

2026–2027 Competitive Events Guidelines

Foundations of Technology

Foundations of Technology challenges members to demonstrate their understanding of fundamental technology concepts through an objective test. This event covers topics such as hardware, software, networking, cybersecurity, and emerging technologies used in modern business environments.



Event Overview	
Division	Collegiate
Event Type	Individual
Event Category	Objective Test
Event Elements	50-minute test, 100-multiple choice questions

Event Information:	
National Leadership Conference: Timing Structure: Test Duration: 50 minutes Important Notes: • Internet Access: Provided for testing time only. • Event Schedule Notes: ○ Some events may begin before the Opening Session. ○ All schedules are posted in local time for the NLC host city. ○ Schedule changes are not permitted.	State Leadership Conference: Testing will take place prior to the State Leadership Conference. Testing must occur at school under the supervision of a proctor. Check the SLC Call to Conference for specific instructions and deadlines.

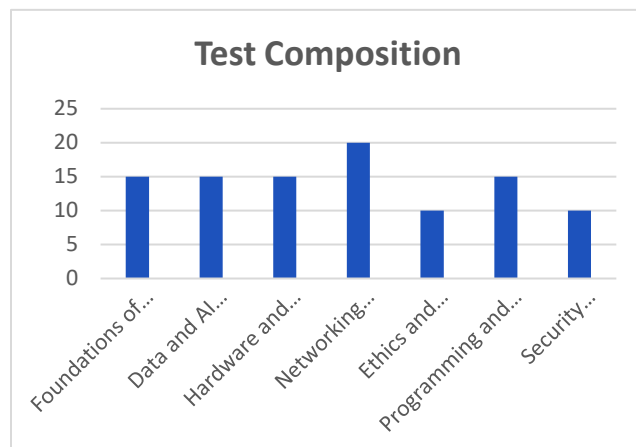
*** Event specifics are continued below. Review the document in its entirety.

This event is intended for students who are early in their collegiate academic journey and just beginning their study of technology. Only members who have completed no more than six credit hours on a semester schedule (or the equivalent number of quarter hours) of college-level technology coursework by May 1, 2027, are eligible to compete.

Knowledge Areas

- Foundations of Computer Systems
- Data and AI Foundations
- Hardware and Software Foundations
- Networking Systems and Protocols
- Ethics and Technology
- Programming and Algorithms
- Security Foundations

Test questions are based on the knowledge areas and objectives outlined for this event. Detailed objectives can be found in the study guide included in these guidelines.



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Foundations of Technology



National Leadership Conference

Required Competition Items

<u>Items Competitor Must Provide</u>	<u>Items FBLA Provides On-site</u>
• Sharpened pencil • Fully powered device for online testing • Conference-provided nametag • Photo identification • Attire that meets the FBLA Dress Code	• One piece of scratch paper per competitor • Internet access • Test login information (link & password provided at test check-in)

Eligibility Requirements

To participate in FBLA competitive events at the National Leadership Conference (NLC), the following criteria must be met:

- **Membership Deadline:** FBLA national membership dues must be paid to the specific division by 11:59 p.m. Eastern Time on March 1 of the current school year.
- **Conference Registration:** Members must be officially registered for the NLC and must pay the national conference registration fee to participate.
- **Official Hotel Requirement:** To be eligible to compete, competitors must stay within the official FBLA housing block.
- **State Entry Limits:** Each state may submit up to four entries per event.
- **Event Participation Limits:** Each member may participate in:
 - Two individual or team events, and
 - One chapter event (e.g., *Community Service Project* or *State of Chapter Presentation*).
- **Participation Requirement:** To be eligible for an award, each competitor must complete all components of the event at the National Leadership Conference.
- **Identification at Check-in:** Competitors must present valid photo identification (physical or digital) that matches the name on their conference name badge. Acceptable forms include a driver's license, passport, state-issued ID, or school ID.
- **Late Arrivals:** Competitors will be allowed to compete until such time that the results are finalized, or participation would impact the fairness and integrity of the event, as determined by Competitive Events staff. Five penalty points will be assessed for late arrivals in any competitive event.

Event Administration

- **Test Duration:** 50 minutes
- **Format:** This event consists of an online objective test that is proctored and completed on-site at the National Leadership Conference (NLC).
- **Materials:** Reference or study materials are not permitted at the testing site.
- **Calculators:** Personal calculators are not allowed; an online calculator will be available within the testing platform.
- **Question Review:** Competitors may flag questions within the testing platform for review prior to the finalization of results at the NLC.

2026–2027 Competitive Events Guidelines

Foundations of Technology



Scoring

- Each correct answer is worth one point.
- No points are deducted for incorrect answers.
- Tiebreakers are determined as follows: (1) The number of correct responses to 10 pre-selected tiebreaker questions will be compared. (2) If a tie remains, the number of correct responses to 20 pre-selected questions will be reviewed. (3) If a tie still remains, the competitor who completed the test in the shortest amount of time will be ranked higher.
- Results announced at the National Leadership Conference are considered official and will not be changed after the conclusion of the National Leadership Conference.

Penalty Points

- Competitors may be disqualified if they violate the Code of Conduct or the Honor Code.
- Five points are deducted if competitors do not follow the Dress Code or are late to the testing site.

Recognition

- A maximum of 10 entries (individuals or teams) may be recognized per event.

Americans with Disabilities Act (ADA)

- FBLA complies with the Americans with Disabilities Act (ADA) by providing reasonable accommodations for competitors. Accommodation requests must be submitted through the conference registration system by the official registration deadline. All requests will be reviewed, and additional documentation may be required to determine eligibility and appropriate support.

Electronic Devices

- Unless approved as part of a documented accommodation, all cell phones, smartwatches, electronic devices, and headphones must be turned off and stored away before the competition begins. Visible devices during the event will be considered a violation of the FBLA Honor Code.

Sample Preparation Resources

- Official sample test items can be found in [CONNECT](#). These sample items showcase the types of questions that may be asked on the test and familiarize competitors with the multiple-choice item options.

Important FBLA Documents

- Competitors should be familiar with the [Competitive Events Operations Manual](#), [Honor Code](#), [Code of Conduct](#), and [Dress Code](#).

2026–2027 Competitive Events Guidelines

Foundations of Technology



Study Guide: Knowledge Areas and Objectives

Foundations of Computer Systems (15 test items)

1. Describe memory organization in computer systems (e.g., memory hierarchy, caches, registers)
2. Describe differences between digital, analog, discrete, and continuous systems
3. Describe different logic gates and their combinations (AND, OR, NOT, NAND, etc.)
4. Discuss methods for backing up a computer system
5. Discuss scheduling algorithms and their performances
6. Describe simple problems and solutions as state machines
7. Describe primary operating system components (e.g., registry, virtual memory, file system)
8. Analyze the functions of operating systems

Data and AI Foundations (15 test items)

1. Discuss probabilistic and logic-based reasoning
2. Describe foundational algorithms for artificial intelligence (e.g., minimax, search algorithms, alpha-beta pruning)
3. Analyze challenges associated with big data systems
4. Discuss data sourcing, acquisition, and processing
5. Discuss the benefits of cloud computing for data processing
6. Discuss the use of data in AI and machine learning
7. Analyze the use and training of large language models (LLMs)

Hardware and Software Foundations (15 test items)

1. Discuss considerations when using peripheral equipment (e.g., external storage, printers, USB)
2. Describe common methods of computer hardware maintenance
3. Discuss the characteristics of different types of computers (e.g., mainframe, PC, mobile)
4. Describe computer components (e.g., CPU, motherboard, GPU)
5. Discuss the functions of RAM and secondary storage (e.g., HDD, SSD)
6. Describe storage devices and configurations (e.g., HDD, SSD, RAID, NAS)

Networking Systems and Protocols (20 test items)

1. Discuss the characteristics of different types of networks (e.g., LAN, MAN, WAN)
2. Explain basic networking protocols (e.g., TCP/IP, UDP, DHCP, SMTP)
3. Discuss methods of connectivity (e.g., Ethernet, Wi-Fi, cable)
4. Describe the general architecture of networks (e.g., nodes, connections, switches)
5. Select an appropriate networking architecture for a business (e.g., peer-to-peer, client-server, intranet)
6. Discuss the pros and cons of network topologies (e.g., bus, star, ring)
7. Explain the purpose and mechanics of IP addressing
8. Troubleshoot network maintenance issues (e.g., securing and protecting cable)
9. Discuss common network security techniques (e.g., authorization, authentication)

Ethics and Technology (10 test items)

1. Discuss illegal use of online technology (e.g., piracy, licensing infringement, jailbreaking for illegal purposes)
2. Discuss ethical concerns related to generative AI
3. Discuss the ethics of data brokerage and privacy online
4. Discuss ethical concerns related to AI assistants and LLMs

2026–2027 Competitive Events Guidelines

Foundations of Technology



Programming and Algorithms (15 test items)

1. Discuss the attributes, methods, and variables of classes and objects
2. Discuss characteristics of programming language paradigms (e.g., functional, object-oriented, imperative, declarative)
3. Analyze the time complexity of simple algorithms
4. Interpret blocks of code
5. Describe basic data structures (e.g., arrays, lists, hashmaps)
6. Describe key features of object-oriented programming (e.g., encapsulation, abstraction, polymorphism, inheritance)
7. Describe basic search and sorting algorithms
8. Discuss APIs, modules, and libraries

Security Foundations (10 test items)

1. Discuss the applications of confidentiality, integrity, and availability
2. Evaluate vulnerabilities in a digital system (e.g., human error, authorization, authentication)
3. Describe strategies to defend against common cyber attacks (e.g., DoS, DDoS, virus)
4. Explain how insecure coding practices can lead to vulnerabilities (e.g., buffer overflow, race conditions, SQL injection)
5. Describe the differences between symmetric and asymmetric encryption
6. Discuss the use of hashing in cryptography (SHA-256, blockchain, digital signatures, etc.)

References for Knowledge Areas & Objectives

Association for Computing Machinery. *Computing Competencies for Undergraduate Data Science*.

https://www.acm.org/binaries/content/assets/education/curricula-recommendations/dstf_ccdsc2021.pdf

Association for Computing Machinery. *Computing Competencies for Undergraduate Programs in Information Systems*. <https://www.acm.org/binaries/content/assets/education/curricula-recommendations/is2020.pdf>

Association for Computing Machinery. *Information Technology Curricula 2017*.

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Computer Science Teacher's Association. *K-12 Computer Science Standards*.

<https://members.csteachers.org/documents/en-us/46916364-83ab-4f51-85fb-06b3b25b417c/1/>

Codecademy. *Introduction to IT*. <https://www.codecademy.com/learn/introduction-to-it>

Ohio Department of Education. *Ohio's Learning Standards for Technology*.

<https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Technology/Ohios-Learning-Standards-for-Technology/The-2017-Ohio-Learning-Standards-in-Technology.pdf.aspx?lang=en-US>