

ACADEMIC GUIDE

THE CHAIN

HOW THE WORLD WORKS

AN ASCM & WAG ENTERTAINMENT PRODUCTION

“The Chain” Documentary- Curriculum Integration Guide

“The Chain” is a docuseries that unravels the complexities of the global supply chain. Produced by ASCM and Wag Entertainment, this series explores the intricate global supply chain and its profound impact on our modern world. It highlights the often-unseen work of supply chain and logistics professionals, revealing the innovative solutions they use to ensure essential goods reach us daily. The series also examines critical disruptions and groundbreaking innovations shaping the future of these networks, emphasizing the urgent need for ethical, efficient, and economical supply chains for a sustainable future.

How To Use “The Chain” Documentary in Your Classroom

The academic learning objectives document provides a framework for using “The Chain” in the classroom to teach students about the real-world complexity, sustainability, and ethical dimensions of global supply chains. It outlines how instructors can:

- Align each episode with specific learning goals.
- Reinforce key supply chain concepts like logistics, sourcing, risk management, and sustainability.
- Use discussion prompts and questions to encourage critical thinking and application of supply chain principles.
- Connect the series to professional certifications like APICS CPIM, CSCP, CLTD, and CTSC.



Series Objectives, Concepts, and Critical Thinking Prompts



Learning Objectives

- Understand the real-world complexity of global supply chains.
- Explore the human, technological, and environmental dimensions of supply chain operations.
- Analyze how macro events (e.g., pandemics, climate change, geopolitical shifts) impact supply chain resilience.
- Evaluate sustainability practices and ethical considerations in supply chain design and execution.



Key Concepts

- Global Sourcing & Supplier Networks
- Logistics & Transportation
- Risk Management & Resilience
- Sustainability & Circular Supply Chains
- Technology in Supply Chains (RFID, cloud, tracking)
- Supply Chain Ethics & Equity
- Supply Chain Visibility & Coordination



Prompts & Questions Across the Series

- What are the common challenges across different supply chains?
- What innovations are transforming supply chain operations?
- How can supply chains be designed to be more ethical and equitable?
- What role does consumer behavior play in shaping supply chain decisions?
- What surprised you most about how supply chains operate?
- How does sustainability influence supply chain decisions?
- What ethical dilemmas arise in global sourcing?



EPISODE 1

Food

Episode 1 - Food

The variety and year-round availability of fresh produce in supermarkets is testament to a complex global food supply chain. This intricate system allows consumers to access items that aren't locally or seasonally available. A critical element for perishable goods is the cold chain. A specialized logistics network using refrigerated containers to maintain temperatures during transportation. This entire process, from agriculture to your refrigerator, requires immense supply chain orchestration, with countless individuals working behind the scenes to deliver food safely and efficiently, a feat largely taken for granted by the average consumer.



By the end of this lesson, students will be able to:

- Analyze the structure and function of cold chain logistics in perishable goods transportation.
- Map the end-to-end supply chain of a multi-ingredient food product.
- Evaluate the risks, challenges, and innovations in global food supply chains.
- Identify key stakeholders and their roles in food logistics.
- Apply supply chain concepts to real-world scenarios involving food distribution.



Key Concepts Covered

- Cold Chain Logistics
- Global Sourcing
- Transportation & Distribution
- Supply Chain Visibility
- Risk Management
- Sustainability in Food Supply Chains



Use these questions and prompts for group discussions or worksheets:

- Identify each supply chain stage for the hamburger ingredients.
- What are the risks in each stage of the hamburger's supply chain?
- How does the cold chain mitigate spoilage and waste?
- What technologies are used to maintain cold chain integrity?
- What are the trade-offs between local sourcing and global supply chains?
- How does consumer demand shape supply chain complexity?
- What innovations are emerging in cold chain technology?



APICS Certification-Related Questions: CPIM, CLTD, CSCP

- How does cold chain logistics relate to inventory management principles (CPIM)?
- What transportation modes are used, and how do they affect distribution efficiency (CLTD)?
- How do global sourcing decisions impact supply chain visibility and risk (CSCP)?

EPISODE 2

Transport

Episode 2 - Transport

The global supply chain for electric vehicles hinges on the lithium battery supply chain. While EVs offer environmental benefits on the road, the electric vehicle production process, particularly lithium extraction, carries substantial environmental costs. The lithium mining process is highly water-intensive, requiring half a million gallons of water per ton of lithium, and has raised concerns regarding environmental and safety sustainability. Addressing this increased demand and mitigating environmental impacts necessitates developing a more sustainable lithium battery supply chain through collaboration with suppliers and the establishment of a circular supply chain.



By the end of this lesson, students will be able to:

- Describe the global supply chain for lithium-ion batteries used in EVs.
- Analyze the environmental impacts of lithium mining and EV production.
- Evaluate strategies for creating a sustainable and circular battery supply chain.
- Identify key stakeholders in the EV supply chain and their roles.
- Apply supply chain principles to assess risk, sustainability, and innovation in EV logistics.



Key Concepts Covered

- Lithium Extraction & Processing
- Environmental Sustainability
- Circular Supply Chains
- Supplier Collaboration
- Risk & Resource Management
- EV Manufacturing Logistics



Use these questions and prompts for group discussions or worksheets:

- What environmental concerns are raised in the episode?
- How do circular supply chains differ from traditional linear models?
- What are the trade-offs between EV sustainability and lithium extraction?
- How can supply chain managers influence environmental outcomes?
- What role does supplier collaboration play in improving sustainability?
- How can supply chain transparency improve sustainability?
- What are the geopolitical risks of relying on lithium from specific regions?
- How can circular supply chains be scaled globally?



APICS Certification- Related Questions: CSCP, CTSC, CLTD

- What are the implications of lithium extraction on supply chain ethics and sustainability (CTSC)?
- How can supplier collaboration improve visibility and reduce risk (CSCP)?
- What logistics strategies support EV component distribution (CLTD)?

EPISODE 3

Sports



Episode 3 - Sports

Putting on a professional sporting event, like an American football game, involves an intricate supply chain that largely goes unnoticed by fans. A critical component is the ball itself, with the NFL supply chain relying on sole sourcing from Wilson, which has produced all official American footballs, since 1941. While sole sourcing carries risks, it's a common practice in sporting event supply chains. These concentrated manufacturing hubs benefit from specialized expertise and scale, enabling the efficient distribution of sports equipment worldwide, highlighting the supply chain orchestration necessary for successful professional sporting events.



By the end of this lesson, students will be able to:

- Explain the concept of sole sourcing and its strategic implications.
- Analyze the supply chain components required to execute a large-scale sporting event.
- Evaluate the risks and benefits of concentrated manufacturing hubs.
- Identify logistical challenges in event planning and execution.
- Apply supply chain principles to real-world scenarios in sports and entertainment.



Key Concepts Covered

- Sole Sourcing Strategy
- Event Logistics & Planning
- Supplier Specialization
- Risk Management
- Infrastructure Supply Chains
- Supply Chain Coordination



Use these questions and prompts for group discussions or worksheets:

- What are the risks of sole sourcing footballs from one supplier?
- How do specialized hubs contribute to supply chain efficiency?
- What are the trade-offs between sole sourcing and multi-sourcing?
- How does supplier expertise impact product quality and consistency?
- What role does supply chain visibility play in event success?
- What contingency plans should be in place for supplier disruptions?
- How do logistics differ between recurring events and one-time events?



APICS Certification- Related Questions: CPIM, CLTD, CSCP

- What are the risks and benefits of sole sourcing from an inventory planning perspective (CPIM)?
- How do logistics teams coordinate infrastructure delivery for large events (CLTD)?
- How does supplier expertise contribute to supply chain efficiency (CSCP)?

EPISODE 4

Apparel



Episode 4 - Apparel

Dive into the environmental and social impacts of fast fashion, a system producing 100 billion garments annually by rapidly bringing low-cost clothing to market. The global supply chain for these items relies on inexpensive overseas manufacturing, particularly in Bangladesh, where low wages enable the production of clothes that travel thousands of miles to consumers. This unsustainable fashion supply chain leads to massive textile waste, as cheap, often synthetic, garments are quickly discarded and end up polluting landfills and oceans, highlighting the critical need for consumer-driven change to promote a more sustainable fast fashion supply chain.



By the end of this lesson, students will be able to:

- Describe the structure of the fast fashion supply chain and its global reach.
- Analyze the environmental and social impacts of low-cost garment production.
- Evaluate the sustainability challenges of fast fashion and textile waste.
- Explore the global second-hand clothing trade and its implications.
- Propose supply chain strategies for promoting sustainable fashion.



Key Concepts Covered

- Fast Fashion Supply Chains
- Global Sourcing & Labor Economics
- Textile Waste & Environmental Impact
- Reverse Logistics & Second-Hand Markets
- Consumer Behavior & Demand Planning
- Sustainable Supply Chain Strategies



Use these questions and prompts for group discussions or worksheets:

- What environmental and social issues are highlighted?
- How does the second-hand clothing market fit into the supply chain?
- What drives the demand for fast fashion?
- How do supply chain decisions impact labor conditions and waste?
- What role do consumers play in shaping supply chain sustainability?
- How can supply chain transparency improve ethical sourcing?
- What are the trade-offs between affordability and sustainability in fashion?
- How can reverse logistics be optimized to reduce textile waste?



APICS Certification- Related Questions: CSCP, CTSC, CPIM

- How does demand planning influence fast fashion production cycles (CPIM)?
- What reverse logistics strategies can reduce textile waste (CSCP)?
- How can transformation initiatives promote ethical sourcing and circularity (CTSC)?

EPISODE 5

Health

Episode 5 - Health

Raw materials for medications like morphine are surprisingly concentrated. This “morphine chain” is tightly regulated and tracked using RFID sensors to ensure supply chain safety and prevent diversion. Despite global healthcare logistics, a significant disparity exists in medication availability. This imbalance of medication access and excess highlights a critical challenge within the healthcare supply chain, emphasizing the need for global conversations and improved distribution to ensure equitable access to essential medicine.



By the end of this lesson, students will be able to:

- Describe the structure and regulation of pharmaceutical supply chains.
- Analyze the role of technology (e.g., RFID) in securing and tracking sensitive medical products.
- Evaluate the challenges of equitable access to essential medications globally.
- Explore the logistics of hospital supply chains and critical care delivery.
- Propose strategies for improving transparency, efficiency, and equity in healthcare logistics.



Key Concepts Covered

- Pharmaceutical Supply Chains
- RFID & Supply Chain Security
- Regulatory Compliance
- Healthcare Logistics
- Global Access & Distribution Inequities
- Critical Supply Chain Infrastructure



Use these questions and prompts for group discussions or worksheets:

- What makes the morphine supply chain unique?
- How is RFID used to ensure safety and compliance?
- Why is traceability critical in pharmaceutical supply chains?
- What are the risks of supply chain failure in healthcare?
- How can global supply chains be redesigned for equity?
- How do regulations shape the design of healthcare supply chains?
- What role does technology play in ensuring safety and compliance?
- How can supply chain professionals advocate for equitable access to medicine?



APICS Certification- Related Questions: CSCP, CTSC, CPIM

- How does inventory control ensure availability of critical medical supplies (CPIM)?
- What global distribution challenges affect medication access (CSCP)?
- How can digital tools like RFID improve traceability and safety (CTSC)?

EPISODE 6

Communications

Episode 6 - Communications

While companies like Apple, Samsung, and Lenovo may design their devices in the United States, their production is outsourced, with China assembling the vast majority. To achieve this, China's manufacturers rely on importing over 400 separate parts from dozens of countries, demonstrating layers of suppliers involved. Once assembled, they are transported by air cargo, flying thousands of miles before reaching the consumer. This intricate web, from raw materials through multiple tiers of production and rapid transportation, underscores the remarkable supply chain infrastructure that brings this essential technology into our hands.



By the end of this lesson, students will be able to:

- Map the multi-tiered global supply chain for smartphones and wearable devices.
- Analyze the role of outsourcing and international supplier networks in electronics manufacturing.
- Evaluate the logistics of high-speed transportation and distribution for consumer tech.
- Understand the strategic importance of supplier coordination and visibility.
- Apply supply chain principles to technology products and global events.



Key Concepts Covered

- Multi-Tier Supplier Networks
- Outsourcing & Global Manufacturing
- Air Cargo Logistics
- Supply Chain Visibility & Coordination
- Technology Product Lifecycle
- Event-Driven Demand Planning



Use these questions and prompts for group discussions or worksheets:

- How many countries contribute to the smartphone supply chain?
- What are the risks and benefits of outsourcing production?
- How does air cargo support rapid global distribution?
- What challenges arise from managing hundreds of suppliers?
- How does supply chain speed affect consumer tech markets?
- How do companies manage visibility across hundreds of suppliers?
- How does consumer demand for connectivity shape supply chain decisions?



APICS Certification- Related Questions: CSCP, CLTD, CTSC

- How do multi-tier supplier networks affect supply chain coordination (CSCP)?
- What are the trade-offs of using air cargo for tech distribution (CLTD)?
- How can digital transformation improve visibility and responsiveness (CTSC)?

About ASCM

The Association for Supply Chain Management (ASCM) is the global pacesetter of organizational transformation, talent development and supply chain innovation. As the largest association for supply chain, ASCM members and worldwide alliances fuel innovation and inspire accountability for resilient, dynamic and sustainable operations. ASCM is built on a foundation of world-class APICS education, certification and career resources, which encompass award-winning workforce development, relevant content, groundbreaking industry standards and a diverse community of professionals who are driven to create a better world through supply chain.

For more information, visit [ascm.org](https://www.ascm.org).