Introduction to Global Standards Development
What Is a Standard?

- Much more than technical documents… Standards have important bottom-line implications
- Standards fuel global trade, promote health and general welfare, advance innovation
- Wide range of valuable uses around the world
- Standards come in many forms:
  - Product specifications
  - Test methods
  - Manufacturing practices
  - Operational and purchasing guidelines
  - Classifications
  - Standardized terminology
  - And more….

1. Scope

1.1 This specification defines performance requirements for helmets used in nonmotorized recreational snow sports (such as skiing, snowboarding, and other alpine sports). This specification is a performance standard and is not intended to restrict design. Although a helmet that meets this specification will help reduce the risk of some types of injuries to the head at slower speeds, the protection is limited. The user is responsible for participating in the sport within his/her abilities and the nature of the snow conditions which may vary widely. Compliance with the common sense rules of the sport’s safety, including any applicable responsibility codes, is essential to help reduce the risk of personal injury.

1.2 All testing and requirements of this specification shall be in accordance with Test Methods F 1446, except where noted herein.

1.3 Partial utilization of this specification is prohibited. Any statement of compliance with this specification shall be a certification that the product meets all of the requirements of the specification in its entirety. A product that fails to meet any one of the requirements of this specification is considered to be noncompliant.

3. Headform

3.1 Headform to be used in specified in the section on Test Hc F 1446. The appropriate size head accordance with the section on Hc Test Methods F 1446 for the helmet.

5. Marking the Test Line

5.1 The test line is shown in Fig. accordance with Test Methods F 1446.

5.2 Conditioning and Number of S

5.2.1 Low Temperature—The low to 28°C.  
5.2.2 High Temperature—The high to 38°C.
Critical Role in Our Everyday Lives

- Support water quality testing
- Ensure safer car and air travel
- Help heat and insulate our homes
- Make soccer, skiing, bike riding and other activities safer
- Protect our health and welfare
- Advance the commercial application of new technologies
- Many other valuable uses
Why Participate in Standards Development?

- **Economic Incentives**
  
  Increase product quality, lower costs, bring economical products to market

- **Serve the Public Interest**
  
  Fulfill responsibility to consumers

- **Shared Work Incentives**
  
  Solve common issues through cooperation and consensus

- **Professional Growth**
  
  Participants enhance their careers, contribute to company success
U.S. Standards System

- Public and Private Sector Stakeholders
  - Industry
  - Laboratories
  - Consumers
  - Government Agencies
  - Trade Associations, Professional Societies
  - Academia, and
  - Consortia

- Develop Mandatory and Voluntary Standards
U.S. Standards System

Mandatory Standards

- Set or cited by government agencies
- Procurement and regulatory standards

Did You Know:

The U.S. Consumer Product Safety Commission was established as an independent federal regulatory agency whose job is to protect the public from unreasonable risks of injury from consumer products. The commission works together with ASTM International on numerous safety-related standards, such as those related to public playground equipment.
U.S. Standards System

Voluntary Standards

- Participation and use is voluntary
- Developed by cross-section of stakeholders
- Government standards developers often refer to voluntary private sector standards

Did You Know:

In 2005 the U.S. Department of Defense adopted an ASTM voluntary consensus standard related to the design and performance of unmanned air vehicles, known as UAVs, used in applications such as border and port security, environmental monitoring and research, meteorology, wildlife reconnaissance, natural resource management and agriculture.
National Technology Transfer and Advancement Act

- Passed in 1996
- Requires government agencies to use private sector standards whenever possible
- Saves taxpayers money, eliminates duplicative efforts, and facilitates adoption of private sector standards
Types of Standards

- Company Standards
- Consortium Standards
- Industry Standards
- Government Standards
- Voluntary Consensus Standards
Company Standards

- Developed by company employees
- Support business, manufacturing, and service practices
- Intellectual property
- Example: Boeing

Did You Know:

The Boeing Company has thousands of proprietary standards that help it design and manufacture the safe and reliable aircraft that we depend on in our air travel. Boeing is also an active user of numerous aerospace industry consensus standards developed at ASTM International, such as a newly released test method for certain titanium alloy materials.
Consortium Standards

- Similar companies join together in consortia
- Address common issues for collective progress

Did You Know:

The United States Council for Automotive Research, the umbrella organization of DaimlerChrysler, Ford and General Motors, has a strategic standardization board that reflects the organization’s commitment to managing standards issues related to competitiveness in the global auto industry.
Industry Standards

- Developed by industry-specific association or professional society
- Join together for consensus standards development

Did You Know:

The National Electrical Manufacturers Association publishes over 500 standards, application guides, and technical papers that play a vital part in the design, production, and distribution of products destined for both national and international commerce.

(photo from [www.nema.org](http://www.nema.org), lighting systems division).
Government Standards

- Developed by government agencies
- Private sector standards adopted as regulations

Did You Know:

The Environmental Protection Agency references numerous ASTM International standards in important areas such as ground water monitoring, environmental site assessment, and many other topics.
Voluntary Consensus Standards

- Strong technical quality, market relevance
- Developed by broad range of technical experts
- Example SDOs: ASTM International and American Society of Mechanical Engineers
ASTM International

- Founded 1898 – one of the oldest voluntary consensus standards development organizations
- Broad global membership – over 125 countries
- More than 135 standards writing committees covering hundreds of fields; more than 12,000 standards
- Open, balanced, transparent process

**Did You Know:**

Using ASTM’s Work Item Registration system, any interested individual from anywhere in the world who wants to know whether ASTM International is developing or revising a standard in a particular area can access the information at ASTM’s website.
International Standards

- Accepted in more than one country
- Developed with international participation
- Support regulatory compliance
- Facilitate global market access

Did You Know:
According to the U.S. Department of Commerce, over 80 percent of global commodity trade is impacted by standards.
International Standards and Trade

World Trade Organization

- Technical Barriers to Trade Agreement
- Encourages use of standards to support fair trade practices
- Defines principles of international standards:
  
  Openness, Transparency, Impartiality and Consensus, Relevance and Coherence
International Standards: Development Process

- One-country, one-vote model
  
  International Organization for Standardization (ISO)

- Global stakeholder representation; open consensus process
ASTM International and Global Standardization

Building International Bridges

- Commitment to global cooperation
- Supporting the needs of nations around the world
- Eliminating barriers to the use of ASTM standards
- Sharing expertise through training and education

Did You Know:

Over 3,000 ASTM International standards have been adopted as the basis of national standards or are referenced in regulations in countries outside the United States.
Thank You

ASTM International Learning Module Series

www.astm.org