Ancient India

Section 5

MAIN IDEAS
1. Indian artists created great works of religious art.
2. Sanskrit literature flourished during the Gupta period.
3. The Indians made scientific advances in metalworking, medicine, and other sciences.

Key Terms and People
Metallurgy the science of working with metals
alloy a mixture of two or more metals
Hindu-Arabic numerals the numbering system invented by Indian mathematicians and brought to Europe by Arabs; the numbers we use today
inoculation a method of injecting a person with a small dose of a virus to help him or her build up defenses to a disease
astronomy the study of stars and planets

Academic Vocabulary
process a series of steps by which a task is completed

Section Summary
RELIGIOUS ART
Both the Mauryan and Guptan empires unified India and created a stable environment where artists, writers, scholars, and scientists could thrive. Their works are still admired today. Much of the Indian art from this period was religious, inspired by both Hindu and Buddhist teachings. Many beautiful temples were built during this time and decorated with elaborate wood and stone carvings.

What was the main inspiration for art and literature during the Mauryan and Guptan empires?

_______________________
_______________________

SANSKRIT LITERATURE
Great works of literature were written in Sanskrit, the ancient Aryan language, during the Gupta Dynasty. The best-known works are the Mahabharata (muh-HAH-BAH-ruh-tuh) and the Ramayana (rah-MAH-yuh-nuh). The Mahabharata,

In what language were literary works from the Gupta period written?

_______________________
_______________________
a long story about the struggle between good and evil, is considered a classic Hindu text. The most famous passage is called the *Bhagavad Gita* (BUG-uh-vuhd-GEE-tah). The *Ramayana* is the story of the Prince Rama, a human incarnation of one of the three major Hindu gods, Vishnu, who fights demons and marries the beautiful princess Sita.

**SCIENTIFIC ADVANCES**

Scientific and scholarly work also blossomed during the early Indian empires. Most prominent was the development of **metallurgy**, the science of working with metals. Indian technicians and engineers made strong tools and weapons. They also invented **processes** for creating **alloys**. Alloys, such as steel or bronze, may be stronger or more useful than pure metals like iron or copper.

The numbers we use today, called **Hindu-Arabic numerals**, were first developed by Indian mathematicians. They also created the concept of zero, upon which all modern math is based.

Other sciences also benefited from this period of Indian history. In medicine, Indians developed the technique of **inoculation**, which is injecting a person with a small dose of a virus to help him or her build up defenses to a disease. Doctors could even perform certain surgeries. India’s fascination with **astronomy**, the study of stars and planets, led to the discovery of seven of the planets in our solar system.

**CHALLENGE ACTIVITY**

**Critical Thinking: Drawing Inferences** Our modern society borrows significantly from the scientific and mathematical achievements of the early Indian empires. Write a short play, story, or essay describing how our modern world might look without these inventions.
DIRECTIONS  Write a word or phrase that has the same meaning as the term given.

1. alloy ____________________________________________________________

_________________________________________________________________

2. astronomy ________________________________________________________

_________________________________________________________________

3. Hindu-Arabic numerals _____________________________________________

_________________________________________________________________

4. inoculation _______________________________________________________

_________________________________________________________________

5. metallurgy _______________________________________________________

_________________________________________________________________

DIRECTIONS  Read each sentence and fill in the blank with the word in the word pair that best completes the sentence.

6. Identifying seven of the planets in our solar system is one accomplishment early Indias made in the field of ______________________.

(astronomy/metallurgy)

7. Indian doctors knew how to protect people against disease through ______________________.

(alloy/inoculation)

8. Ancient Indians were masters of _____________________ and knew processes for mixing metals to create an _____________________.

(astronomy/metallurgy); (alloy/inoculation)

9. The ___________________, which means “Song of the Lord,” is one of Hinduism’s most sacred texts. (Bhagavad Gita/Hindu-Arabic numerals)

10. The numbers we use today are called ______________________ because they were created by Indian scholars and brought to Europe by the Arabs.

(Bhagavad Gita/Hindu-Arabic numerals)
5. Buddhism is the religion based on the teachings of Siddhartha Gautama, the Buddha.

**True/False**

6. F; The Buddha was opposed to the caste system and taught that anyone could achieve **nirvana** no matter what caste they had belonged to in life.

7. T

8. F; **Missionaries** traveled through Asia, eventually spreading Buddhism to China, Korea, and Japan.

**SECTION 4**

**Summary**

(First Page) Candragupta Maurya; his complex government required funding provided by high taxes.

(Second Page) Asoka’s sons fought each other for power and invaders threatened the country; Gupta Dynasty

**Challenge Activity**

Answers will vary. Student essays should accurately depict the influence of religion on the policies of their chosen leaders.

**Fill in the Blank**

1. Candra Gupta II
2. Asoka
3. Candragupta Maurya
4. Huns
5. Gupta Dynasty

**Written Summary**

Answers will vary. Sample answer: Early Indian society reached its high point under two dynasties: the Maurya Dynasty and the Gupta Dynasty. The Maurya Dynasty was founded by Candragupta Maurya and reached its peak under Asoka. India grew under Gupta rulers like Candra Gupta II, but invasions by the Huns weakened it.

**SECTION 5**

**Summary**

(First Page) Hindu and Buddhist teachings; Sanskrit

(Second Page) metallurgy; Hindu-Arabic numerals; possible answer—they mapped the movements of stars and planets visible to the naked eye.

**Challenge Activity**

Answers will vary. Student plays, stories, or essays should reflect an understanding of the contributions of ancient India.

**Words or Phrases**

Answers will vary. Sample answers:

1. a mixture of two or more metals
2. the study of stars and planets
3. numbers we use today
4. injecting a person with a small dose of a virus to help build up defenses to a disease
5. the science of working with metals

**Fill in the Blank**

6. astronomy
7. inoculation
8. metallurgy; alloy
9. *Bhagavad Gita*
10. Hindu-Arabic numerals

**Ancient China**

**SECTION 1**

**Summary**

(First Page) northern China; Chang Jiang Valley

(Second Page) Xia dynasty; Shang dynasty

**Challenge Activity**

Answers will vary. Student illustrations should accurately use Chinese characters to illustrate an element of early Chinese culture.

**Fill in the Blank**

1. Gobi
2. Huang He
3. jade
4. Xia
5. Shang
6. Oracle
7. Chang Jiang
8. pictographs