No one likes to be tricked or convinced into believing something that may not be true. Understanding common logical fallacies is one way to avoid this. Strong, convincing arguments have sound support and logical reasoning. Weak arguments have little or suspicious support and shaky reasoning. Errors or weaknesses in arguments are called logical fallacies. There are many types of logical fallacies.

Writers and speakers both mistakenly and intentionally use logical fallacies. Why would someone purposely use a logical fallacy? Because many logical fallacies effectively persuade people, but only if the listener or reader doesn’t notice the fallacy. These exercises describe some common logical fallacies and will help you become skilled at identifying them.

**Loose or Hasty Generalization**

This fallacy involves reaching a conclusion before adequate evidence has been presented. An example would be concluding that all cows have spots after seeing only three cows. Stereotypical statements also fall into this category.

*Italians are a passionate people.*
*All students at this school oppose uniforms.*

**Weak or False Analogy**

An analogy compares one situation to another in order to illustrate a point. Analogies help readers picture a situation. False or weak analogies might sound good, but a deeper comparison of the two situations will reveal weaknesses.

*Wearing uniforms to school is like being in a prison of clothing. Students didn’t do anything wrong, so why are they being punished?*

The writer is comparing the restriction of wearing uniforms to the restriction of being imprisoned. Since prison involves punishment, the writer calls wearing uniforms a punishment. This is persuasive because many students don’t like wearing uniforms; however, the analogy is false. The motivation for requiring uniforms isn’t to punish. Further, serving a prison sentence is far more serious than wearing uniforms.

**Circular Reasoning**

Repeating what has already been said to make it look like a cause, explanation, or reason.

*That test was hard because the questions were so difficult.*
Cause-Effect Error

All of these relate to errors in explaining a cause-effect relationship and may look like this:

*We won the baseball game because I wore my lucky socks.*
(There is no rational cause-effect relationship.)

*I lost my job because my boss doesn’t like me.*
(This writer is claiming a single cause. It may be true that the boss doesn’t like the writer, but the writer may have lost the job for a different reason or for many reasons.)

*Orange hair in cats causes them to have more hairballs.*
(Having orange hair is more likely a correlation than a cause-effect relationship between the two characteristics. Cats with orange hair may have more hairballs than other cats, but the orange hair is not likely the cause of the increased hairballs.)

*As soon as our town allowed people to keep chickens in their backyards, more people started getting sick.*
(Just because one event occurred before another, doesn’t make the first event a cause.)

Either/Or Thinking

This tactic involves stating a complicated issue in black and white terms. This technique appeals to our desire for simplicity. However, most issues are complicated.

*Offshore drilling: You’re either for it or against it!* 

The decision to drill for oil in off-shore locations is a complicated issue with many reasons for and against doing so. To reduce the issue to “either/or” terms leads readers to believe the issue involves a straightforward decision when it does not.

Slippery Slope

With this technique, a writer describes a chain of events with an extreme and undesirable result. The dire event is generally unlikely to occur, but the suggestion of it leads readers to believe that “going down that path” should be avoided at all costs.

*If we allow one developer to build a hotel on the lake, this place will look like Disneyland or Las Vegas in no time.*

*If I don’t have that dress, the whole prom will be ruined for me.*
Logical Fallacies 1: Activity I: Identification

Using the preceding information as a reference, identify which of the following techniques is used in the examples. Write your answers in the spaces provided.

- Loose or Hasty Generalization
- Cause-Effect Error
- Weak or False Analogy
- Either/Or Thinking
- Circular Reasoning
- Slippery Slope

1. Boys are more outspoken than girls.

2. Taking a parenting class is as silly as reading a book to learn how to swim. You can only learn by doing.

3. The technology program at our school is top-notch because it’s the best.

4. The British like to keep a stiff upper lip.

5. Either you’re for us or against us.

6. Nothing went right today, so of course, I didn’t get a raise.

7. Either you support building the new highway or not. A vote against us is a vote against growth and prosperity.

8. Banning soda from school is like taking candy from a child. All children like candy and who would hurt a child?

9. I couldn’t have failed this test. I’m an ‘A’ student!

10. Increasing offshore drilling for oil would lead to environmental disaster.
Logical Fallacies 1: Activity I
Student Answer Key

1. Loose or Hasty Generalization
2. Weak or False Analogy
3. Circular Reasoning
4. Loose or Hasty Generalization
5. Either/Or Thinking
6. Circular Reasoning
7. Either/Or Thinking
8. Weak or False Analogy
9. Circular Reasoning
10. Slippery Slope
Logical Fallacies 1 Activity II: Analyzing an Argument

Read the following passage.

The jungle-gym area in our community park is becoming a safety hazard and should be shut down(1). Countless nights this week, I have spotted teenagers hanging around the jungle-gym well after official park hours(2). Research shows that people are far more likely to get injured playing in the dark and especially while playing on jungle-gyms(3). The teens in our community are out of control(4). Everyone knows how easily things can get out of hand when young people are unsupervised(5). The only logical thing to do is to remove the jungle-gym(6). If not, the park area could quickly become a hang out for all kinds of people, even criminals(7). Then, our entire neighborhood would go down the tubes, our property would lose value, and everyone would suffer(8).

Now, answer the following questions.

1. Which 2 sentences contain an example of a loose or hasty generalization?
2. Identify 2 sentences containing an example of either/or thinking.
3. Identify 2 sentences illustrating an example of slippery slope thinking.
4. Identify a sentence which contains an example of a cause-effect error.
5. Read this statement from the text

   “Everyone knows how easily things can get out of hand when young people are unsupervised.”

   This statement is not true. If you were arguing against this statement, what might you say? Write your answer below.

6. Read this sentence from the text.

   “Research shows that people are far more likely to get injured playing in the dark and especially while playing on jungle-gyms.”

   Explain how the writer could strengthen this argument. Write your advice below.
Logical Fallacies :1 Activity II: Student Answer Key

1. 4,5
2. 1,6
3. 7,8

4. 6 (Students may identify the entire passage as containing errors in cause and effect.)

5. Answers will vary but might include these points:
   - Students might point out the error in arguing that every time young people get together, they get in trouble, which is not true.
   - Students might cite specific examples of young people not getting in trouble and examples of situations in which young people do not need to be supervised.
   - Students might also point out the fallacy of saying ‘everyone knows’ which suggests that everyone agrees with what is being said about young people as though this statement were a fact, which it is not.

6. Answers will vary but might include these points:
   - The writer would need to cite specific research or specific experts. As the statement is written, the writer’s ‘research’ could be her own observations or information she read in a popular magazine or heard on the news. In any case, the research needs to come from an authoritative source to carry any weight in the argument.
   - There is an additional problem with the wording of the statement. ‘Far more likely’ suggests a comparison to something, although that ‘something’ is not stated. The reader might interpret the statement by reasoning that people are more likely to get injured…while playing on jungle-gyms…compared to doing nothing? Playing on other types of equipment? Skydiving? Without completing the comparison, the extent of the danger involved is impossible to interpret and/or is the equivalent of saying there are risks involved when playing on jungle-gyms, a fact everyone already knows.