C. a process that involves the collection of information and ideas supported

by belief or opinion

\_\_\_\_\_ objective

B. a process that involves the collection of information and ideas supported

by evidence

\_\_\_\_\_ pseudoscience

A. based on facts instead of opinions or beliefs

\_\_\_\_\_ science

**Words to Know**

*Write the letter of the definition next to the matching word as you work through the*

*lesson. You may use the glossary to help you.*

**Lesson Question**

**?**

**W**

**2K**

possess.

that

**Recognize** the characteristics

.

science.

distinguish it from

of

**Identify** the

and

**Define**

develops.

**Explain** how

**Lesson Goals**

F. based on opinions or beliefs instead of facts

\_\_\_\_\_ systematic

E. using a careful method

\_\_\_\_\_ scientific knowledge

D. the information that is gathered by the systematic study of nature

**Words to Know**

\_\_\_\_\_ subjective

**W**

**2K**

**The Learning Process**

*Fill in the steps of the learning process.*

**The Learning Process**

**Slide**

nature.

gathered by the systematic study of

**Scientific knowledge:**

* is the

.

* is supported by

.

* involves the collection of

.

* Involves observation and

process.

**Science**

**Science:**

* is a

**2**

Conclusion made from the facts

Data collected

Way to collect facts

**Science: A Cyclical Process**

*Fill in the steps of the cycle of science.*

**Slide**

candling

•

effect

**Examples:**

* The

**Explanation**

•

.

supported by belief or

**Pseudoscience**

**Pseudoscience:**

* is a process that involves the collection of information and ideas

**4**

|  |  |
| --- | --- |
| **Science vs. Pseudoscience****Science** | **Pseudoscience** |
| * Relies on process
* Is
* Is constantly
 | * Lacks process
* Is
* Is to new

information |

**7**

**9**

.

* Experimentation leads to changes in scientific

.

* The hypothesis can be tested through

.

* A scientific question may lead to a

.

* An observation may generate a scientific

**Observation of the Natural World**

* Scientific knowledge develops through making about the natural world.

and thinking logically

* Skeptical–requiring

to solve problems

* Creative–using

at the natural world

* Observant–taking a

about the natural world

**Characteristics of Scientists**

* Curious–asking

**Slide**

**Words to Know**

|  |  |
| --- | --- |
|  | an act of recognizing and noting something by using the senses |
|  | a possible explanation of or answer to a scientific question that is based on prior knowledge or research, and is testable |

**11**

**14**

.

* Repeat

.

* Use

trials.

•

observations.

**Repeated Experimentation**

* Make

of a system

* Equipment

•

* Other concerns

•

* Complexity

**Practical Limitations**

* Time

**Slide**

* Advancements in technology often lead to new scientific

.

.

they cannot directly

to make observations of things

* Scientists rely on

**The Use of Technology**

**Slide**

* Acknowledge
* Create

over time

* Conduct

**Practical Solutions**

* Limit

**14**

**Ethical Limitations**

Ethical controversy:

* Testing on
* Testing on laboratory

How does scientific knowledge develop and progress?

**Lesson Question**

**Slide**

**?**

experimentation.

* limited by time, money, equipment, size, complexity, etc.

through observation and

* builds scientific
* is conducted by curious, observant, creative, and

scientists.

.

by

**Review: Key Concepts**

Science:

* is a process that involves the collection of information and ideas supported

**Answer**

**2**

**Slide**

.

and

supported by

**Review: Key Concepts**

Pseudoscience:

* is a process that involves the collection of information and ideas

**2**

*Use this space to write any questions or thoughts about this lesson.*