- Make NO STRAY marks on any page of your test booklet.
- For the open-response questions, be sure you write your answers on the lines and spaces provided. Answers or parts of answers written outside the boxed areas cannot be scored.

The following is the guide that will be used to evaluate your responses to the open-response questions in this test.

KENTUCKY GENERAL SCORING GUIDE

**SCORE
POINT 4**

- **You complete all important components of the question and communicate ideas clearly.**
- **You demonstrate in-depth understanding of the relevant concepts and/or processes.**
- **Where appropriate, you choose more efficient and/or sophisticated processes.**
- **Where appropriate, you offer insightful interpretations or extensions (generalizations, applications, analogies)**

**SCORE
POINT 3**

- **You complete most important components of the question and communicate clearly.**
- **You demonstrate an understanding of major concepts even though you overlook or misunderstand some less-important ideas or details.**

**SCORE
POINT 2**

- **You complete some important components of the question and communicate those components clearly**
- **You demonstrate that there are gaps in your conceptual understanding.**

**SCORE
POINT 1**

- **You show minimal understanding of the question.**
- **You address only a small portion of the question**

**SCORE
POINT 0**

- **Your answer is totally incorrect or irrelevant**

BLANK

- **You did not give any answer at all.**

SCIENCE

Please mark your answer for each multiple-choice question by filling in the circle completely for the correct answer. Mark only one answer for each question. If you do not know the answer, make your best guess.

1. A material that does not transfer heat well is known as a(n)
 - ? Applicator
 - ? Protector
 - ? Insulator
 - ? Conveyor

2. A material that transfers heat well is known as
 - ? Conductor
 - ? Producer
 - ? Insulator
 - ? Inventor

3. The highness or lowness of a sound
 - ? Pitch
 - ? Vibration
 - ? Sound wave
 - ? Amplitude

PLEASE GO ON TO THE NEXT PAGE →

4. The number of times a sound source vibrates in one second is its
- ? Efficiency
 - ? Frequency
 - ? Amplitude
 - ? Instrument
5. The transfer of heat through space, such as the transfer of heat from the Sun to Earth, is known as
- ? Convection
 - ? Heat
 - ? Conduction
 - ? Radiation

PLEASE GO ON TO THE NEXT PAGE →


SCIENCE OPEN-RESPONSE QUESTIONS

Read all parts of each open response question before you begin. Write your answers to the open-response questions in the space provided in this test booklet. For each open-response question, use the grid provided in the test booklet to create any required charts or graphs. If a question does not require a chart or graph, write your written response over the grid lines.

Write your answer to question 6 in the space provided on the next page.

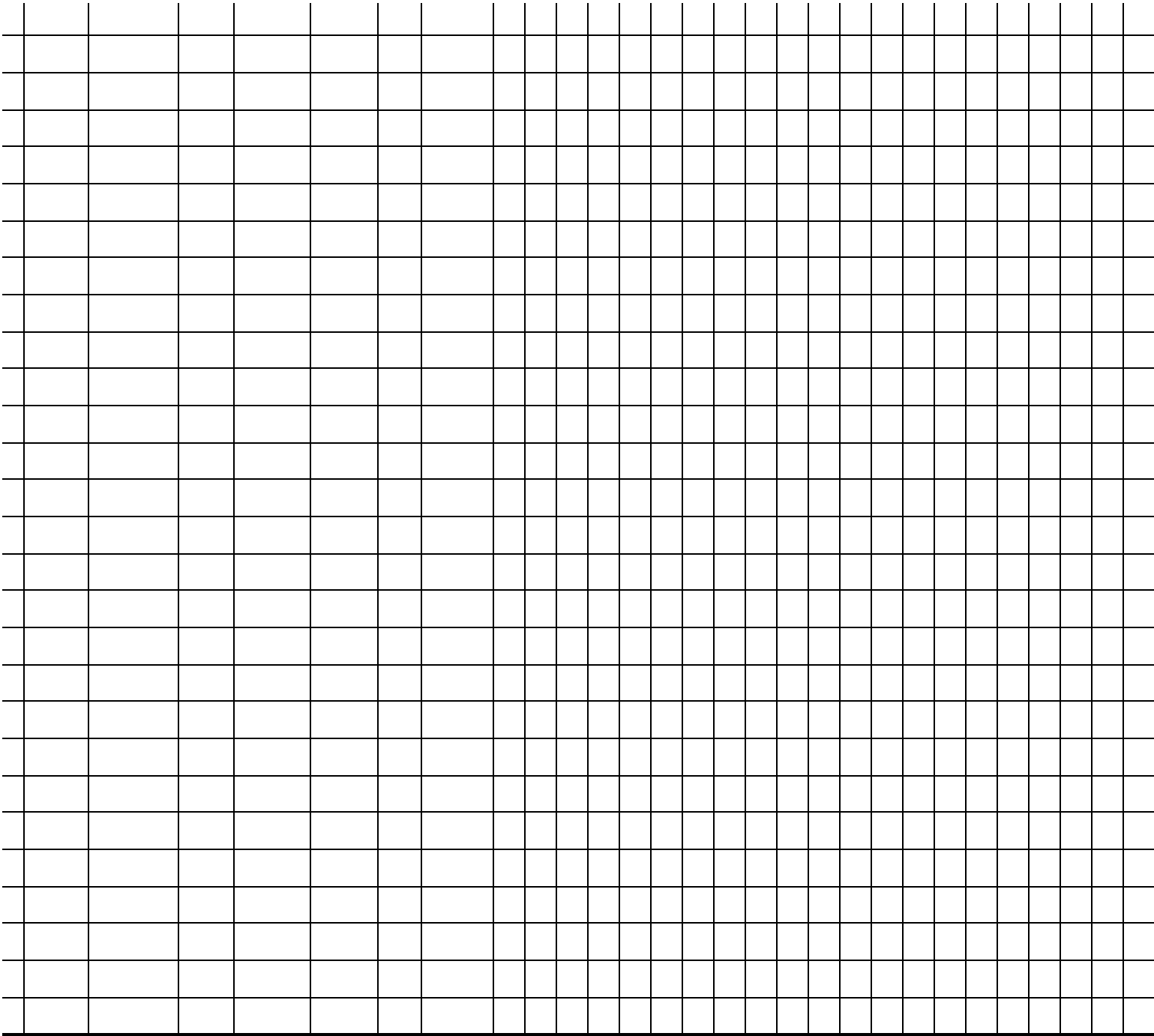
Forms of Energy

6. A. State the three forms of energy.
B. Explain one way that each form of energy benefits you.

Do not write on this page. Please write your answer to this open-response question on the next page. 

PLEASE GO ON TO THE NEXT PAGE →

- A. The three forms of energy are heat, light, and sound.
- B. There are many benefits of energy, which humans receive. Heat, a form of energy, is produced by the sun, fire and fossil fuels. Heats benefits are warmth and economic resources, such as heating our homes, and fueling our cars. Light, which is also a form of energy, is primarily produced by the sun. Benefits of light are the ability to see, modern technologies, such as fiber optic cables used for communication; and scientific devices, such as telescopes, microscopes, and magnifying glasses. Also, solar energy is dependant on light produced by the sun. Finally, sound is another form of energy. Sound is produced by the back and forth movement



STOP! 