

# Boating Safety



**SUGGESTED GRADE LEVELS:** MS

**SUBJECTS:** Physical Development and Health

**SKILLS:** analysis, discussion, generalization, inference, public speaking, reading, small group work, writing

**CORRELATION TO ILLINOIS LEARNING STANDARDS:**

Physical Development and Health 22.A.2c, 22.A.3c

## Objectives

Students will: 1) increase their awareness of the need for boating safety education; and 2) learn the main causes of fatal boating accidents and how they could have been prevented.

## Method

Students take the “Boating Safety Knowledge Quiz” and complete open-ended situations about actual Illinois boating accidents.

## Background

Recreational boating grows in popularity every year as people take to the waves of Illinois lakes and rivers. More than 360,000 boats are registered in Illinois.

With the increase in the number of boaters over the years, a corresponding increase in accidents has been recorded. Personal watercraft, popularly known as wave runners and jet skis, represent about four percent of registered watercraft in Illinois, yet they account for about 44 percent of reported accidents. There are many causes of boating accidents (standing up in small or overloaded boats, failing to follow boating rules, boating in unsafe conditions, excessive consumption of alcohol, inexperienced operators, carelessness, etc.), but most people who die in boating accidents drown because they end up in the water without a personal flotation device (PFD), commonly called a life jacket. Chances of surviving any boating accident are greatly improved by wearing a PFD. Alcohol and drug abuse are involved in a majority of the fatal boating accidents. The fatality rate from boating accidents in Illinois has remained relatively steady (32 fatalities in 1993, 17 – 1994, 16 – 1995, 27 – 1996, 14 – 1997, 19 – 1998, 13 – 1999, 14 – 2000, 8 – 2001, 23 – 2002, 13 – 2003, 18 – 2004, 16 – 2005, 18 – 2006, 13 – 2007, 13 – 2008, 25 – 2009, 16 – 2010).

Education and enforcement are being used to help reduce the number of accidents. Boating safety courses are offered by the Illinois Department of Natural Resources (IDNR). For information about class locations call 1-800-832-2599 or visit <http://www.dnr.illinois.gov/safety>.

## Materials

copies of “Boating Situation Cards;” copy of “Solution to Boating Situation Cards;” paper; writing materials

## Procedure

1. Discuss boating with students. Ask how many of them have boated on the waters of Illinois. Poll them in regards to why they were boating (recreation, fishing, skiing, others). Have students take the “Boating Safety Knowledge Quiz.” Discuss responses.
2. Divide the class into small groups. Provide each group with one of the “Boating Situation Cards.” An alternate method of doing the activity is to give each group the entire set of cards. Each “Situation Card” provides the conditions for an actual fatal boating accident in Illinois. You may want to withhold that information from students for the present time. (NOTE: These are actual incidents. To avoid unnecessary embarrassment and discomfort to students, ask if any of them has knowledge about anyone who has died or was injured in a boating accident in Illinois in 1993-1995. Try to find out in which county the accident happened. Adjust the selection of cards accordingly.)
3. Explain to the students that each card contains information about a boating trip. They should analyze the conditions, stating what is good and bad about the situation. Have them write two outcomes for the situation: one using what could go wrong; and one using what could prevent an accident. The actual situations are given for you to discuss with the students at the end of the activity.

4. Have each group read their situation to the class. They should point out the positive and negative points in the situation. Let them summarize their outcomes for the class. Do other class members agree with their interpretation?
5. Read and discuss the actual outcome of each situation. Were the students close to the actual results?

## Extensions

1. Invite a local Conservation Police Officer or local fire protection district officer to speak to the class about boating safety. Check the telephone book under the Illinois Department of Natural Resources for the phone number of the officer in your area.
2. Let the groups make up their own situations or use personal experiences to write more situation cards. Trade cards with other groups and repeat the activity.
3. Organize a boating safety awareness campaign for the school and community. Students could develop posters, bumper stickers, announcements, Web pages or other items to promote safe boating.
4. Sponsor a boating safety education course. Call 1-800-832-2599 and speak to an IDNR Safety Education staff member for more information.

## Evaluations

1. Students should submit their written reports and be evaluated on the presentation.

2. Students will summarize the main factors in the fatality reports and discuss how these people could have survived.
3. Find photographs of boaters. Give one to each student to analyze for positive and negative features.

## ANSWERS TO “ILLINOIS BOATING SAFETY KNOWLEDGE QUIZ”

1) C; 2) A; 3) D; 4) A; 5) D; 6) C; 7) A (clear skies reported in 75-80 percent of accidents); 8) A (calm water reported in 55-60 percent of accidents); 9) D; 10) A



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## STUDENT ACTIVITY PAGE | Illinois Boating Safety Knowledge Quiz

1. Approximately how many boats are registered in Illinois?  
 A. one million     B. two million     C. about 360,000     D. about 180,000
2. How many boating accidents are reported in a typical year for Illinois?  
 A. 100-200     B. 10-20     C. 500-600     D. 1,000-2,000
3. How many people are injured in these accidents?  
 A. 10-20     B. 30-40     C. 50-60     D. 80-150
4. What are the three months when boating accidents are most often reported?  
 A. June, July, August     B. July, August, September  
 C. April, May, June     D. May, June, July
5. On which three days of the week are the most accidents reported?  
 A. Sunday, Monday, Tuesday     B. Friday, Saturday, Sunday  
 C. Thursday, Friday, Saturday     D. Saturday, Sunday, Monday
6. During which of the following time periods do the majority of boating accidents occur?  
 A. midnight - 6:00 a.m.     B. 6:01 a.m. - noon  
 C. 12:01 p.m. - 6:00 p.m.     D. 6:01 p.m. - 11:59 p.m.
7. What is the prevailing weather condition when most boating accidents occur?  
 A. clear skies     B. cloudy skies     C. rain     D. fog
8. What is the prevailing water condition when most accidents occur?  
 A. calm     B. choppy     C. rough     D. strong current
9. What type of accident is most frequently reported?  
 A. falling overboard     B. capsizing  
 C. collision with a fixed object     D. collision with another vessel
10. The majority of people involved in boating accidents in Illinois received no formal instruction in boating safety.  
 A. true     B. false



**1** Two fishermen were trying to cross a cold, shallow water lake during strong winds. The boat was a 12-foot jon boat powered by a 5-horsepower motor. The operator was inexperienced and a nonswimmer. PFDs were worn by both occupants. What could go wrong? What could prevent an accident?



**2** Four fishermen were trolling below a dam. The current started to take the boat upstream towards the dam. A trolling motor and motor were both on the boat. PFDs were present but not worn. What could go wrong? What could prevent an accident?



**3** Two jet skiers were traveling together with a third jet skier following behind. The two lead skiers made an abrupt turn to the right. PFDs may have been worn. What could go wrong? What could prevent an accident?



**4** Four friends went canoeing using two canoes. No one was wearing a PFD, although throwable PFDs were available. It was dark when they came to a dam. They portaged around the dam. The first pair put their canoe in the water, and the second pair put their canoe in between the first pair and the dam. As the second pair shoved off, the canoe's bow turned toward the dam. What could go wrong? What could prevent an accident?



**5** A father and his 14-year-old son were boating. The father was operating the boat and passing a barge. When he got well beyond the barge, he turned to cross in front of it. The father was wearing a PFD, but the son was not. What could go wrong? What could prevent an accident?



**6** After an evening of heavy alcohol consumption, two adult boaters went out in a small jon boat equipped with oars, beer, cigarettes and a PFD rated for a 90-pound person. The operator stood up in the boat and walked to the front. What could go wrong? What could prevent an accident?



A person was riding an inner tube that was being pulled by a boat. This person was wearing a PFD. A second boat was operating parallel to the boat towing the tuber. The second boat suddenly cut behind the first boat. What could go wrong? What could prevent an accident?



A teenager deliberately rode a small, inflatable raft over a low head dam. There were no paddles or PFDs in the raft. What could go wrong? What could prevent an accident?



A man and woman were in a boat at night. The man turned the running lights off in the boat so as to not attract mosquitoes. When another boat approached, he briefly turned the lights back on to alert the other operator of his presence. What could go wrong? What could prevent an accident?



The operator of a personal water craft was traveling above a dam on a river. He had purchased the personal water craft two days previously. The man was an avid skier and familiar with this section of the river. He was wearing a wet suit and a PFD. Warning buoys for the dam were not in place on this section of the river. What could go wrong? What could prevent an accident?



A 14-foot boat was occupied by seven people on Lake Michigan. One of the passengers was a 16-year-old girl who was celebrating her birthday. No PFDs were used. The motor stalled, and the operator restarted it while in reverse. What could go wrong? What could prevent an accident?

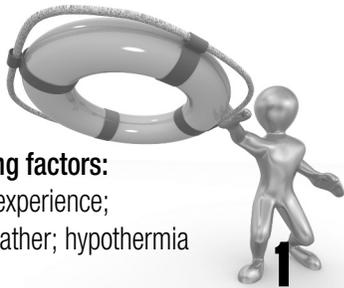


A personal water craft and a power boat were on course for a head-on collision on a river. The operator of the power boat veered to the right. Both operators were wearing PFDs. The operator of the personal water craft had been drinking alcohol and smoking marijuana. What could go wrong? What could prevent an accident?



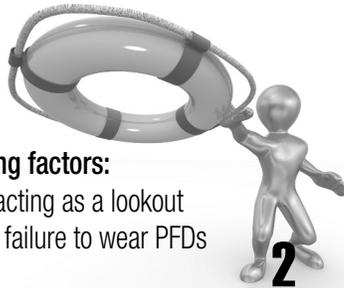
A boat that had been purchased the day before was being driven downstream in a river at a high rate of speed. The operator and occupants had been drinking alcohol heavily. PFDs were worn. The boat was traveling over shallow water with rocks along the bottom. What could go wrong? What could prevent an accident?

The boat was swamped and capsized. The passenger swam to shore, leaving the operator with the boat. The passenger searched through flooded timber until he found a state highway. From there he walked to a friend's home to report the accident. The friend had already gone to look for the boaters. Four hours elapsed before the body of the operator was found. He died from hypothermia and drowning. The accident occurred in Putnam County.



**Contributing factors:**  
operator inexperience;  
adverse weather; hypothermia

The operator tried to start the motor and flooded it. The trolling motor was not strong enough to pull the boat out of the current and away from the dam. One man pulled out PFDs, but two of the men jumped out of the boat. One of these two men made it to the dam wall, but the other man did not and drowned. The boat nosed into the boil, spun around and stood on its side. A third occupant was thrown or jumped from the boat and drowned. The fourth occupant put on two PFDs before being thrown into the water. He was rescued by other boaters. The accident occurred on the Mississippi River in Hancock County.



**Contributing factors:**  
no person acting as a lookout  
for danger; failure to wear PFDs

The operator of the third jet ski made an evasive turn to the left but could not avoid striking one of the jet skis. The operator of this ski was killed. The victim died from internal injuries. The accident occurred in Kankakee County.



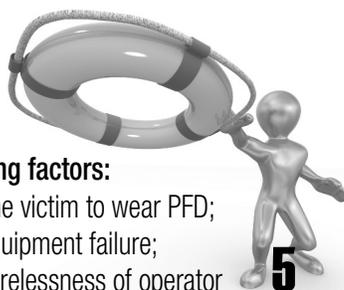
**Contributing factors:**  
carelessness; navigational rule  
violation

In spite of frantic paddling, the second canoe was pulled into the spillway and capsized. One of the canoeists was able to free himself from the boil, but his companion drowned. This accident happened in Stephenson County.



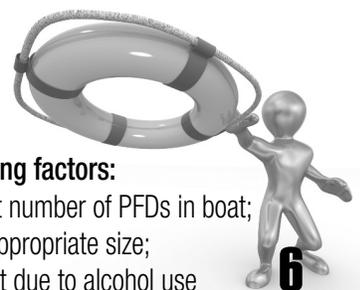
**Contributing factors:**  
inexperience; no wearable PFDs  
available

As the father turned in front of the barge, the motor stalled, and he was unable to start it again. He told his son to jump into the river, which the son did. The boat was struck by the barge, and the operator was trapped inside. The operator was freed from the boat by rescuers using a chain saw. His son drowned. The accident occurred on the Illinois River near Peoria.



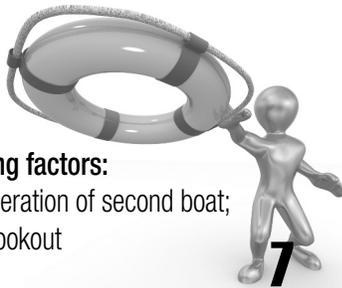
**Contributing factors:**  
failure of the victim to wear PFD;  
possible equipment failure;  
possible carelessness of operator

The boat capsized, and the other occupant drowned. The victim, a 200-pound woman, was found face up in the water wearing the PFD. The operator was arrested for operating a water craft under the influence of alcohol (OUI). The operator was convicted of felony OUI and was sentenced to four years in prison.



**Contributing factors:**  
insufficient number of PFDs in boat;  
PFD of inappropriate size;  
impairment due to alcohol use

The tuber was killed instantly when he was run over by the boat. The operator of the second boat stated that he did not realize that someone was being towed. The victim died of massive chest injuries.



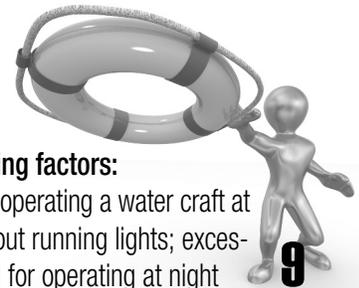
**Contributing factors:**  
careless operation of second boat;  
no proper lookout

The teenager was killed. Two friends were on an inflatable air mattress and went over the dam, too. They were kicked free from the boat and rescued.



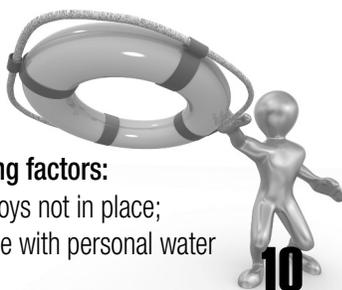
**Contributing factors:**  
carelessness; no PFDs worn or  
available

The woman was killed when a second boat ran up over the back of the boat she was riding in. The boat that struck them came up from behind at a high rate of speed and did not see the unlighted boat until it was too late to avoid the collision.



**Contributing factors:**  
unlawfully operating a water craft at  
night without running lights; exces-  
sive speed for operating at night

The operator was killed when he lost control of the water craft. He was caught in the boil and drowned. The accident happened in Kane County.



**Contributing factors:**  
warning buoys not in place;  
inexperience with personal water  
craft

The boat went backwards, and water came over the transom, capsizing it. The 16-year-old girl drowned. The operator was arrested for operating a water craft under the influence of alcohol (OUI).



**Contributing factors:**  
Contributing factors: overloading;  
OUI; no PFDs used

As the power boat operator veered to the right, the personal water craft mirrored his action. Each time the power boat attempted to evade, the personal water craft moved in the same direction. The boats collided head on, and the operator of the personal water craft died of massive head injuries. The accident happened in McHenry County.



**Contributing factors:**  
navigational rule violation; alcohol  
and marijuana use

Three occupants were injured and two died in this accident on the Ohio River in Hardin County. The boat hit the rocks and became airborne. It came to rest upside down, partially in the water. Both victims were pinned under water by the boat. The three injured people were thrown onto shore. One of them walked and crawled all night to reach help. The victims died from blunt trauma.



**Contributing factors:**

excessive speed; inexperience;  
alcohol use