

This passage is about computer printers.

A few years ago, a popular computer magazine published an article with some surprising news. Some color printers put a secret code on all the papers they print. This secret code is made up of very small yellow dots. They are so small they cannot be seen without a magnifying glass or a special blue light that makes them look black.

Until recently, few people knew what the code meant. However, a consumer protection group called Electronic Frontier Foundation (EFF) has now figured out the pattern for a certain type of Xerox printer. The dots on papers coming from this type of printer tell the time and day the paper was printed and which printer it came from. EFF has been able to figure out how the code works for only this particular printer. They believe, though, that the codes from printers made by other companies contain the same information.

The government claims secret codes printed on documents will help them catch people who make fake money. If counterfeit bills contain information about who printed them, it will be easier for the government to catch the lawbreakers.

However, many citizens, as well as EFF, object to this use of codes because they feel it violates their privacy. They believe that the government could also use these codes to find out and keep a record of what people print. In other words, the government could use these printing codes to spy on people, not just to catch criminals.

121. What is the purpose of this article?
 - a. to examine two different printing technologies
 - b. to criticize a new government printing technique
 - c. to discuss a controversial feature of some printers
 - d. to recommend the best kind of printer
122. If you do not use special equipment, what do the codes look like?
 - a. They are not visible.
 - b. They look black.
 - c. They make a pattern of yellow dots.
 - d. They appear as light blue dots.
123. What did the public learn from EFF's investigation about printed dots made by some color printers?
 - a. how to see the dots
 - b. how to remove the dots
 - c. what the dots are made up of
 - d. what the dots mean
124. In the first sentence of the third paragraph, what does **them** refer to?
 - a. secret codes
 - b. documents
 - c. companies
 - d. the government
125. Why do the codes that are mentioned in the passage worry some people?
 - a. The codes leave yellow marks on the page.
 - b. The government can trace the source of printed documents.
 - c. People can use them to make fake money.
 - d. The codes can't be used by all printing companies.

This passage is about animal behavior.

In order to deal with their environment, animals depend not only on instinct and individual learning but also on something called *social learning*. One famous example of social learning was observed among a group of macaque monkeys in Japan. In the 1950s, researchers noticed a young monkey washing the sand off a sweet potato in a stream before eating it. Over time, this behavior spread to other monkeys of the group, and today, potato washing among the macaques is common.

Biologists report another example of social learning on an island in the U.S. state of Virginia. They noticed herring gulls using hard paved roads to crack open clamshells in order to get at the clam meat. The gulls take clams out of a river, fly two hundred meters to a road and then drop the clams onto the pavement.

For over three years, the biologists collected and measured thousands of these broken clamshells. The gulls seem to prefer medium-sized clams, about three inches wide. The researchers think that a shell smaller than three inches isn't worth the energy needed to drop it because it doesn't contain much meat. A large clam has more meat but is too heavy to carry. As the birds grow older, they seem to get better at calculating the right clam size and the most efficient dropping height.

There are five species of gulls on the island, but only the herring gulls drop clams. The biologists are not certain how the herring gulls first learned to do this, but think that herring gulls may be able to learn from one another. The other gull species on the island, however, do not appear to be capable of social learning.

126. What is the main purpose of the passage?
 - a. to explain the differences between social learning, individual learning, and instinct
 - b. to compare macaque monkeys and herring gulls
 - c. to show how researchers observe wild animals
 - d. to show that some animals use social learning
127. How did the group of monkeys mentioned in paragraph 1 learn to wash potatoes?
 - a. by a process called individual learning
 - b. by using a natural instinct
 - c. by watching researchers
 - d. by watching other monkeys
128. According to the passage, what did the herring gulls learn to do?
 - a. break clamshells
 - b. carry heavy clams
 - c. wash their food
 - d. find clams in the river
129. How did the biologists conduct their study of the gulls?
 - a. They looked for clams in the river.
 - b. They collected broken clamshells.
 - c. They practiced dropping clamshells on the road.
 - d. They taught the gulls how to find clams.
130. What conclusion did the biologists come to about the other four species of gulls on the island?
 - a. They aren't able to learn from other gulls.
 - b. They are not as social as the herring gulls.
 - c. They depend too much on social learning.
 - d. They depend too much on instinct.

A

* Science and You Magazine

Marketing Manager Needed

Science and You, ranked among the top ten magazines in the country, seeks a marketing manager. Candidates must have excellent communication skills and be able to work well with others.

Main responsibilities:

- Designing marketing strategies to increase the number of subscribers
- Organizing customer satisfaction surveys

Minimum qualifications:

- Master's degree in business
- Two years of management experience

For more information and application instructions, please visit the *Science and You* website at: www.scienceandyoumagazine.com/employment

B

From: *Science and You*
<subscriptions@scienceandyoumagazine.com>
To: Thomas Mulligan <tmulligan@worldemail.com>

Dear Mr. Mulligan,

Thank you for renewing your subscription to *Science and You*! You've made a smart decision to continue receiving *Science and You* every month.

We've confirmed your choice to renew your subscription for two years. As a long-term customer, you get a 70% discount on additional subscriptions. What better opportunity to send friends a gift subscription, so they too can enjoy reading *Science and You*?

Please visit our website www.scienceandyoumagazine.com/subscriptions to learn more about discounts, or if you need to change your mailing address.

Again, thank you for subscribing to *Science and You*! It is our pleasure to conveniently deliver this source of interesting up-to-date science information to you and your family.

Sincerely,

Science and You Team

C

Management Instincts

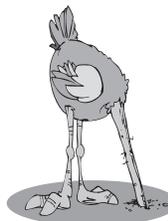
by Susan Lin, Career Advisor

In the business world, instincts are an important management tool.



Some managers are extremely goal-oriented. Like tigers, their instincts help them work precisely and fast. However, they tend to be aggressive and not work very well with others. This can lead to an uncomfortable office environment.

Other managers have excellent social instincts and communicate well with others. Nevertheless, they have difficulty dealing with conflicts. Like ostriches, they bury their heads in the sand and hide from problems rather than confront them.



Clearly, natural instincts have both positive and negative aspects. Those managers who learn to monitor their instincts and adapt their behavior are the most effective.

D

Questions from Readers

Q: Is it true that ostriches often bury their heads in the sand?

— Thomas Mulligan, Detroit, MI



A: People often say that when danger approaches ostriches bury their heads in the sand. However, this is a myth that probably comes from a misunderstanding of one of the bird's defensive behaviors. Sometimes, when they see potential predators, ostriches will try to "hide" by lying low and stretching their long necks flat on the ground. This way, from a distance, they look like bushes, or part of the landscape. To people observing ostriches trying to camouflage themselves

this way, it may appear that the birds are burying their heads in the ground.

Unfortunately, this common misconception about ostriches has given them a sad reputation as defenseless animals. Nevertheless, this could not be further from the truth. Ostriches are the largest bird in the world. Growing to be 7 to 9 feet (2.1 to 2.7 meters) tall, the ostrich is taller than the average man. They use their long, powerful legs to defend themselves when necessary. In fact, an ostrich can kill a lion with a single, well-placed kick!

— Margaret Holmes, Animal Biologist

To submit questions to experts at *Science and You*, please send an email to: questions@scienceandyoumagazine.com

Let us know what you think of *Science and You*. Please visit our website at www.scienceandyoumagazine.com/survey and complete our customer satisfaction survey.

Question 131 refers to section A on page 26.

131. In the first sentence, what does the phrase **ranked among the top 10** refer to?
- years in business
 - cost
 - popularity
 - number of employees

Questions 132–133 refer to section B on page 26.

132. Why did Mr. Mulligan receive this email?
- He recently renewed his subscription.
 - He changed his mailing address.
 - He requested information about discounts.
 - He bought the magazine for a friend.
133. What does the email encourage Mr. Mulligan to do?
- renew his subscription
 - tell friends how to get a discount
 - give somebody a subscription
 - send comments to the editors of a magazine

Questions 134–135 refer to section C on page 26.

134. In paragraph 2, why does the author mention tigers?
- to compare the instincts of humans and tigers
 - to explain how some managers behave
 - to explain why some managers have difficulty working fast
 - to describe how people can become less aggressive
135. According to the last paragraph, how should managers handle their instincts?
- They should try to change them.
 - They should always trust them.
 - They should never follow them.
 - They should pay attention to them.

Questions 136–138 refer to section D on page 26.

136. What is the main point of section D?
- A common belief about an animal is wrong.
 - Scientists don't understand an animal's behavior.
 - One animal has changed its habits to survive.
 - Some animals protect themselves better than others.
137. In paragraph 2, why does the author mention **the average man**?
- to give an example of ostrich predators
 - to emphasize how big ostriches are
 - to contrast how fast ostriches and people grow
 - to explain how ostriches got their reputation
138. What is the main point of paragraph 2?
- The reputation ostriches have is well deserved.
 - The future of ostriches is in danger.
 - Ostriches are more aggressive than lions.
 - Ostriches are able to defend themselves.

Questions 139–140 refer to sections A, B, C, and D.

139. Which sections encourage readers to contact the publisher?
- sections A, B, and C
 - sections A, B, and D
 - sections B, C, and D
 - all sections
140. What is probably true about the people who are compared to tigers in section C?
- They would not be hired as managers by *Science and You*.
 - They would not subscribe to *Science and You*.
 - They would receive an award at *Science and You*.
 - They would be good instructors at *Science and You*.

A

To: Solutions Tech Supervisors
 From: gloria@hr.solutionstech.com
 Subject: Company Picnic

Dear Supervisors,

This is a reminder about our annual company picnic on June 15. We still need managers to volunteer to help out.

- Set up children's activities (2–4 p.m.)
- Greet employees (5–7 p.m.)
- Assist with games (5–7 p.m. or 7–9 p.m.)
- Collect food donations (5–7 p.m. or 7–9 p.m.)

We want to make this a great event for all our employees. If you can lend a hand, contact me by June 1. Please state activity and time shift preference.

Sincerely,
 Gloria Jones, Planning Committee

C

City Food Bank in Urgent Need of Donations



City Food Bank is running extremely low on canned goods and other nonperishable foods.

To meet the need, City Food Bank is urging community groups, neighborhood clubs, and local businesses to hold food drives. “We are in particular need right now because of the bad weather that hit our community. Many homes were flooded last

month, so many people who don't normally use our service came in for food assistance.”

City Food Bank is a not-for-profit organization dedicated to reducing hunger. It is the oldest food-relief agency in the Riverside area. It is located at 549 Park Road, Riverside, and donations are accepted every day from 9 a.m. to 9 p.m.

B

Evening at Riverside Park

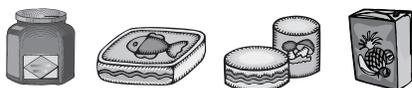
All Solutions Tech Company employees and families
 June 15, 5 p.m.–9 p.m.

For even more fun and maybe starting a new tradition, we're having a circus at our annual company picnic. As usual, we'll provide lots of good food and drink and live music. Our charity event this year is a collection for the City Food Bank.

JBK Circus will perform under the Big Tent.

- The Amazing Acrobats: The Rossi Family
- SoJo the Clown and His White Dog
- Clara and Her Dancing Horses

Also, special children's games and activities including face painting and clown magic.



Don't forget to bring along a donation for City Food Bank.

**D**

Executive Profile: Jeff Blackstone Chief Development Officer, Solutions Tech Company



Jeff Blackstone, CDO of Solutions Tech Company, the largest computer-support business in Michigan, likes working with people as much as with computers.

Blackstone believes that success on the job is tied to several factors. One is that employees have fun together when they are not working. He is pleased that his company is even bringing in a circus for their annual company picnic.

Blackstone worked for several years in computer development before studying organizational psychology at State University. He believes some companies' employees end up just doing jobs they are good at but don't like. He thinks that is a formula for stress on a worker. At Solutions Tech, Blackstone's primary responsibility is to match employees with the kind of tasks they like and do best.

Since joining Solutions Tech eight years ago, he's been earning the praise of the employees there as well as the respect of the whole community for his support of local charities. “One of the charities that I think is so important is City Food Bank,” said Blackstone. Blackstone volunteers at the food bank once a month. He added that he's really looking forward to the company picnic where he'll be personally helping City Food Bank build up its food supply.

Question 141 refers to section A on page 28.

141. What is the main purpose of section A?
- to find out who needs volunteers
 - to get help with a company event
 - to encourage people to attend an event
 - to announce the time of a company picnic

Questions 142–143 refer to section B on page 28.

142. What should people take to the event?
- picnic food and drinks for their family
 - an item to donate to the food bank
 - games for children to play
 - money to attend the circus
143. What will be available for the first time this year?
- food and drinks
 - live music
 - circus performances
 - charity collection

Questions 144–145 refer to section C on page 28.

144. Why does the food bank need donations now?
- It is the only place hungry people can get food.
 - Food there has become quite old.
 - More people than usual have used it recently.
 - It does not have any canned goods available.
145. What kind of food would be an acceptable donation?
- eggs
 - fresh fruit
 - bread
 - dried beans

Questions 146–148 refer to section D on page 28.

146. What is the main purpose of section D?
- to help City Food Bank
 - to attract a new chief development officer
 - to clarify the business of a large computer company
 - to provide information about a Solutions Tech employee
147. What did Blackstone do before working where he does now?
- worked with computers
 - taught psychology at a university
 - did financial planning at a bank
 - managed a charity
148. In the third sentence of paragraph 3, what does **that** refer to?
- workers doing jobs that they don't like
 - workers doing jobs that they're not good at
 - employees afraid of losing their jobs
 - employees having too much work to do

Questions 149–150 refer to refer to sections A, B, C, and D.

149. Which sections include information about a company event?
- A, B, and C
 - A, B, and D
 - A, C, and D
 - B, C, and D
150. What will Jeff Blackstone probably be doing on June 15?
- setting up children's activities
 - collecting food donations
 - assisting with games
 - greeting employees