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NAME: _____
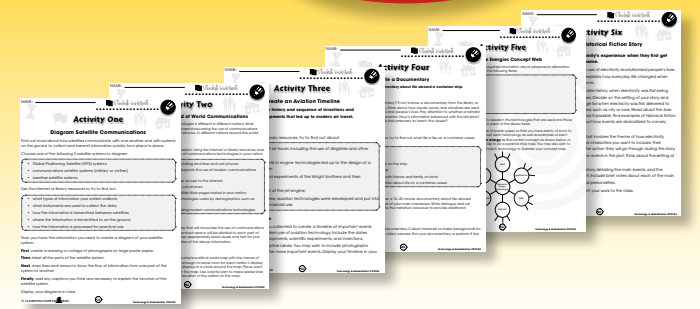
Communications Technology

1. a) Use a dictionary to look up the word COMMUNICATION. Write the definition on the spaces provided.

The definition of **communication** is:

_____

_____

   b) Based on the definition above, what do you think communication technologies are? Write your ideas on the spaces provided.

_____

_____

   c) On the spaces provided, list three technologies that you use to communicate.

_____

_____

_____

2. Write each word beside its meaning. You may use a dictionary to help you.

| papyrus	codes	electromagnetic radiation	hieroglyphics

   _____ **a)** pictures used to represent words in a language

   _____ **b)** a lightweight writing material used in Ancient Egypt

   _____ **c)** systems used to represent words for communicating messages

   _____ **d)** a form of energy that travels in waves

NAME: _____

Communications Technology

Written Communication

One of the first and most basic forms of communications technologies was the development of written languages. Archaeological evidence shows that picture words, or heiroglyphics, were used since about 4,100 B.C.E. Writing allowed information to be stored and transported from one area to another. The development of lightweight media to transport written text, such as papyrus in ancient Egypt and paper in ancient China, allowed information to travel farther and more easily. The invention of the printing press in the middle of the 15th century in Europe, greatly increased the volume of print communications. Until then, all printed communications, even books, had to be copied by hand. After the printing press was invented, the amount of books in existence surged, and a greater percentage of the population learned to read, or became **literate**.
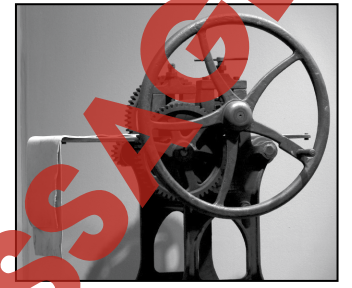
The printing press invented during the 15th century

STOP — **What does it mean to be literate?**

_____

_____

Postal Service

Early forms of postal service—an organized, systematic transportation and delivery of written communications—were found in the ancient world in places like Egypt and China as early as the second millennia B.C.E. Because written communications, or **correspondence**, had to be physically moved from one area to another, long distance communication was tied to the development of transportation technologies. Communications between nations moved slowly, carried at first by foot and horseback, and later on trains and ships. The United States Postal Service (USPS) began in 1775, when Benjamin Franklin was appointed the first postmaster general, overseeing the operation of the USPS. By the early 1800s, the USPS was the largest postal service in the world. Regular delivery of mail allowed people to stay more connected, and merchants and governments were able to conduct business across great distances.

NAME: _____

Communications Technology

1. Fill in each blank with the correct word, phrase, or number from the reading.

   a) One of the first and most basic forms of communications technologies was the development of _____.

   b) Until the invention of the _____, all printed communications, even books, had to be copied by hand.

   c) Early forms of postal service were found in the ancient world in places like Egypt and China as early as the _____.

   d) Development in _____ allowed signals to be transmitted over wire.

   e) The development of _____ of information allowed for the development of radio and television.

2. Use the words below to fill in the timeline of communications technologies. Then, write a sentence about how each technology changed people's ability to communicate.

US Postal Service begins	first telephones	hieroglyphics	digitized information

_____ a _____ 4,100 B.C.E.

_____ b _____ 1775

_____ c _____ 1870s

_____ d _____ 1900s

Activity Three

Design a Transportation System

International business travelers and tourists need transportation around major cities and tourist locations. Imagine you are a regional planner for a popular travel destination. Plan a system that will allow people to move between international airports and common destinations in and around cities, such as:

- business districts
- universities
- tourist sites
- industrial areas
- natural landmarks

Do Your Research

First, use library and internet resources to research a major city and its surrounding region. Find a map of the region and mark the locations of 10–12 destinations above. Find out about current transportation technologies that use alternative energy sources. Use that information to design a modern transportation system for your region.

Plan Your Transportation System

Overlay a piece of tracing paper or Mylar on your map. Draw lines to show the routes of different parts of your transportation. Use different colors to represent different means of travel. Draw a key to help viewers interpret the transportation system.

Design a Brochure

Create a brochure that travelers can use to get information about your region's transportation system. Be sure to include the following information:

- what transportation technologies are used in different parts of the system;
- where travelers are picked up and dropped off;
- what alternative energy sources are used to power different vehicles in your transportation system;
- what modern technologies and amenities your transportation system uses to accommodate the needs of international travelers.

Panel 1 — Crossword Puzzle

After You Read   NAME: _____

Crossword Puzzle!
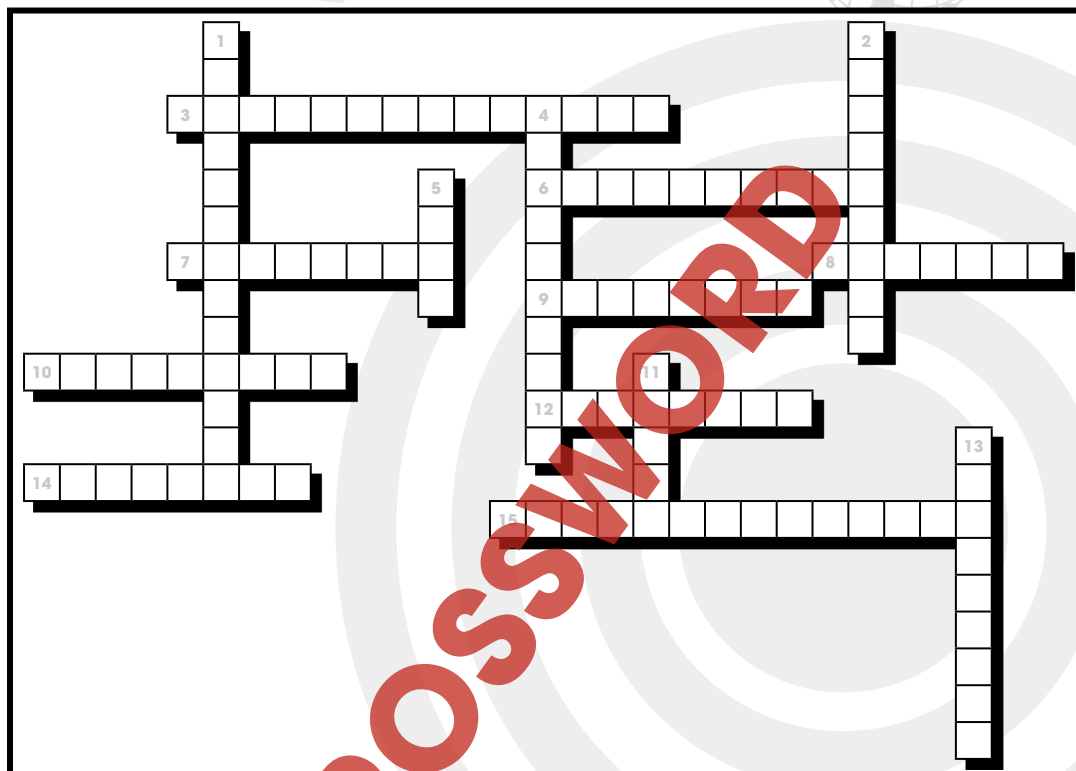
Across

3. _____ technology helps people exchange information
6. a nation that is undergoing industrialization
7. able to read
8. increased greenhouse gas concentration leads to global _____
9. fabrics, such as cotton and wool
10. harmful substances that people put into the environment
12. technology for air travel
14. a giant, international network of computers
15. movement of people and goods from place to place

Down

1. the movement of people, ideas, and goods around the world
2. a 19th century invention using codes to send messages along wires
4. related to the use of manufacturing and machines
5. petroleum gas is a fossil _____
11. greenhouse _____ trap heat in the atmosphere
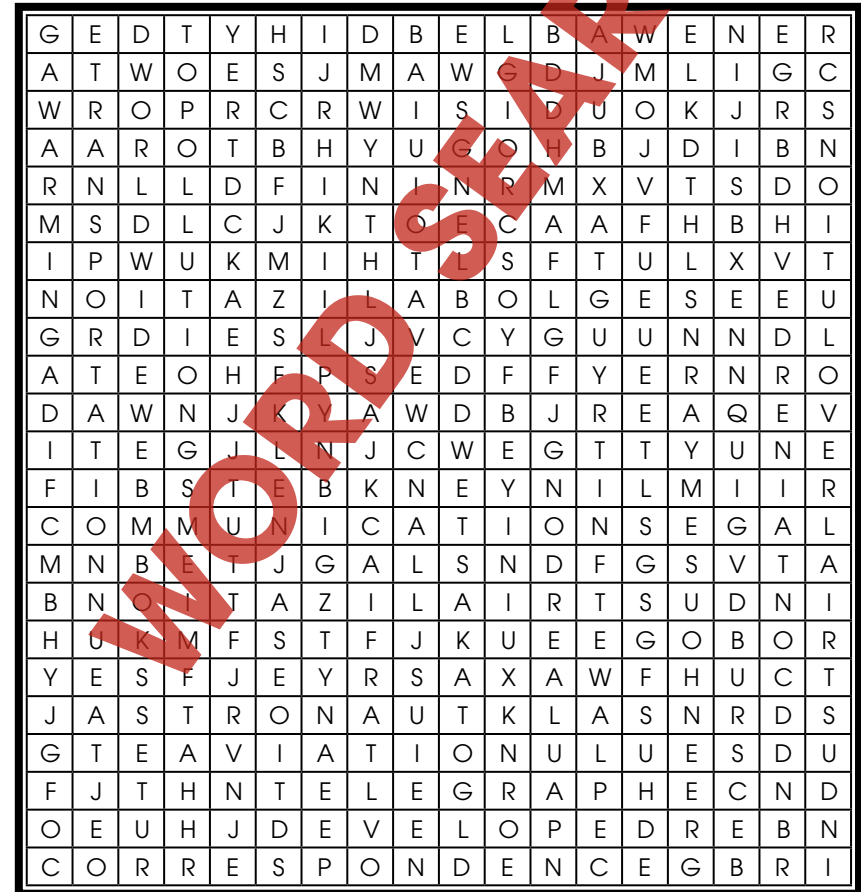13. a source of energy that can be used again and again or does not run out

Word List

aviation
communications
developing
fuel
gases
globalization
industrial
internet
literate
pollution
renewable
telegraph
textiles
transportation
warming

Panel 2 — Word Search

NAME: _____   *After You Read*

Word Search

Find all of the words in the Word Search. Words are written horizontally, vertically, diagonally, and some are even written backwards.

astronaut
aviation
communications
container
correspondence
developed
digitize
energy
fuel
globalization
greenhouse
Industrial Revolution
industrialization
internet
literate
migrate
nation
ocean
orbit
pollution
renewable
space
technology
telegraph
textiles
transportation
warming
World Wide Web

G	E	D	T	Y	H	I	D	B	E	L	B	A	W	E	N	E	R
A	T	W	O	E	S	J	M	A	W	G	D	J	M	L	I	G	C
W	R	O	P	R	C	R	W	I	S	I	D	U	O	K	J	R	S
A	A	R	O	T	B	H	Y	U	G	O	R	B	J	D	I	B	N
R	N	L	L	D	F	I	N	I	N	R	M	X	V	T	S	D	O
M	S	D	L	C	J	K	T	O	E	C	A	A	F	H	B	H	I
I	P	W	U	K	M	I	H	T	L	S	F	T	U	L	X	V	T
N	O	I	T	A	Z	I	L	A	B	O	L	G	E	S	E	E	U
G	R	D	I	E	S	L	J	V	C	Y	G	U	U	N	N	D	L
A	T	E	O	H	F	P	S	E	D	F	F	Y	E	R	N	R	O
D	A	W	N	J	A	K	A	W	D	B	J	R	E	A	Q	E	V
I	T	E	G	I	L	N	J	C	W	E	G	T	T	Y	U	N	E
F	I	B	S	I	E	B	K	N	E	Y	N	I	L	M	I	I	R
C	O	M	M	U	N	I	C	A	T	I	O	N	S	E	G	A	L
M	N	B	E	T	J	G	A	L	S	N	D	F	G	S	V	T	A
B	N	O	N	T	A	Z	I	L	A	I	R	T	S	U	D	N	I
H	U	U	M	F	S	T	F	J	K	U	E	E	G	O	B	O	R
Y	E	S	F	J	E	Y	R	S	A	X	A	W	F	H	U	C	T
J	A	S	T	R	O	N	A	U	T	K	L	A	S	N	R	D	S
G	T	E	A	V	I	A	T	I	O	N	U	L	U	E	S	D	U
F	J	T	H	N	T	E	L	E	G	R	A	P	H	E	C	N	D
O	E	U	H	J	D	E	V	E	L	O	P	E	D	R	E	B	N
C	O	R	R	E	S	P	O	N	D	E	N	C	E	G	B	R	I

Panel 3 — Comprehension Quiz

After You Read   NAME: _____

Comprehension Quiz   22

Part A   8

Circle **TRUE** if the statement is TRUE or **FALSE** if it is FALSE.

1. In the first millenium B.C.E., humans were trading goods and technologies over long trade routes with the aid of domesticated animals.
   TRUE   FALSE
2. The period from 1900–1950 in the United States is known as the Industrial Revolution.
   TRUE   FALSE
3. The telegraph was invented in the early 18th century.
   TRUE   FALSE
4. The World Wide Web was developed in the latter part of the 20th century.
   TRUE   FALSE
5. Natural gas is a renewable energy resource.
   TRUE   FALSE
6. By the late 1950s, jet aircraft outpaced steam ships for use in international travel.
   TRUE   FALSE
7. Telephones depend on the use of electromagnetic technology.
   TRUE   FALSE
8. Cargo airplanes are the most efficient way to transport goods from the places where they are made to the places where they are sold.
   TRUE   FALSE

Part B   6

On the spaces provided, give an example of a technological development in each field and explain how that development affects globalization.

Transportation _____

Communications _____

Space _____

SUBTOTAL: ____/14

Panel 4 — Communications Technology Timeline

Communications Technology Timeline

After You Read

Communications Technology

3. a) Explain how the invention of the printing press changed the amount of information people had access to.

_____

_____

_____

b) Explain the role of electromagnetic technology in the advancement of communications.

_____

_____

_____

_____

Research

Write a Story

4. Write a story about how people communicated in the past. First, choose a date for the setting of your story. Then, use the internet or library resources to find out about how people communicated during that time period. Try to find out:

- how people communicated with family and friends;
- how merchants communicated with customers;
- how governments communicated with citizens;
- how people obtained news and information;
- any communications technologies that developed around that time and how they may have changed the way people communicated.

Using this information as background, write a story about characters that lived during your chosen time period. Include descriptions of how people communicated, and any technologies they used. If there were recent developments in communication technologies, describe the changes they caused. Share your stories as a class in chronological order.

3.

a) The printing press greatly increased the volume of printed materials available, and more people became literate.

b) Electromagnetic technology allowed for the sending of signals along wire, which led to the development of the telegraph and telephone.

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EASY MARKING ANSWER KEY