

Teacher's Guide for FACES

March 2011: Machines

Teacher's Guide prepared by Lisa Greenberg. Lisa Greenberg taught in international schools in Japan, Singapore, and Saudi Arabia, and worked for the Department of Research for the Chicago School System. She is currently editing the text of a book on the old city of Jeddah, Saudi Arabia....for which she uses a machine, her computer!

Getting Ready

Brainstorm with students what machines their family has used since they woke up in the morning and generate a list. Then have students work in pairs or groups to organize the list (some organizing principles might be simple and complex, machines for eating/traveling/studying, machines I can use alone/machines my parents used. For fun, have students draw a cartoon or write a short joke/paragraph about having one machine they use regularly disappear from the earth.

Staying in Touch

Research on Timeline:

Divide the class into 14 groups. Have each group research one item on the communications timeline, such as the wireless telegraph, write a short synopsis, and illustrate it. Post the research on a class timeline.

Discuss question # 15: How will we communicate in the future? Encourage students to think outside the box.

Critter Corner: Planes Saving Cranes

Outlining and Taking Notes:

After reviewing the concept of outlining information, have students outline the article, listing main topics and details. Then pair students to review each other's outlines.

What's So Simple About Machines?

Essay writing:

Pose the question: What is the difference between the two statements: "Necessity is the mother of invention" and "Invention becomes the mother of necessity"? Ask students to support their explanation with examples from the article and in their own experience in a written essay.

My Day Without Machines

Using Graphic Information:

Have students look at the article title and the photographs on pp. 10-13. Ask, what do you think the article is about? What experiences do you think the author had? Do you think she was successful or not?

Then have them read the article. Ask, did they anticipate the story correctly or were they surprised by its information/conclusion?

Log on to Learn, Diminishing the Digital Divide, Kyrgyzstan Goes Wireless

Reading for Information

1. What is the School of the Air?
2. What machines are used to communicate in the School of the Air?
3. What is the teacher-student ratio in the School of the Air?
4. How does a student get help if he doesn't understand something he has been taught?

5. How do students meet each other in School of the Air?
6. How would you describe the e-school initiative in Africa?
7. Why is it important to Africa?
8. What do teachers have to learn to do to make the e-school initiative successful?
9. What was the first e-school in Africa?
10. How has the e-school project grown?
11. List three ways in which Albina Abrimova's life in Kyrgyzstan is different from yours.
12. How does her family use cell phones and how does your family use cell phones?
13. According to the article, what are the factors that prevent easy access to computers in Kyrgyzstan?
14. How would Albina's life change if she had easy access to the Internet?

Express Yourself: The Changing World of Pop

Creative Writing (choose one):

1. Imagine you are Bre Morgan. Write a three-paragraph entry about one day in your diary.
2. Write the lyrics for a song that concerns itself with some of Bre's interests (see p. 20 for ideas).
3. Imagine that you meet Bre Morgan after a concert. Write 20 lines of a dialogue you might have with her.

The Fast Cars of Formula One, Faster Than a Speeding Bullet, EN-V: Futuristic Vehicle

Creative Thinking:

Read all three articles and think about how transportation might change in the future. Describe or illustrate a future vehicle.

Marvels of Modern Medicine, A Helping Hand, Dear Tommy

Homework:

Discuss with your family medical care they have received that your grandparents and great-grandparents could not have received. What new machines were used?

Internet Research:

Using safe sites on your school computer, find, list, and print five new facts about any of the medical inventions discussed in the article. Share this information with your classmates.

One Small Flush for Mankind

Current Events:

The article shows how toilets improved sanitation and reduced disease. Scan the newspaper or safe site Internet news to discover current sanitation issues and how they are being addressed. Do they require specific machines, changes in behavior, or both?

Farm Reapers to Robots, A Day on the Farm, A Double-Edged Sword

Making Comparisons:

Discuss: How has machine technology transformed agriculture and industry since the founding of the United States?

Drawing Conclusions:

Discuss: How have advances in technology impacted the U.S. economy over the last 100 years?

Drawing Inferences:

Discuss: From the information in these articles, how do you think job opportunities are changing in the United States? How will this affect you personally?

John Henry: Man vs. Machine

Reading Fluency:

Divide students into small groups and have each person take turns reading a paragraph.
Circulate through the groups to check on fluency, pronunciation, and emotive expression.

Working with symbol and imagery:

How is the steam drill an "iron monster"?

What does the sentence "Then his soul boarded the train that only he could see" mean?