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SECTION I
PROGRAM INFORMATION

ABOUT THE PENNSYLVANIA FISHING PROGRAMS
The Pennsylvania Fishing programs are introductory programs in fishing and conservation of Pennsylvania’s waterways. These programs provide very basic fishing skills and background information. The two programs are the SMART Angler Program and the Family Fishing Program.

PENNSYLVANIA FISHING PROGRAM GOALS
The goals of the programs are to:
1. To teach basic skills, equipment, techniques and the safety of freshwater fishing in Pennsylvania.
2. To develop an understanding of the state’s aquatic ecosystems.
3. To foster an appreciation of the state’s aquatic resources.
4. To encourage the wise use of the state’s water resources.
5. To create an awareness of aquatic invasive species (AIS)

FISHING PROGRAMS INCLUDE INSTRUCTION ON THE FOLLOWING:
- types of fish found in Pennsylvania
- fish habitats
- safety
- equipment
- outdoor manners and protecting our water resources
- basic fishing skills and practice using them!
- knowledge on aquatic invasive species

As a certified FSI, you will receive the following benefits:
- The chance to help children and adults discover the fun of fishing and the importance of protecting our waters.
- Access to “how-to” materials for conducting a successful basic fishing skills program.
- Access to the Commission’s audio-visual loan library and other educational resources, including fishing equipment.
- Opportunity to participate in the Commission’s Volunteer Incentive Program (VIP).

Also, as a certified FSI, you and/or your sponsoring organization will have some responsibilities:
- Teach at least one Fishing Program every two years to maintain certification.
- You must have your own valid Pennsylvania fishing license to conduct a Fishing Program.
- Ordering student materials and notifying the Commission of your class.
- Follow-up reporting on your classes.
- Obtaining fishing equipment and tackle (from PFBC).
- Ensuring the safety of your students.
- Following the formats and lesson plans of the Fishing Program you are teaching.
SETTING UP A COURSE
One of the biggest advantages an instructor has in teaching a Pennsylvania Fishing Program is flexibility. The Program can be taught at any location convenient to the instructor that meets the site requirements.

Location - The instructor is responsible for the program from beginning to end. It is best if the instructor can develop a working relationship with the people at the facility where the program will be taught. There are numerous facilities available in all communities which are interested in providing programs, such as: recreation centers, fire halls, marinas, outdoor clubs, high schools, libraries, churches, as well as numerous community organizations.

Classroom-style location & casting practice area:
- Accessibility: There should be a parking area & restrooms nearby. Find locations where the classroom, parking area, fishing area and casting practice site can be found within walking distance of each other. Trail to water site should be free of broken glass and hazards, ideally wheelchair accessible and wide enough for two people to walk side by side or at very least, one person to walk comfortably.
- Sheltered area: Space to be used as a classroom (e.x. –pavilion). It should be near the proposed fishing site. It is a place to sit down and get out of the weather (provide shade, safety from storms etc.) and have tables for knot tying, rod rigging, and gear/equipment.
- Flat, open space: Near classroom area & parking area, that is easily accessible and large enough to accommodate for casting practice (preferably a grassy area). Area should be free of low hanging tree limbs and other obstructions overhead and behind.

Fishing area:
- Small pond or lake - **Avoid moving water**
- Walking distance from shelter/restrooms.
- Easy access to water. No steep banks, fences, heavy brush or obstacles to climb over.
- Area where anglers can spread out without leaving the instructor’s field of vision.
- An easily accessible and open shoreline without brush or trees to hinder casting. Large rocks/rip rap banks or shore area is not conducive to safe, fun fishing for small child or older persons.
- Area with minimal boat/recreational traffic and good chance of panfish action.
- Close proximity to or easily accessed by instructor’s vehicle for ease of unloading equipment or gaining access to first aid kits or emergency equipment.

Co-sponsors - Having a service or educational organization co-sponsor the program is an excellent way to obtain a facility, advertising, and program support. Before committing to a facility, the
instructor should visit the site to determine if it will meet the needs of the program requirements and provide a quality learning environment. Instructor's having problems locating an appropriate location should contact their Regional Education Specialist (RES) or the Bureau of Boating & Outreach in Harrisburg for assistance.

**Timing** - The Programs can be taught in any month of the year but should be set up well in advance of the first class so course materials can be requested and news releases or advertising can be completed on a timely basis. A minimum of three weeks' notice is recommended because of lag time in media publications and paper flow. Summer is usually the times of greatest public interest in fishing. Schedule to reduce or avoid conflicts. For example, scheduling a Fishing Program on the opening day of trout season or on the 4th of July is usually going to affect attendance.

**PARTICIPANT REGISTRATION**
One member of the teaching team should be assigned the responsibility of taking registration prior to the class. Facility staff may also take registration. There should be a firm deadline. When possible, it is important to register students for the Program prior to the program to avoid the problem of "walk-in registrations." This may result in many more students showing up than the facility can handle or you are ready for.

Registration prior to the program will also help the instructor solve potential problems that may develop during the class. All students should be told the exact dates and times of the Program at pre-registration. Students should never be waiting at the course site before or after classes. At least one instructor must stay at the Program site until all students have left. The instructor should not leave students unsupervised at any time.

**COURSE REPORTING**
The instructor should report all Pennsylvania Fishing Programs to the Commission’s Bureau of Boating & Outreach. Instructors need to register all Fishing Programs using the online *Fishing Program Scheduling Form* that can be accessed through the Commission’s website. The form can be accessed via this link: [http://www.fish.state.pa.us/promo/form/family_fishing.htm](http://www.fish.state.pa.us/promo/form/family_fishing.htm) or at [http://fishandboat.com/FamilyFishingPrograms.htm](http://fishandboat.com/FamilyFishingPrograms.htm)

By providing this information, it is possible for the Commission to advertise your class on the internet. Instructors are requested to complete the Program Report form at the conclusion of the program on the Commission’s website at [http://www.fish.state.pa.us/promo/form/family_fishing_report.htm](http://www.fish.state.pa.us/promo/form/family_fishing_report.htm)

**CLASS SIZE AND TEAM TEACHING**
Program size should be between 10 and 30 students. Instructors who teach a large number of students in one course should have at least one co-instructor to assist. Teaching this program to fewer than ten students is less than ideal.

Team teaching is strongly recommended for the Pennsylvania Fishing Programs. It enables a group of instructors to provide a variety of teaching methods and help each student improve their skills. In addition, by working as a team, instructors not actively teaching can deal with any problems that may
occur during the program. Additional instructors can remind the teaching instructor of any topics that he/she may have overlooked, and can key off what the other person is saying to give additional information.

COURSE CONTENT
The content of the Pennsylvania Fishing Programs includes discussion of all topics in the textbook. Films, videos, and publications can be excellent sources of supplemental information to classroom discussion; however, they should not be used to replace actual instruction. Audio-visual aids used in classes must be approved in advance by the Pennsylvania Fish and Boat Commission, Bureau of Boating & Outreach. The Bureau of Boating & Outreach has a variety of publications available to use as aids in classroom instruction. Publications and audio-visual aids are only available upon written request (forms attached).

FORMS
Many of the forms are changed on a regular basis to provide you with the most up-to-date information. They can be downloaded from the Commission website at www.fish.state.pa.us. The most current versions of all forms mentioned are included in this manual.

INSTRUCTOR CODE OF CONDUCT
Instructors represent the PA Fish & Boat Commission when teaching this program. As a Fishing Skills Instructor, no person may:
1. Deliberately make false statements or any other comments that would degrade the Fishing Skills program, the PA Fish & Boat Commission, or the Commonwealth of Pennsylvania; or
2. Deliberately conduct themselves in any manner that will bring discredit to the Fishing Skills, the PA Fish & Boat Commission, or the Commonwealth of Pennsylvania (Example: making an inappropriate remark about another instructor or student); or
3. Deliberately perform any demonstration or act in a manner that would place any student in an unsafe situation whether the demonstration resulted in injury or not (Example: immersing a student’s hand in ice water for an extended period or allowing a student to enter the water without a PFD).

Failure to conform to the Instructor’s code of conduct while participating as an instructor in a Fishing Program could result in the Commission revoking your certification as an instructor.

NON-DISCRIMINATION POLICY
The programs and facilities of the PA Fish & Boat Commission are available to all regardless of race, color, national origin, age, sex or disability.

OUT-OF-STATE CLASSES
The PA Fishing Programs may not be taught outside the Commonwealth of Pennsylvania without prior written approval by the PA Fish & Boat Commission and the equivalent official in the state where the course is to be taught.

CHECKLIST AND TIPS FOR INSTRUCTORS
The following checklist will help make sure your class goes smoothly.

✔ Double-check the time and location of the class.
✓ Complete online Fishing Program Form at least three weeks prior to your class.
✓ Requisition all fishing publications (Fish ID guides, Litter Bags, Summary books, etc) you will need for the Program at least three weeks in advance.
✓ Check to make sure you have all the necessary materials, equipment, and instructional aides and make sure they are in good working order.
✓ Check the classroom or location for equipment, heating and lighting.
✓ Eliminate any distracting influences in the classroom or the fishing area.
✓ Get the help of co-instructor (See the section on class size and team teaching).

COMMUNICATIONS
Instructors often need to communicate with Commission staff. This includes the Bureau of Boating & Outreach’s Regional Education Specialist (RESs) and the Bureau office in Harrisburg.

Bureau of Boating & Outreach:
P.O. Box 67000, Harrisburg, PA 17106-7000
PHONE: (717) 705-7833
FAX: 705-7831
EMAIL: ra-be@state.pa.us
Commission World Wide Web: www.fish.state.pa.us

Regional Education Specialist:
- **Northwest - 814-683-5126**; Butler, Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango, Warren
- **Southwest - 814-443-9841**; Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland
- **Northcentral - 814-359-5127**; Cameron, Centre, Clearfield, Clinton, Elk, Jefferson, Lycoming, McKean, Montour, Northumberland, Potter, Snyder, Tioga, Union
- **Southcentral - 717-705-7850**; Adams, Bedford, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lebanon, Mifflin, Perry, York
- **Southeast - 215-968-3631**; Berks, Bucks, Chester, Delaware, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Schuylkill
SECTION II

TEACHING TECHNIQUES

This section is designed to assist those with little or no formal training in teaching, training or education. It includes some of the basic concepts instructors must consider, understand and apply to be effective. This information is important, whether you’ve taught before, or taught 100 programs. As the saying goes… Talking ain’t teaching, and listening ain’t learning.

ENVIRONMENT
The learning process is affected by whatever surrounds the student, whether it is good or bad. In order for the student to learn, the environment they are in must be positive. Factors to consider when preparing to teach a class include:

1. Time of day (best time is morning; worst is right after lunch and late in the evening).
2. Location of class (easy to find or well known facilities are best).
3. Size of class (10 to 20 students is ideal).
4. Interruptions or distractions (noise, weather, movement of people or objects).

THE LEARNER
Creating the best learning situation requires the instructor to realize that students vary in individual characteristics. Students will differ in the following areas:

1. Health and fitness - Be alert to illness or fatigue.
2. Physical development - Some skills may be beyond the physical ability of some students (i.e. elderly or very young lifting equipment).
3. Intellectual development - The instructor may have to simplify and explain certain information to a student who learns at a low level. See the section information on the developmental needs of young people.
4. Personality - Emotional state, attention span, and attitude all affect learning.
5. Learning styles - People learn best in different ways, i.e., hands on, hearing, and visual learning. Incorporate all styles when teaching.

INSTRUCTOR CHARACTERISTICS
The instructor's responsibility is to do everything possible to enhance the learning experience, making it as easy and enjoyable as possible. Fostering an informal atmosphere has been found to be best for teaching boating courses. The effectiveness of an instructor depends on the instructor possessing certain personal characteristics, which will make the learning experience more valuable to the students as well as making them as comfortable as possible.

1. Personal characteristics
   a. Enthusiasm - Assume an upbeat attitude.
   b. Leadership - The instructor is the role model and in charge.
   c. Attitude - Maintain a professional attitude. Treat everyone fairly. If possible, learn their names and be patient.
   d. Accept other people's values. Learn new information.
   e. Personal appearance - Dress neatly and appropriately. Wear your uniform (if you have one). If this is not applicable, dress a step "up" from your students. Be on time.
2. **Responsible management** (Do NOT assume anything)
   a. Class management
   b. Check lighting, ventilation and temperature.
   c. Make sure the instructor will be close enough to students to maintain good eye contact.
   d. Check the teaching aids to be used in the class. Ensure the visual aids are the right size for the room and are placed where all the students can see them. Set up all equipment before class. Make sure it is ready.
   e. When appropriate, set aside a section for group practice.

3. **Supervision**
   a. Plan the course with the Pennsylvania Fish and Boat Commission. Let the Bureau of Boating & Outreach know when and where your programs are scheduled by registering your course on the website.
   b. Administer the course. Make sure all material is covered. Guest speakers for certain subjects may be appropriate, but their conduct is the responsibility of the instructor.
   c. Use the Fishing Program Evaluation Form to evaluate the program.

**SUGGESTIONS FOR EFFECTIVE COMMUNICATION**

Communication is the act of transferring information between two or more people. Effective communication is the backbone of good instruction. To communicate effectively, an instructor should put the following into practice:

1. Establish and hold the attention of the entire group at the beginning of the first class.
2. Define clearly what the students can expect to get from the course. Explain what will be happening during the session, what will be discussed, what they will learn, and when the class will have breaks.
3. Involve all class members in the discussion, but keep it under control. Do not let one student dominate the conversation.
4. Give instructions in a conversational tone and keep them simple.
5. Limit instructions to as many as the students can handle at one time.
6. Relate the subject matter to common or universal experiences, but do not overdo "war stories."
7. Learn to think while "standing on your feet."
8. Use words everyone knows. Define new words in a class discussion. Write the key points in advance or write them on a large sheet of paper and post it in the classroom, referring to it when needed.
9. Do not read to the students unless you need to quote something to them.
10. Avoid annoying verbal and nonverbal distractions (i.e., jingling change, constant swaying, and verbal fillers such as "umms" and "you know").

**VOICE**

One of the best teaching tools is the instructor's voice. Regardless of its quality, there are many ways the instructor's voice can be used to its best advantage.

1. **Volume** - Talk loud enough so all students can hear. A microphone should be used if the instructor's voice tends to be soft or there is a large group.
2. **Delivery** - Vary the rate of the delivery according to the difficulty of the subject and the learning ability of the students. Avoid speaking in a monotone.
3. **Pronunciation** - Pronounce or accent each syllable clearly and distinctly. Pauses and raising and lowering the voice in much the same way we use punctuation in writing are effective techniques. Be especially careful to pronounce boating terms properly to protect your credibility as the instructor.

4. **Conversation** - Instructors should realize they are not making a speech or preaching. Instructors are talking with, not at, the students. Everyone should be involved in the discussion. Try not to talk longer than fifteen minutes without involving the students in some manner.

5. **Clarity** - Stay away from expressions such as "always," "never," "I say." Instead, cite legitimate, credible authorities to emphasize a point, such as "the textbook states" or "generally." Be as diplomatic as possible.

**BODY LANGUAGE**

Body language refers to the way the body reveals feeling, intent, values, attitude, belief and motivation through the language of the eyes, facial expression, posture, and gesture.

1. **Student's body language**
   a. Instructors should be alert to student reactions by letting their eyes travel around the room.
   b. Include students in the discussion who appear to be tired or bored.
   c. Direct eye contact may bring an inattentive student back to attention. If eye contact fails, take a step toward the student and direct a question to him/her.
   d. Check posture. Students slouched down in their seats may not be paying attention. A short break may be helpful.
   e. Do anything appropriate to hold the students' attention. An inattentive student will not learn.

2. **Instructor's body language**
   a. Instructors must be aware of their own nonverbal communication.
   b. Show a willingness to listen by leaning the head or body forward.
   c. Show friendliness by smiling and making frequent eye contact.
   d. Refrain from making gestures that may confuse the student or indicate anger or frustration (i.e., clenched fist, frown).

As an instructor, you are encouraged to develop and create additional teaching methods for presenting the content. All subjects in the lesson plan must be presented, but the method used to present the material is flexible.

A REMINDER: It is the instructor’s responsibility to make all students in your course feel as comfortable as possible. The Commission strongly recommends that smoking be prohibited in any Commission sponsored course. Instructors should inform the students of this at the very beginning of the course, as well as the location of the restrooms, exits, and an overview of the Program schedule. Also, facilities being used for public boating courses should be handicapped accessible.
What We Know About Youth Development and Fishing
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Introduction
Research on developmental changes of children and teens has a long history. More recently, those concerned with outdoor recreation, environmental education, and (more specifically) fishing recruitment and retention have been active in research and education. This fact sheet summarizes some of the most useful youth development research. As all youth development specialists would caution, it’s important to note that not all people develop in the same way at the same age. But what we do know is that there are certain patterns to youth development—certain “ages and stages” that are commonly experienced by most people!

Even though there will always be some people who don’t fit a subjectively chosen age and stage scheme or sets of categories (some will have developed faster or slower than the norm), the lifestage concept can be effectively used to develop outings, lessons, field trips, events and programs that will meet the needs and interests of the majority of individuals at a particular lifestage. Adaptability on the part of the volunteer working with the group allows those activities to be modified to include all youth, regardless of where they fit developmentally. The information following is included to help everyone working with youth. It can be helpful in planning and developing the overall structure of sportfishing programs for youth groups, as well as with specific activities, lessons and experiences.

Ages and Stages of Youth Development
Pre-school Years (up to age 5) - Although most 4-H and other organized youth programs rarely start with pre-school-aged youth, it’s important to start our focus on youth development and fishing at this young age. During this time, the primary influences on the pre-schooler are family members and caregivers.

Physical development during this period is tremendous; young people are developing fundamental large motor skills, movement skills and language skills. Outdoor play may contribute greatly to the acquisition of these motor skills.

Thinking (or cognitive) skills are also developing rapidly. Thinking processes at this time are intuitive, and depend on perceptions instead of truly logical thought (Schiamberg 1988). Yet, pre-school children are learning to categorize, classify and organize things into categories (Piaget 1963). Children this age are curious, and ask many questions (Henderson and Moore 1979). The child’s emerging self-concept is based on what he/she is capable of doing (physically, and cognitively). By age 4 or 5, children describe themselves in relation to their possessions, and are starting to use their peers’ evaluations in refining their self-image. They also are able to talk about themselves in terms of “likes” and “dislikes,” and see themselves in terms of categories such as gender, age or activity likes/dislikes.

Since many of today’s anglers report that they first started fishing during these years, these patterns of early development are important to understand. Encouraging pre-schoolers to try fishing, providing them their “own” fishing rod, responding to their curiosity about fishing and
water, practicing the motor skills involved in casting, and talking about fishing may help incorporate fishing into the child’s early self-image.

Childhood Years (ages 5-10, grades K-5) - During these years, the child is much more involved with people outside the family. Although physical development is slower and more gradual than during preschool years, this is still an important time for completion of development of fundamental motor skills (Schiamberg 1988). Children still have limited mobility, and parents limit their “travels” exploring the neighborhood (Rejeski 1982). During this time, development of the child’s thinking abilities is remarkable! For much of this stage, thinking is logical and concrete (Piaget 1963). As this stage ends, (or by about age 11 or 12), thinking becomes more flexible, and the child is able to deal with more abstract concepts, solve more complex problems, test hypotheses, and see multiple viewpoints.

As an example of this cognitive development, children’s conceptions of death change. At first, children do not recognize that death is irreversible; they view it as magical and occurring for odd reasons. Later, children view death in concrete terms, but by age 11 or so, they can understand the more abstract concepts of death (Keecher 1975).

As another example of cognitive change in childhood years, consider these changes in interest in the environment (Rejeski 1982). At about age 6 or 7, children are fascinated mostly with the most common and widespread (obvious) features of their environments. Children may not understand complex environmental concepts, because children this age are very “me-centered” in their views of the environment. For example, they may attribute human emotions to inanimate objects (or fish and wildlife).

Between the ages of 7-10, children are the least informed about animals (Kellert and Westervelt 1983). Later (around ages 9-10), children begin to incorporate both direct, hands-on experience and indirect experiences (e.g., reading) into their ways of understanding and making sense of their environments. During this stage, children are using their new thinking skills to classify objects and use symbols (language, pictures) to describe their world (Rejeski 1982). Now they are able to be aware of human impacts on environments.

Childhood is also an important time for social and personal development. Children’s impulsive behaviors are decreasing, and their attention spans are increasing! It is during this stage that feelings of self-competence emerge. In fact, children may define themselves as “I am what I learn” (Erikson 1959). Being successful and receiving positive feedback are important to this age group. By age 8, children already evaluate themselves in comparison with others (Schiamberg 1988). This has important implications; how to handle competition (or whether to make an event or learning experience competitive) should be carefully considered (see Fact Sheet entitled “What We Know About Youth and Competition,” by Hall, 1991).

Later in childhood years, the child becomes less “me-centered” and can understand better the thoughts and viewpoints he/she holds and those held by others (Schiamberg 1988). Also late in childhood, the youth is starting to emerge from the time when he/she perceive that rules are clear-cut, made by authority figures, and have to be followed for those reasons. Instead, they are beginning to make decisions on more complex moral issues based on mutual respect for others. (Around the start of adolescence, young teens take into account their own more abstract moral/ethical values, principles and ideals for specific situations.)

So all of these changes mean that childhood is a great age for development of a lifelong interest in fishing. Children this age are naturally interested in the outdoors, animals and in developing competence in the activities they enjoy. Several recreation researchers have observed that
childhood participation in activities may lead to lifelong interest and involvement (Yoesting and Christensen 1978; Kelly 1977).

During childhood, physical abilities make it easier for youth to stay still longer and to use the particular skills necessary in fishing. Yet, their young age and still relatively short attention span necessitate active learning (with hands-on or group activities). Fishing should be fun, trips should be short and planned with children’s needs in mind, and the likelihood of success (catching at least some fish—not necessarily large ones or many fish) should be high. Research in Michigan has shown that by grade 6, up to 90 percent of youth have had the opportunity to go fishing at least once (Wong-Leonard 1992). Other surveys suggest that the proportion of kids who have tried fishing is slightly different from state to state (probably depending on the amount of fishing opportunities accessible) and may be lower in highly urbanized areas. Yet, consistently, most anglers nationally report that they started fishing before their teen years. Among Michigan’s most active anglers, over 91 percent say they started fishing before age 11, and a surprising 46 percent started even before age 5 (Dann 1993). So taking young children fishing is important!

Adolescence (early adolescence ages 11-15, grades 6-8; later adolescence ages 15-18, grades 9-12) is a time of transition—teens change from depending wholly on family to a life of more freedom, conflicting values, and many influences on their own views and values (Steinberg 1980). Early adolescence (from about age 10 to age 15) in particular is characterized more by change than by stability! There is also very wide variability between teens in their rates of development; some teens may seem like they are 15 years old, “going on” 20, or they may seem more like children!

This time of change in the teen years is, of course, brought on by the dramatic physical changes of puberty. These changes lead to new feelings about oneself, and greater interest in dating/courtship (Hill 1980).

Changes in thinking abilities are also dramatic. Whereas children focus on the concrete, and the “here and now,” teens are learning to consider possibilities and hypothetical situations, abstract ideas and concepts, and perspectives of others (Hill 1980, Steinberg 1980). These abilities raise new issues for teens. This age group no longer accepts parents as always being correct (Steinberg 1980), and relationships with parents change. Early adolescents also become more reflective and introspective in thinking about themselves, and concerned about what others think about them.

Peers are increasingly important at this age. Most of a teen’s time is spent with friends or classmates (Csikszentmihalyi and Larson 1984); in fact, the most popular leisure activity of teens is spending time with friends. Peers provide teens with companionship, share knowledge, provide status, provide norms to guide behaviors, provide an “escape” from family, and serve as a testing ground for behaviors, emotions, feelings, values and lifestyles (Hartup 1984, Williams and Stith 1980).

The peak time for teens to feel “peer pressure” (the pressure to conform to what other teens expect of them) is around 8th or 9th grade; later, this pressure is lower (Moschis 1987, Steinberg and Levine 1990). The pressure to conform to sex role stereotypes (“traditional” ways of acting based on whether you are male or female) may be especially strong during adolescence, and this pressure may be stronger for girls than for boys (Hill and Lynch 1983). In spite of strong peer pressures, most teens report that they would like to spend more time talking with parents than they do (Steinberg 1980, Steinberg and Levine 1990).
Identity (identifying with certain goals, ideals) is an important issue for teens. Teens may become more concerned with ethics, career development, and other issues of identity (Schiamberg 1988, Steinberg and Levine 1990). They are more idealistic and future-oriented than children, and are increasingly able to understand complex issues, such as those related to government and politics (Gallatin 1980, Schiamberg 1988).

Research on fishing participation has shown that among today’s most active anglers, most had the opportunity to become even more deeply involved in fishing during teen years (Dann 1993). Anglers reported that several factors may have contributed to their own increased fishing during teen years: access to a car or other transportation, more free time, friends who fish, and changing interests and preferences (Dann 1993). So retaining youth in fishing becomes critical during the teen years for developing lifelong interest in the activity!

Similarly, consumer researchers have noted that the attitudes and behavior patterns established during adolescence may carry over into adulthood and become part of a person’s way of life (Moschis 1987). Since early adolescence is a key time for trying new hobbies and interests, fishing could be a positive experience for teens. These activities and learning experiences through organized clubs help youth adjust to adulthood and are important links to experiencing enjoyment in activities pursued into the adult years (Caldwell and Bence 1993).

Since teens are gaining mobility and separating from parents, they may, in fact, have a greater opportunity for venturing out to experience fishing with peers. Yet, there may also be barriers to fishing participation in teen years. Since cliques are popular, and a large amount of time is spent socializing, if fishing is not perceived as “cool” by a group, even a teen with a good introduction to fishing during childhood may “quit,” perhaps permanently. Furthermore, many anglers reported that work, school and family obligations, and other recreation activities (e.g., sports), prevented them from fishing more often in teen years (Dann 1993). Girls, in particular, may have many more constraints than boys (e.g., lack of transportation, lack of skill, peer pressure to do “girls’ things”).

Presently, more research is being conducted to understand some of the complicated patterns of angling participation, and the potential influences of mentors and club involvement on activity and interests. Clearly, programs that specifically attract and keep teens involved in fishing are needed (perhaps much more than the programs and derbies that simply “get kids started” in fishing) (Dann 1993). There is some limited evidence that teens seek different elements of the fishing experience than do other age groups. Teens may be quite interested in adventurous fishing (catching lots of fish, catching large fish, as on a charter), or in quiet reflective fishing (as in stream fly fishing alone). So this information, and other background on youth development, is vital to those of us offering learning experiences to this age group!

**About Youth at Risk**

This term usually refers to youth “at risk” of not having the developmental experiences necessary for success in adulthood. Risk factors are usually defined as things that may increase a youth’s vulnerability to having problems during the “usual” developmental stages or to displaying problem behaviors (such as drug use, sexual activity, etc.).

On the other hand, “protective factors” are those experiences or environments that promote a youth’s healthy development and competence. (For more information on youth at risk, see the Fact Sheet entitled “Youth At Risk,” by Hughey, 1992.)

Much has been written about youth at risk. Certainly, youth at risk lack many of the factors or experiences described in this fact sheet that may help a youth develop lifelong interest in fishing.
It is easy to see how involvement in activities such as fishing may be a low priority for families and young people just “struggling to get by.”

Constructive use of leisure time is certainly related to the risk factors and the protective factors faced by today’s youth. So there is indirect evidence that fishing can help young people develop constructive habits for their free time! It’s always essential to consider that among any population of youth and families some might be considered “at risk,” and thus have other concerns than whether or not they go fishing on a particular day. Targeting specific sportfishing learning experiences for at-risk audiences may mean: providing special transportation, working with neighborhood associations or parks programs, finding mentors for youth other than family members, providing easy access to equipment, or reaching community groups through less traditional channels (e.g., churches) instead of through the “usual” groups (e.g., sportsmen’s clubs).

References
Hall, D. 1991. What we know about youth and competition. PDC Series 93411-21. ISU
Hughey, J. 1992. Youth at risk. PDC Series 93202-06. KSU
Steinberg, L. D. 1980. Understanding families with young adolescents. Center for Early Adolescence, Carrboro, NC.

Additional Information for Volunteers
SECTION III
Planning and Conducting SMART Angler Programs

The SMART Concept
This program uses the acronym "SMART" to help anglers remember important skills, attitudes and knowledge.

SAFETY First!
MANNERS Are Important.
APPRECIATE Clean Water.
RELEASE Some of your Catch.
TEACH Others to be S.M.A.R.T. Anglers.

SMART Program Format and Lesson Plans
Instructors must follow one of two formats for the SMART Program. The SMART two options for SMART Programs include; a half-day program (2½ hours) and a full-day format (6 hours). The 2½-hour format fits easily into an evening or Saturday morning time slot. The 6-hour/full-day format can be utilized as part of a summer camp for a single day, or divided among six different days.

The supplemental activities can be found in the Project Wild Aquatic. The Commission also makes available videos, fact sheets and brochures that will supplement your SMART programs.

SMART Program Equipment and Materials
The Fish & Boat Commission will supply each Fishing Skills Instructor, provided paperwork is submitted four weeks before the event, with the following:
- Loan of spin cast rod and reels (up to 50 outfits).
- A "SMART" packet for each participant
- Supplemental handouts: fact sheets, posters, brochures (see the Educational Resource Catalog)
- Supplemental videos (see the Educational Resource Catalog). For 6-hour only
- HACH test kits for dissolved oxygen and pH. For 6-hour only

In addition, tackle boxes (1 for every 6 participants) may be available on a first-come first-served basis. Contact the Bureau of Boating & Outreach in Harrisburg about the availability of tackle boxes. Fishing Skill Instructors are responsible for obtaining other equipment such as video cassette players and TVs, flip charts and other office supplies.
SMART Packet Contents
While the specific contents of the SMART packets may change each year, listed below are examples of the items included in the 2½-hour packet.

1. Litter bag
2. PLAY – Smart Angler
3. PLAY – Take Your Family Fishing
4. All About Fish Fact Sheet
5. Fish ID brochures
6. Supermarket Baits/Knots on Knots Fact Sheet
7. Pocket First Aid Kit
8. Amphibian Quiz/Are you a smart angler fact sheet

COURSE OVERVIEW
The Pennsylvania Fish and Boat Commission's Smart Angler program is an introductory program for young anglers in fishing and fishing safety. The 2 ½ program is designed to provide the student with basic fishing, safety and stewardship information.

The 2 ½-Hour SMART Angler Class (Half-Day) Lesson

Lesson Plan

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Welcome and Introduction 15 minutes</td>
</tr>
<tr>
<td>2. Aquatic Ecosystems 20 minutes</td>
</tr>
<tr>
<td>3. S.M.A.R.T. 20 minutes</td>
</tr>
<tr>
<td>4. Casting Practice 20 minutes</td>
</tr>
<tr>
<td>5. Fishing 1 hour</td>
</tr>
<tr>
<td>6. Wrap-up 15 minutes</td>
</tr>
</tbody>
</table>
Welcome and Introduction

Theme
An introduction to instructors, the Pennsylvania Fish and Boat Commission and the SMART Angler Fishing Program.

Objectives
By the end of the unit, the students will be able to:
1. Describe the day’s events.
2. Identify the agency responsible for fishing and boating in Pennsylvania.

Suggested Course Materials
Sign-up Sheet
Nametags
Aquatic lessons (Project Wild Aquatic)

Instructor References
Fish Scale Sketch
Time: 15 minutes

Content

Welcome and Introduction

A. Welcome the group and introduce instructors and volunteers. Discussion

B. Pass out a sign-in sheet.

C. Pass out nametags.

What Is a SMART Angler Class?

A. Today you will be participating in a SMART angler class. Discussion

B. Everyone will learn about aquatic ecosystems and how to fish the SMART way.
   1. Included are some fun activities, casting practice and a chance to fish.
   2. Everyone will get a “goody” bag at the completion of the class and a free subscription to the Pennsylvania League of Angling Youth (PLAY) Newsletter.
C. The Pennsylvania Fish & Boat Commission sponsors SMART angler classes.
   1. The Commission is responsible for fish, aquatic invertebrates, reptiles and amphibians, and it regulates fishing and boating activities in our state.

Icebreaker Activity

A. Conduct an icebreaker activity.
Aquatic Ecosystems

Theme

Knowledge of aquatic ecosystems is an important fishing skill.

Objectives

By the end of the unit, the student will be able to:
1. Identify and describe the essential components of habitat (water, food and shelter).
2. Describe the importance of good habitat for fish and other wildlife.
3. Define “limiting factors” and give examples.
4. Recognize that some fluctuations in wildlife populations are natural as ecological systems undergo a constant change.
5. Define carrying capacity.
6. Define aquatic invasive species.

Suggested Course Materials

Go Fish Lesson Plan (WILD About PA Fishes)
Paper, chalkboard or easel pad, markers and play area or gym

Instructor References Available on PFBC Website:

Great Fishing Needs Great Habitat
How to Make a Largemouth Bass
PLAY: Why Fish Need Trees (Gimme Shelter)

Time: 20 minutes

Content

Ecosystems

During this portion of the 2½-hour class, you will have enough time to complete only one activity related to ecosystems. The selected activity focuses on the components of aquatic communities and the needs of aquatic animals.

A. Understanding aquatic ecology is an important skill for an angler to have. Knowledge of habitats, habitat components and aquatic critters will help you become a better angler and answer the following questions:

PA Fishing Skills Instructor Manual Revised 3/04/09
1. Which is the best bait or lure to use?
2. Where is the best place to fish on a lake, pond, river or stream?
3. Where are the fish today?
4. Where do I go to catch certain fish like bass, trout or catfish?

**Aquatic invasive species** (AIS) are aquatic animals and plants that have been introduced into waterways in which they do not live naturally. AIS have harmful effects on the natural resources in these ecosystems and the human uses of these resources.

**Why are AIS such a problem?**
Invasive species are also known as biological pollution because some invaders can pack the same punch as other kinds of pollution, disrupting ecosystems and reducing biodiversity. AIS can:

- **prey on native species**, like the flathead catfish, recently introduced to the Delaware River. The Flathead has a huge appetite for a variety of fish;
- **compete with native species**, like purple loosestrife that can take over a marsh or wetland by crowding out native plants;
- **alter ecosystems**, like nutria that dig channels that convert productive, green wetlands of the Chesapeake into barren mud flats;
- **spread diseases**, like the Canada goose that can spread bacteria and viruses and excess nutrients in their waste;
- **cause economic damage**, like the zebra mussel that is estimated to cost the Great Lakes $100 to $400 million (that’s $400,000,000) each year to control.

**Communities**

A. Let’s do a fun activity, which demonstrates the influence of habitat components on aquatic animals like fish.
   1. The activity will also demonstrate how a fish population fluctuates and how habitat determines carrying capacity, or the number of fish that the habitat can support.
S.M.A.R.T

Theme

The best way to fish is the SMART way. SMART is the acronym for safety first, manners are important, appreciate clean water, release some of your catch and teach others to be SMART anglers.

Objectives

By the end of the unit, the student will be able to:
1. Identify what each letter in the word SMART represents.
2. List one example of a good behavior related to each of the following:
   a. Safety
   b. Manners
   c. Appreciation of clean water
   d. Releasing your catch
   e. Teaching others

Suggested Course Materials

Chalkboard or easel pad
Markers
One fishing rod, pre-rigged with casting plug
One fishing rod, pre-rigged with hook

Instructor References Available on PFBC Website:

Are you a SMART Angler?
Care of the Catch
Cold-Water Safety
Floaters and Fishermen
The Golden Rule
Put 'em Back Alive
Reach, Throw, Go!
Springtime Stream Dangers
Staying Safe in Winter Weather
The Toolbox: Water Safety
Wading Safely
Why Do We Have Fishing Regulations

Time: 20 minutes
Content

What is a SMART Angler?

A. S.M.A.R.T. stands for:
   1. Safety first.
   2. Manners are important.
   3. Appreciate clean water.
   4. Release some of your catch.
   5. Teach others to be SMART anglers.

Teaching Method

Discussion

Safety Always Comes First

A. Be careful around lakes streams and piers.
   1. Don’t run when carrying a fishing rod.
   2. Stay back from the slippery bank edges.
   3. Remember that cold water calls for extra caution.
   4. Wear your life jacket. It floats—you don’t.

B. Be extra careful when wading.
   1. Use waders with a felt bottom.
   2. Use a wading stick.
   3. Watch for slippery rocks, sticks and deep holes.

C. Be careful when casting.
   1. Check behind you before casting.
   2. Keep a rod’s length from people, trees and objects.

D. Handle hooks and fish carefully.
   1. Always secure the hook to your rod when not fishing.
   2. Learn how to remove an embedded hook.
   3. Watch out for those sharp fins on fish.

Manners Are Important

A. Anglers need to have good manners toward other people.
   1. Ask permission from and respect landowners.
   2. Help anglers when in need.
   3. Give others plenty of space.
   4. Don’t yell, boast or brag.

B. Anglers also need to have good manners toward...
the environment.
1. Don’t litter or pollute (obvious trash like candy wrappers and pop cans, and not so obvious like monofilament line, old hooks, etc.).
2. Pick up trash that you find (as long as it is not dangerous like needles, broken glass or poison).

Appreciate Clean Water

A. Learn all you can about the fish you are after and where they live. It will make you a better angler.

B. Without clean water, there are no fish. Become a conservationist and help do your part to protect our water resources.

C. Explain some ways that you appreciate clean water.
   1. Don’t leave litter behind.
   2. Take a bag along and pick up litter.
   3. Recycle fishing line.
   4. Report polluters.

Release Some of Your Catch

A. It’s OK to keep a few fish.
   1. Keep only those fish you intend to eat.
   2. Take care of your catch.
   3. Don’t fill your freezer to have fish go to waste.
   4. Come prepared to get your fish home.
   5. Make sure you know how to identify your fish and their seasons, sizes and creel limits.

B. It’s also good to let a few go to fight another day.
   1. Learn how to release your catch.
      a. Land the fish quickly.
      b. Keep the fish in water as long as possible.
      c. Handle the fish as little as possible.
      d. Quickly remove the hook.
      e. Return fish to the water as soon as possible.
      f. Revive the fish if necessary by gently moving it back and forth in the water.
Teach Others To Be SMART Anglers

A. The future of our sport is in your hands.
   1. We need your support if fishing is to remain a part of our culture.
   2. Why not take someone under your “fin” and teach him or her how to become a SMART angler.

Casting Practice

Theme

Casting practice can make you a better angler.

Objectives

By the end of the unit, the student will be able to:
   1. Demonstrate how to perform an accurate overhead cast.

Suggested Course Materials

At least five spincasting rods pre-rigged with casting plugs
At least five hula-hoops, circles made from string or other targets
Rope or chalk to make a “casting line” marker

Instructor References

Fishing, Getting Started booklet
Practice Make Perfect

Time: 20 minutes

Content Teaching Method

Set-Up

A field, gym or other large area must be set aside before the casting practice session. Establish and mark a “casting” line and set up hula-hoops or targets at
varying distances. Rods should be rigged with casting plugs ahead of time.

Casting Techniques

A. Casting with the spincasting rod is very easy.
   1. Face forward and keep your feet planted about shoulder width apart.
   2. The key to a good cast is in the arm and wrist, not the feet.
   3. You control the cast just by pressing and letting go of the thumb button.
   4. Remember to look behind you and make sure there are no obstacles in the way.

B. The overhead cast is best when space is limited (and it is the cast we recommend you use for practice).
   1. Point at the target.
   2. Draw the rod back just past a vertical position.
   3. Allow the rod to flex.
   4. Start forward without pausing.
   5. Release line and follow through.

C. The sidearm cast is best when there is plenty of room between anglers and there are no overhead obstructions.
   1. Point rod toward the target.
   2. Draw the rod back, allowing it to flex behind and to the side of you.
   3. Bring the rod forward without pausing.
   4. Release line and follow through.

Casting Practice

A. Divide the students into approximately five groups and have them line up single file (as in a relay race).
   1. The first student at the front of the line will be handed a rod and have an opportunity to cast at the targets.
   2. Each person will get five casts.
   3. After five casts, he or she will move to the back of the line and give the next person a turn.

Lecture and demonstration

Demonstrate the overhead cast, aiming for one of the targets

Demonstrate the sidearm cast, aiming for one of the targets

Lecture

Hands-on activity
Casting Olympics (only if time allows)  

A. Set-up a casting area and arrange the hoops at a variety of distances from the casting line.

B. Divide the group into teams of four or five students.  
   1. Each team should select a name, such as “The Muskies” or “The Stoneflies.”

C. Designate five casting stations, one for each target.  
   1. Each team should go to a different station.  
      Teams should also select a member to start the contest.

D. Each team member will get two chances to land a "bull’s-eye" into the target (bounce-outs do not count).

E. The team with the highest number of bull’s eyes wins the “Olympics.”  
   1. You may wish to award prizes (candy or stickers) to the winning team members.

Evaluate competency of the students

Hands-on Activity

Fishing

Theme

The best way to learn about fishing is to experience it firsthand.

Objectives

By the end of the unit, the student will be able to:  
   1. Bait a hook.  
   2. Demonstrate the ability to fish independently.

Suggested Course Materials

First aid kit
Throw bag or throw able PFD in case of emergency
One instructor tackle box with scissors, spare tackle, pliers, etc.
Rods that are pre-rigged with hook, sinker and bobber
One tackle box for every six students (hooks, sinkers and bobbers)
Live bait (worms or night crawlers)
Assortment of “supermarket bait” (corn, cheese, dough balls, etc.)
Whistle

**Instructor References Available on PFBC Website:**

Care of the Catch
Fishing, Getting Started booklet
Knots on Knots
Know Your Sunfish
How to Rig a Minnow
Let’s Go Fishing in Pennsylvania
Nightcrawlers
Pennsylvania Fishes Identification Guide
Pennsylvania Summary of Fishing Regulations and Laws
PLAY: Any Issue
Pocket First Aid Kit
Put 'em Back Alive
Supermarket Baits
Why Fish Strike

**Time:** 1 hour

**Content**

**Set-Up**

Each participant will get to borrow one fishing rod. Rods should be rigged with hook, sinker and bobber before the fishing session. Extra pre-rigged rods should be kept on hand to replace those that break or become heavily tangled. Instructors and helpers should make themselves available to assist with baiting hooks, tying on new hooks and removing fish.

**All About Fishing**

A. Several guidelines must be reviewed before the fishing session.
   1. Review the SMART concept and stress safety.
   2. It is OK to spread out, but all participants must remain within sight of the instructor.

**Teaching Method**

Lecture and discussion
Question and Answer
3. We understand that tackle will sometimes break or get lost, but treat our equipment as if it were your own.
   a. If something breaks, please let us know so we can fix it.
   b. Keep track of all your tackle and don’t forget to return it when the session is over.
4. The “whistle” means the fishing session is over.
   a. Students must return promptly with their tackle in the same condition that it was given to them.

B. Fishing is meant to be a relaxing sport. You don’t catch fish with every cast.
   1. Patience is very important.
   2. Use the quiet time to think about what life is like for a fish (where it lives, what it eats, etc.)
      a. Thinking like a fish will help you catch more fish!

Using Bait

A. One of the ways you can improve your chances of catching fish is by using live bait.
   1. Although a lure will sometimes work well, live bait is usually a sure bet and it’s what fish are used to eating all the time.
      a. Nightcrawlers, minnows, maggots, grubs, crickets and crayfish all work well.
      b. Nightcrawlers or worms are usually your best bet.
   2. Remember to take good care of your bait so that it will be fresh and lively.
      a. Keep bait cool and out of the sun.

B. Baiting a hook is easy.
   1. Grab the worm and carefully place it on the hook.
   2. Give it a try.
      a. Use cheese or corn, if you don’t like worms.

Unhooking and Releasing Fish

A. Once you have hooked a fish, you must bring it in.
1. Reel in slowly, depending on the size of the fish and the tackle you are using.
2. With the fish close at hand you have a choice.
3. Do you keep it or let it go (release it)?
4. The hook is removed with the same technique either way. You should keep the fish in the water as much as possible if you plan to release it.
5. Remove the hook the same way it went in.
   a. Small needle nose pliers help you get a good grip on the hook.
   b. Be careful when holding sunfish! They have spines located on their backs that are sharp!

B. If the fish is going to be kept, place it on a stringer or in a bucket or cooler.
   1. Some anglers will kill the fish before placing it in the cooler.
      a. Give the fish a rap on the top of the head with the handle of a knife or pliers.

C. Keep only what you will eat as long as it is within the season, size and kreele limit:

   1. Time is important. Bring the fish in quickly and unhook it quickly.
   2. Keep the fish in the water as much as possible and handle it only with wet hands.
   3. If the hook is in deeply (not in the mouth), just cut the line near the fish's mouth.
   4. If the fish is not ready to swim away on its own, gently move it back and forth in the water until it can.
   5. Following these rules won't guarantee that every fish you put back will live to be caught again, but it will sure help!

Fishing Session

A. Review boundaries on the areas where the participants can fish and set time limits.

B. Remind participants to return the equipment in the same condition that it was given to them.

Demonstrate proper handling and release technique

Hands-on activity
C. Disperse for fishing and don’t forget to fish the SMART way.

D. Give a 5-minute warning, which will allow participants enough time to wrap up and return their equipment.

Instructors and adults should circulate among the children to provide assistance.

Wrap-Up

Theme

Wrap-up and conclusion to 2½-hour class

Objectives

By the end of the unit, the student will be able to:
1. Recall what SMART stands for.
2. List SMART behaviors that occurred during the fishing session.

Suggested Course Materials

2½-Hour SMART Angler Packet

Instructor References

Are You a SMART Angler?
PLAY: Any issue

Time: 15 minutes

Content

Wrap-up

A. Review what the letters of SMART stand for.
   1. Can any of you give specific examples of SMART behaviors that you saw today?

B. Manners are a very important part of the SMART concept. We will take a minute to police the area and make sure that there is no equipment or litter

Teaching Method

Question and answer

Discussion
lying about.

C. Pass out 2½-Hour Packet. The following items are included in the packet.
   1. PLAY Newsletter
      a. PLAY stands for Pennsylvania League of Angling Youth. It’s filled with lots of fishing information and fun activities.
      b. You or your parents must complete and return the application on the last page to receive this free newsletter.
   2. Litter bag for future fishing trips.
SECTION VI

Planning and Conducting Family Fishing Programs

Family Fishing Program Format and Lesson Plans
Instructors must follow a format close to the SMART Program for the Family Fishing Program. The Family Fishing Program covers all of the same material as the SMART Program but is geared to let families enjoy the activity together. The 2½-4 hour format fits easily into an evening or Saturday morning time slot which is going to be when you hold a Family Fishing Program.

You can find supplemental activities in the Project Wild Aquatic curriculum. The Commission also makes available fact sheets and brochures that will supplement your Family Fishing program.

Family Fishing Packet Contents
While the specific contents of the SMART packets may change each year, listed below are examples of the items included in the 2½-hour packet.
1. Litter bag
2. PLAY – Smart Angler
3. PLAY – Take Your Family Fishing
4. All About Fish Fact Sheet
5. Fish ID brochures
6. Supermarket Baits Fact Sheet
7. Pocket First Aid Kit
8. Amphibian Quiz/Are you a smart angler
9. Summary guide
10. Fishing getting started
11. Angler Magazine

The 4 - Hour Family Fishing Program Lesson

Lesson PlanTime
1. Welcome and Introduction20 minutes
2. Aquatic Ecosystems 20 minutes
3. S.M.A.R.T. 20 minutes
4. Casting Practice20 minutes
5. Fishing together as families 2.5 hour
6. Wrap-up 10 minutes
Family Fishing Program Equipment and Materials

The Fish & Boat Commission will supply each Fishing Skills Instructor, **providing paperwork is submitted four weeks before the event**, with the following:

- Loan of spin cast rod and reels (up to 50 outfits).
- Supplemental handouts: fact sheets, posters, brochures (see the Educational Resource Catalog)
- A "Family Fishing" packet for each participant.

In addition, tackle boxes (1 for every 6 participants) may be available on a first-come first-served basis. Contact the Bureau of Policy, Planning and Communication in Harrisburg about the availability of tackle boxes. Fishing Skills Instructors are responsible for obtaining bait and any additional equipment.

FAMILY FISHING PROGRAM LESSON PLAN

Welcome and Introduction

**Theme**

An introduction to the instructors, the PA Fish & Boat Commission and the Family Fishing Program.

**Objectives**

1. By the end of this Family Fishing Program, all participants will be able to:

   1.1. Identify the agency responsible for fishing and boating in Pennsylvania.
   2.3. Describe some of the economic and social benefits of fishing, and family fishing.

<table>
<thead>
<tr>
<th>Course Materials</th>
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<tbody>
<tr>
<td>• Signup Sheet for pre-registration</td>
</tr>
<tr>
<td>• Nametags (optional)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Instructor References</th>
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<tbody>
<tr>
<td>• Fish Scale Sketch</td>
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<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>15 Minutes</td>
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</tbody>
</table>
Instructor Outline

I. Welcome

   A. Welcome the participants and introduce the staff, instructors and volunteers.

   B. Check attendance from Signup Sheet. If group size is small enough, allow family members to introduce themselves.

   C. Introduce PA Fish & Boat Commission as the agency responsible for fishing and boating in Pennsylvania.

   D. Briefly mention how the Commission provides angler education programs that are funded with fishing license dollars and federal grants (from outdoor equipment taxes). This family fishing program is one of those programs.

   E. The Benefits of Family Fishing

      1. Quality family time outside
      2. Inexpensive activity for the whole family
      3. The entire family can participate
      4. Available 365 days a year

   F. Review the Day’s Agenda.

      1. SMART
      2. Regulations, Licenses and Where to Go
      3. Casting
      4. Equipment, Knots, Rigging and Baiting
      5. Family Fishing Session
      6. Wrap-up

   G. Review logistics, start/stop times, restrooms, site safety issues.

Aquatic Invasive Species (AIS)

Aquatic invasive species (AIS) are aquatic animals and plants that have been introduced into waterways in which they do not live naturally. They have harmful effects on the natural resources in these ecosystems and the human uses of these resources.

Some of the least-wanted AIS in Pennsylvania are European ruffe, sea lamprey, hydrilla, spiny water flea, purple loosestrife, Eurasian watermilfoil, Asian clam, and red-eared slider (turtle). In 2004, Northern snakehead was first found in Pennsylvania waters.
It's not always "foreign invaders" that are the problem. **White perch** and **flathead catfish** are other examples of species that have turned up where they don't belong. While native to some PA watersheds, they have been introduced to other areas.
Larger groups will require additional instructors. The group can be divided into smaller groups and rotate around stations. Here is one format:

1. Keep group together for welcome and introduction, SMART and Regulations.

2. Break larger group into two smaller, nearly equal groups* have each group pick a fish name.* Keep family members together.

3. Section 3: Casting and Section 4: Rigging, are best done with smaller groups.

4. One group goes to Casting, the other to Rigging.

5. After specified time period, the groups swap topics.

6. Regroup just prior to Family Fishing Session.
SMART Fishing

Theme

The best way for families to fish is the SMART way. SMART is the acronym for safety first, manners are important, appreciate clean water, release some of your catch, and teach others to be SMART Anglers.

Objectives

1. By the end of this session, all participants will be able to:

   1.2. Identify what each letter of SMART represents and give at least one example of a good behavior for each letter.

Instructor Outline

I. SMART Fishing

   A. S.M.A.R.T. stands for:

      1. Safety First
      2. Manners are important.
      3. Appreciate clean water.
      4. Release some of your catch.
      5. Teach others to be SMART anglers.

   B. Safety Always Comes First

      1. Be careful around lakes, streams and piers.
      2. Don’t run when carrying a fishing rod.
      3. Stay back from slippery bank edges.
      4. Don’t fish during storms (lightning).
      5. Remember that cold water calls for extra caution.
      6. Wear your life jacket on a boat or near moving water. It floats-you don’t.
      7. Be extra careful when wading.
         a. Don’t wade in fast moving water.

Course Materials

- Flip chart & easel pad
- Markers
- First Aid Kit
- Fishing rod rigged with hook, bobber and sinker
- Summary Book
- Youth PFD, waders or hip boots and wading staff
- Assortment of PDFs for participants
- Rubber Fish
- Large Hook
- “Passport” poster on releasing a fish

Instructor References

- SMART Are You a SMART Angler
- SMART Put Back Alive
- PLAY Are You a SMART Angler
- PLAY Caring for Your Catch

Time

25 Minutes
b. Use waders with a felt bottom.
c. Show hip boots or waders with felt bottoms.
d. Use wading staff.
e. Watch for slippery rocks, sticks and deep holes.

8. Be careful when casting.
a. Look around before casting.
b. Remember to check your “safety circle.”
c. Keep a rod’s length from people, trees and objects.
d. Look above for low hanging branches.

9. Handle equipment, hooks and fish carefully.
a. Always secure hook to your rod when not fishing or walking around.

10. Store fishing tackle carefully and keep it organized.

11. Learn how to remove an embedded hook.

12. Watch out for those sharp fins on fish.

13. Don’t forget to take along those items that can make your outing safe and more enjoyable.
a. First aid kit, allergy medication, bee sting kits, etc.
(Pocket first aid pub)
b. Appropriate clothing
c. Extra non-cotton clothes for cold days, rainwear, boots, hats, sunglasses, etc.
d. Plenty of snacks and water
e. Hand wipes
f. Sunblock and insect repellent.

14. Use the Buddy System
a. Always take a buddy or family member along.
b. Let an adult or someone else know where you are going and when you plan to be back.

C. Manners Are Important

1. Anglers need to have good manners toward other people.
2. Ask permission from and respect landowners.
3. Help anglers when in need, share your fishing spot with other anglers.
4. Give plenty of space and don’t crowd out other anglers.
5. Wade quietly and keep your voice down.

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Demonstrate proper fit of life jacket.

Demonstrate wading staff.

Demonstrate the safety circle using a rod.

Show items you have available and discuss.

Use Q+A to involve participants.

Distribute packets and use marker/masking tape to put names on them.

Query the participants on some ways they can keep the environment clean.
6. Don’t yell, boast or brag.

D. Appreciate Clean Water

1. Learn all you can about the fish you are after and where they live. It will make you a better angler.
2. Without clean water, there are no fish. Become a conservationist and help do your part to protect our water resources.
3. Carry your garbage out.
4. Take a litter bag along once in a while and pick up trash that you find along the waterway.
5. Don’t leave litter behind.
   a. Take a bag along and pick up litter.
   b. Recycle fishing line.
   c. Dispose of cleaners, oils, paints and other household chemicals in proper manner.

E. Release Some of Your Catch

1. Land the fish quickly.
2. Keep the fish in water as long as possible.
3. Handle the fish as little as possible.
4. Quickly remove the hook.
5. Return fish to the water as soon as possible.
6. Revive the fish if necessary by gently moving it back and forth in the water.
7. Discuss reasons to release a fish – undersize, out of season, not going to eat it, not prepared to take it home, have plenty, leave it for someone else to catch, etc.

F. Teach Others to be SMART Anglers

1. Fishing is a healthy and fun sport in which the entire family can participate-lifelong.
2. It’s easy to learn with some practice.
3. It’s also easy to teach others once you become good at fishing.
4. The future of Sportfishing is in your hands, especially adults, guardians and older family members.
5. Take someone under your “fin” and teach him or her how to become a SMART angler.
6. Don’t forget that your fishing license purchase helps to support educational programs for youth and families.
# Regulations, Licenses and Where to Go

## Theme

Pennsylvania provides lots of opportunities for families to go fishing. There are public waterways within a close drive of nearly everyone. Anglers 16 and over will need to have a fishing license and all anglers need to follow fishing regulations like seasons, sizes and creel limits.

## Objectives

1. By the end of this session, all participants will be able to:

   3.1. Explain where they can find information on seasons, sizes and creel limits.
   3.2. List three fishing spots near their home where they can take their family fishing.
   1.4. State that there are rules and regulations that govern fishing.

## Instructor Outline

I. Regulations and Licenses

   A. The rules of fishing are called laws and regulations. All anglers must follow these laws and regulations. They exist to keep us safe. They keep our waterways clean. And they also help us to conserve and manage fish populations for everyone to enjoy.

   1. Seasons determine what time of year we are allowed to fish for certain species.

<table>
<thead>
<tr>
<th>Course Materials</th>
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<tbody>
<tr>
<td>• PA Fishing Summary Booklet</td>
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<tr>
<td>• Fact sheet with license prices</td>
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<tr>
<td>• PA Fishing and Boating Map</td>
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<table>
<thead>
<tr>
<th>Instructor References</th>
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</thead>
<tbody>
<tr>
<td>• Current Summary of Fishing Laws and Regulations Pocket Guide</td>
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<tr>
<td>• (Optional) Print out of PFBC web page home</td>
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<tr>
<td>• PLAY: Caring For You And Your Catch</td>
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2. Sizes show how big the fish must be to keep.
3. Creel limits tell us how many fish we are allowed to keep.

**B. Anglers need to identify the fish they are after so they know which regulations will apply.**

1. You will receive a Fish ID Guide in your packets. Keep one in your tackle box to identify the fish you are catching.

**C. Our regulations also require that anglers 16 and over must have a fishing license to go fishing in our waterways.**

1. Why do we have and require anglers to pay for a license? The monies we collect form licenses go right back to you the angler. It provides:
   a. Staff to protect and manage the resources.
   b. Staff to enforce fishing regulations.
   c. Public access to waterways and places to fish.
   d. Fish raised in hatcheries like trout, walleye, musky, etc.
   e. Programs like this family fishing program.
   f. Educational resources to you and others (like teachers, etc.)

2. What does a license cost and where can I get one?
   a. Consult the page on Fishing Licenses in the PA Summary and mention fees.
   b. Licenses can be purchased at local sporting goods stores, small hardware stores and online. – Query them.
   c. Fishing licenses make nice gifts!

3. A fishing license will not be required during this family fishing program or any “fish for free” day.

**D. The best way to learn and remember some of the fishing regulations is to put yourself to the test. (Shift to end of section???)**

1. Have each family take out the PA Summary book from their packet.
   a. Give each family a fish species and have them briefly look up the season, sizes and creel limits for that fish.
   b. Assign fish that can be easily found in the Commonwealth Inland Waters like panfish, bass, walleye
or trout.

c. Choose a few of the families and have them share their fish species and the regulations that pertain to it.

II. Where to go?

A. Finding a place to go fishing is easier than you think. It’s as easy as opening up a map. The Commission provides lots of different resources to find a place near you. Refer to the following in the packets:

   1. Region Guides
   2. PA Public Fishing Waters
   3. PA Fishing & Boating Map

B. Commission website. The Commission website is a way cool place to find the latest information that is out there somewhere but is kind of hard to find elsewhere. This includes stocking schedules, hot topics, other FFP dates and events.

C. There are lots of family friendly places to go. Still waters (lakes and ponds) are a good start and easier for beginners than rivers or streams.

   1. PFBC Lakes
   2. County Parks or Community Parks (Township and City)
   3. State Parks
   4. Rivers and streams with public access.

D. The best way to learn about where to fish is to discover it for yourself.

   1. Using samples of the Region Guide, ask each family to find a “family friendly” waterway near their home where they can fish.

   Lead a brief discussion on some nearby waterways and allow the families to share the waterway they chose.
Equipment, Knots, Rigging and Baiting

Theme

Knowing how to select (or purchase) the right equipment and tackle, tie knots, rig fishing rods and choosing the right baits will make you a more successful angler.

Objectives

1. By the end of this Family Fishing Program, all participants will be able to:
   2.1. Prepare a fishing outfit for bait fishing, when given a rod, reel, hook, bobber and split shot.
   3.3. Identify what equipment and materials they need to go fishing, and where they can purchase gear and bait near their home. Also, identify where they may be able to borrow gear from FTLP.

Instructor Outline

I. Equipment
   A. It is important that anglers be familiar with the equipment they are using. Today we will be using a spin casting rod and reel combination. The parts include:
      1. Reel
         a. Thumb stop
         b. Drag control
         c. Crank handle
         d. Front cover
      2. Rod
         a. Handle
         b. Finger hook
         c. Guides
         d. Tip

Course Materials

- Spin casting rods pre-rigged with snelled hook, swivel, sinker and bobber
- Several unrigged spin casting rods
- Several different types of fishing rods or Passport Poster on fishing equipment for demonstration
- Instructor tackle box with miscellaneous tackle
- Assortment of hooks, split shot sinkers, bobbers and swivels
- Old fly line or pieces of heavy string for knot-tying practice
- Large fish hooks or eye bolts
- Fingernail Clippers
- Bait (live & artificial)
  “Passport” poster on fishing rig

Instructor References

Show actual examples of each type or use the “Passport” Poster, then explain the use of each.
B. There are lots of other types of equipment. Some of this equipment is meant to be used by more skilled anglers. Those rods and reels include:

1. Spinning rod and reel – good for bait or lures, fun to use.
2. Baitcasting rod and reel – good for bait or lures, harder to use.
3. Fly rod and reel – fly line or casting out tiny flies and streamers, takes lots of skill.

C. Terminal Tackle. Much of the other equipment that is used goes on the end of the line. We call this terminal tackle. Most of it is stored in a tackle box.

1. Hooks – assorted sizes and types for different uses, can buy them already snelled.
2. Snap Swivels – to keep line from getting tangled, for lures or snelled hooks.
3. Sinkers – assorted sizes and weights for different currents.
4. Floats and bobbers – keep bait off bottom, cork, plastic, different colors.
5. Fishing line – assorted weight and types for varying water colors and conditions.
6. Lures – spinners, plugs, flies, spoons, rubber worms, jigs, etc. (Instructor may show personal tackle)

Instructor should open a tackle box and show each piece of tackle while discussing (or use the Passport Poster on fishing equipment)

D. Where can this equipment be purchased?

1. Department stores, local sporting goods stores, chain sporting goods stores, small hardware stores.
2. Lead a discussion on sources for fishing equipment and tackle in their area.
II. Knots

A. Tying fishing knots is an important skill for anglers to have. You are more likely to lose fish if you can’t tie a good knot.

B. The easiest and quickest knot to tie is the improved clinch knot.

1. Pass the line through the eye of the hook. Double back and make five turns around the standing line.
2. Thread the line through the first loop above the eye, and then through the big loop.
3. Hold tag end and standing line while coils are pushed down, hook eye against. Moisten and slide tightly against the eye. Clip the tag end.

C. Another knot to tie is the Palomar knot.

1. Double about 4 inches of line and pass through the eye of the hook.
2. Let hook hang loose and tie overhand knot in doubled line.
3. Pull loop of the line far enough to pass over hook, swivel or lure.
4. Pull tag end and standing line to tighten. Moisten before fully tightening. Clip tag end.

D. Practice is the best way to learn and remember your knots.

1. Hand each family a piece of fly line and a big hook (or eye bolt).
2. Each family member should practice these knots for a few minutes until they feel comfortable tying them. Several times – observe for accuracy.
3. Parents should use this as an opportunity to coach or “teach” their family members.

III. Rigging

A. There are lots of different rigs that can be used for fishing. The type of fish you are after will determine the type of rig you use.

B. Today we will be using a basic bait fishing. Instructor should show the “Passport” Poster on knots and rigging. The rig consists of:

1. Hook
2. Sinker
3. Bobber
4. A snap swivel must also be used if a snelled hook is preferred.

IV. Putting It All Together

A. Setting up your own rig is the best way to become familiar with all the equipment and how it works.

1. Put the two pieces of the rod together at the ferrule and line up the guides.
2. Take the looped line from the reel handle and feed it up through the guides.
3. Cut off the loop and tie on a hook (or swivel if using snelled hooks).
4. Grab a split shot sinker. Squeeze the duckbill to open the clam. Position the sinker about six to eight inches above the hook (or snap swivel). Place over the line and pinch shut.
   a. Do not use your teeth, use fingers or pliers.

V. Baiting

A. There are as many kinds of baits as there are fish. It can be tricky choosing the right bait for the right fish. First you have to think like a fish. You have to know what it is they like to eat.

B. Live baits are often the best to use. It’s what the fish are used to eating everyday and sometimes the movement of the live bait is irresistible.

1. Live bait can be bought or it can be collected on your own.
   a. Worms can be dug from the garden or caught in the grass on a rainy night.
   b. Grasshoppers and crickets also work well. Catch them in your yard. Store in a container.
2. Some anglers collect their own bait. If you choose to collect bait on your own, don’t forget to make sure you know the regulations. Refer to the Current PA Summary page on Commonwealth Inland Waters for aquatic insects, crayfish, small baitfish (a.k.a. minnows), etc.

C. Commercial baits can also work well, but often get expensive.

1. Paste baits – trout, panfish
2. Marshmallow and “nibble” type baits – trout and panfish
3. Stinkbaits – catfish
4. Dough Baits – trout, catfish and panfish, carp
5. Plastic (flavored or salted) imitations

D. Supermarket baits are inexpensive, easy to get and fun to use. Everyone has some type of bait in their kitchen cabinet or refrigerator.

   1. Corn or peas
   2. Cheese
   3. Macaroni or bread
   4. Marshmallows
   5. Meats like liver, shrimp or hotdogs

E. Putting live bait on the hook is not as hard as it seems. Today we will be using worms for bait. Everyone will be putting their own bait on the hook. Pay attention!

VI. Everyone has just setup and rigged their fishing equipment. Now we are almost ready to go fishing.
Casting Skills

Theme
Practicing casting skills can make you a better angler.

Objectives
1. By the end of this session, all participants will be able to:
   1.1. Use spin-casting equipment to cast a practice plug into a hula hoop or other target at least once out of three tries.

Set-Up
A field or other large area must be set aside before the casting practice session. The area should be flat and have no trees or overhead obstructions. Establish and mark a “casting” line and set up hula-hoops or targets at varying distances. Rods should be rigged with casting plugs ahead of time. People using children’s rods need to be spaced accordingly.

Instructor Outline
I. Casting Techniques
   A. Casting is an important skill. It’s how you get your bait or lure into the water and to the fish. A spin casting rod is probably the

Course Materials
- Five or more spin casting rods, pre-rigged with casting plugs
- Five or more hula-hoops, circles made from string or other targets
- Rope or chalk to make a “casting line” marker

Instructor References
- Fishing, Getting Started Booklet
- SMART Practice Makes Perfect
- PLAY Take Your Family Fishing

Time
25 Minutes
easiest to use.

B. The overhead cast is best when space is limited (and it is the cast we recommend you use for practice).

1. Push the button in and point your rod at the target.
2. Draw the rod back over your shoulder just past a vertical position.
3. Allow the rod to flex.
4. Swing the rod forward toward your target.
   a. As the rod comes forward, take your thumb off the button.
   b. The line will release and head towards the target.
5. Remember to follow through. The motion should also be nice and easy; don’t “whip” the rod.

C. The sidearm cast is best when there is plenty of room between anglers and there are no overhead obstructions.

1. The technique is the same as the overhead cast, except:
   a. Draw the rod back, allowing it to flex behind and to the side of you instead of in a vertical position.

II. Casting Practice

A. Divide the participants into approximately five groups.

B. Give each group a pre-rigged rod. The first participant, at the front of the line, will have the first opportunity to cast at the targets.

   1. Each person will get five casts.
   2. After five casts, he or she will move to the back of the line and give the next person a turn.
   3. Have adults and kids coach each other.
Fishing

Theme

The best way to learn about fishing is to experience it firsthand.

Objectives

1. By the end of this session, each family group will be able to:
   1. Report that they have an increased likelihood of going on a family fishing trip in the next six months.

Set-Up

Each participant will get to borrow one fishing rod. Rods should be rigged with a hook, sinker and a bobber before the fishing session. A few extra pre-rigged rods should be kept on hand to replace those that break or become heavily tangled. Extra volunteers and instructors should make themselves available to assist with baiting hooks, tying on new hooks and removing fish. Identify boundaries that participant must remain within during this session.

Instructor Outline

I. All About Fishing

   A. Several guidelines must be reviewed before the fishing session.

      1. Review the SMART concept and stress safety.
      2. It is OK to spread out, but all participants must remain within specified boundaries.
      3. Tackle will sometimes break or get lost. Treat our equipment as if it were your own.

         a. If something breaks, please let us know so we can fix it.
         b. Keep track of all your tackle and don’t forget to return it when the session is over.
         c. Remind families to pick up after themselves.

      4. A “whistle” will be used to signal the end of the fishing or a dangerous condition.

         a. Families should gather up their equipment, bait, personal gear and litter and return to the meeting location.

Course Materials

- First aid kit
- Throw bag or throwable PFD in case of emergency
- Nail clippers, scissors and pliers for instructors
- Rods that are pre-rigged with hook, sinker and bobber
- One mini-tackle box for family (hooks, sinkers, swivels, bobbers, etc.)
- Live bait (worms or nightcrawlers)
- Small storage containers to distribute bait to families
- Assortment of “supermarket bait” (corn, cheese, dough balls, etc.)
- Whistle
- Diaper wipes

Instructor References

- Fishing, Getting Started Booklet
- Fish ID Guide
- PA Fishing Summary
- Put ‘em Back Alive
- Supermarket Baits
II. Fishing Session

A. Review boundaries on the areas where the participants can fish and set time limits.

B. Remind participants to return the equipment in the same condition it was given to them.

C. Disperse for fishing and don’t forget to fish the SMART way.

D. Give a 10-minute warning, which will allow participants enough time to wrap up and return their equipment.

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Wrap-Up

**Theme**

Wrap-up and conclusion to the family fishing program.

**Objectives**

1. By the end of this session, all participants will be able to:

   1. Recall what SMART stands for.

**Instructor Outline**

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**Course Materials**

- Family Fishing Packet
- Program evaluation form.

**Instructor References**

- PLAY Are You a SMART Angler?

<table>
<thead>
<tr>
<th>Time</th>
<th>15 Minutes</th>
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</table>
I. **Wrap-Up**

A. *Review what the letters of SMART stand for.*

1. Can any of you give specific examples of SMART behaviors that you saw today?

B. *Manners and appreciation of our water resources are two very important parts of the SMART concept.*

1. Have families take a few minutes to police the area and make sure that there is no equipment or litter lying around.

C. *Remind the participants that their fishing experience does not have to end today.*

1. Encourage parents and guardians to take advantage of the many fishing opportunities that exist in our state.
   a. There are countless streams, rivers, lakes and ponds with public access.
   b. Don’t forget about some of the good fishing spots near you that we already discussed.

2. Consult the information that was handed out today if you forget something or are looking for a new place to go fishing. You can also visit our website or call the regional office for information.

3. Take advantage of a tackle loaner site or fish for free days if you aren’t quite sure about taking the leap into sport fishing just yet.

D. *Hand out packet of PFBC Information. Thank them for coming.*

E. *Complete paperwork.*

1. Participant survey – Adults
2. Program report/summary – PFBC Staff
3. Time and Activity reports, instructors, help