

*Solutions Manual for Applied Marketing
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Excel Activity Lesson 01: Formulas and Dates

(Estimated Time: 10 minutes)

TED Talk Marketing Managers are working with potential speakers, and a question came up about how long it takes for a recorded video to be posted online. They have provided you with a spreadsheet that includes 100 of the videos recorded between 2001 and 2017. Using this data, calculate the average, minimum and maximum number of days between the recording and publishing dates.

Detailed Instructions:

1. Download the spreadsheet. **TED Talk Activity 1.xlsx**.
2. Highlight both the film date and publish date columns. Make sure both are formatted as dates.
3. Write a formula that will calculate the difference in the publish date and the film date.
4. Be sure to format this new column as a number rather than a date.
5. Beneath the newly created data, write a formula that will calculate the average number of days between the publish date and the film date. Be sure to set the number of decimal points to 0.
6. Beneath the average formula, write another formula that will display the minimum number of days between the publish date and the film date.
7. Beneath the minimum formula, write a final formula that will display the maximum number of days between the publish date and the film date.
8. Be sure to label your average, min, and max using the cell directly to the left of each formula so any viewer will know what they are viewing.

Excel Activity 1: MC Questions

1. What is the average (to the hundredth decimal place)?
 - a. 218.56
 - b. 216.58
 - c. 215.86 (**correct**)
 - d. 230.7
2. What is the minimum?
 - a. 1 (**correct**)
 - b. 2
 - c. 10
 - d. 5
3. What is the maximum?
 - a. 2307 (**correct**)
 - b. 1703
 - c. 1207
 - d. 2370

Instructor's Manual to Accompany ESG Module 1

ESG Introduction

The goal of Module 1 is to introduce students to the environmental issues in ESG reporting so they can identify how these issues relate to a company, understand how they are classified in ESG reports (e.g., Scope 1, 2, and 3 emissions), and understand what a circular economy is and why it is important in ESG reporting. ESG reporting is becoming increasingly crucial for companies or organizations seeking access to the capital required to support long-term viability.

Format:

1. Module content.
2. Resources: ESG reports from Nutrien and IAG will be used to support module content and provide examples.
3. Quiz: Multiple-choice questions based on module content and resources provided.

Lesson 1: Environment

Lesson Overview

The content of Module 1 will expose students to concepts such as

- Environmental factors that may impact a company or organization.
- Defining and identifying Scope 1, 2, and 3 emissions.
- Examples of specific issues related to the environment in ESG reporting.
- Circular economy and why it's important.

Upon completion of the content portion of this lesson, students will be able to:

- Explain why a company or organization's management of environmental factors is important.
- Understand and explain the differences between Scope 1, 2, and 3 emissions.
- Provide examples of specific issues related to the environment in ESG reporting.
- Define a circular economy and understand why it is important.

Learning Objectives

1. Defining the Environmental pillar in ESG reporting, including Scope 1, 2, and 3 emissions.
2. Identifying issues that relate to the environment in ESG reporting.
3. Defining a circular economy and understanding its importance in ESG.

LO1—Defining the Environmental pillar in ESG reporting, including Scope 1, 2, and 3 emissions.

The Environmental “pillar” in ESG reporting relates to a company or organization’s management of natural resources, its operational impact on the environment, and how it plans to mitigate risk and environmental degradation (e.g., pollution, biodiversity loss, mismanagement of resources). This includes not only direct operations but also activities across the company’s supply chains. It involves planning and management surrounding the reduction of the company’s environmental impact and includes reporting on performance on commitments and previous goals.

This area of reporting also addresses environmental impacts that are linked to a company’s ability to create value over time in relation to its activities, such as resource extraction, land cultivation, product manufacturing, and the use of energy and water. It also encompasses a company’s business model, goals, and planning, such as the ability to adapt to change in the context of the climate crisis (e.g., regulatory changes or resource system collapse) and the company’s plan to mitigate environmental and social impacts along its supply chains.

Scope 1 emissions are **direct emissions** (GHGs) resulting from a company or organization’s behavior. If the activities are directly tied to the creation of the good or delivery of the service that is sold by the company, the associated emissions impact would be categorized as a Scope 1 emission. These emissions also include impacts because of a company’s unintended or accidental activities (e.g., oil spill).

Scope 2 emissions are emissions related to a company or firm’s **energy management and consumption**. They can also be characterized as a source of **indirect emissions**. Indirect emissions are “those emitted from sources not owned or controlled by the disclosing entity but that are emitted as a consequence of the activities of the reporting entity.”¹ Scope 2 emission disclosures would include items like heat, electricity, and the production and transportation of products and/or services provided by the reporting company or organization.

Scope 3 emissions are classified as a company or firm’s **indirect emissions** that are related to product design, supply chain management, and materials sourcing and efficiency. They include all activities both upstream and downstream from the reporting company or organization’s activities.

Teaching Suggestion:

Have the students brainstorm examples of what they think might be a company or organization’s direct and indirect emissions. Then have them identify which of their examples are Scope 1, 2, or 3 emissions. For example, what types of emissions might a grocery store have? (GHGs—Scope 1; Electricity at stores—Scope 2; Supply chain management—Scope 3.)

¹ SASB (2020).

LO2—Identifying issues that relate to the environment in ESG reporting.

Factors that relate to the Environment pillar of ESG reporting consider a company or organization's impact (and management of its impact) upon things such as climate change, deforestation, air and water pollution, land exploitation, and biodiversity loss. Examples of issues that relate to the environment for ESG reporting are included in the table below:

Climate change	Water resources	Waste & Pollution Management	Green building practices
Researching, developing, implementing renewable energy solutions	Conserving water and natural resources	Reducing solid waste	Opportunities in clean technology
Researching, developing, implementing renewable energy solutions	Sourcing raw materials	Reducing toxic emissions	Opportunities in implementing green building practices
Researching, developing, implementing renewable energy solutions	Protecting biodiversity and ecosystems	Reducing water pollution	Improving energy efficiency
Researching, developing, implementing renewable energy solutions	Eliminating deforestation	Reducing packaging materials waste	Renewable energy
Researching, developing, implementing renewable energy solutions	Practicing responsible land use	Reducing electronic waste	
Researching, developing, implementing renewable energy solutions	Energy management	Reducing air pollution	
Researching, developing, implementing renewable energy solutions	Ecological impacts	Solid waste management	
Researching, developing, implementing renewable energy solutions		Wastewater management	
Climate change vulnerability			
Product carbon footprint			

Teaching Suggestion:

Have students consider which areas of interest are most important for various industries. For example, based on the examples above, which of these environmental areas of interest might be considered for a mining company? (Reducing carbon emissions, protecting biodiversity, etc.) What about for a bank? (Renewable energy solutions, financing environmental impacts, impact projects, green building.)

LO3—Defining a circular economy, and understanding its importance in ESG.

A **circular economy** is defined as an “economy that uses a systems-focused approach and involves industrial processes and economic activities that are restorative or regenerative by design, enable resources used in such processes and activities to maintain their highest value for as long as possible, and aim to eliminate waste through the superior design of materials, products, and systems (including business models).”² When considering sustainability issues and ESG ratings, circularity has been seen as an important way to improve ESG outcomes. The World Economic Forum (2016) suggested that “circularity would boost innovation in business models, product design, supply chain, and other aspects of the economy.”³ Utilization of circular innovation strategies increases profits for firms and boosts innovation in business models, product design, supply chains, and other aspects of the economy.

² EPA (2021b).

³ Patwa et al. (2021).

Resources

[Nutrien ESG Report 2022](#)

[IAG ESG Report 2021](#)

Examples of ESG reports will be used to support students' understanding of the module content and provide examples of issues related to the environment for a company; how Scope 1, 2, and 3 emissions are identified, disclosed, and managed; and how a company may (or may not) actively engage in a circular economy. They will allow students to become familiar with what an ESG report is, what it looks like, and how to navigate or find information within one.

Quiz

1. What “areas of interest” or “focus areas” related to the environment were included in [Nutrien’s annual ESG report](#)?

- A. Climate change, water, waste, environmental incidents, biodiversity, and product stewardship.
- B. Climate change, water, waste, environmental incidents, and biodiversity.
- C. Climate change, water, waste, and biodiversity.
- D. Product stewardship, biodiversity, climate change, and environmental incidents.

(Answer: A, found on pages 8–9)

2. What percent of IAG’s total GHG emissions were Scope 3? What percentage of IAG’s Scope 3 emissions were identified as being from fuel and energy-related activities?

- A. 76%. 23.3%.
- B. 23.3%. 76%.
- C. 23.3%. 68%.
- D. 0.1%. 68%.

(Answer: C, found on page 82)

3. What frameworks are referenced/used in [Nutrien’s annual ESG report](#)?

- A. SASB, GRI, TCFD, and International Business Council Stakeholder Capitalism Index.
- B. SASB, GRI, TCFD, and UN SDGs.
- C. SASB, GRI, and TCFD.
- D. SASB, IATA, and GRI.

(Answer: A, found on page 12)

4. What did IAG identify as “material issues” related to the “planet” (or environment)? What standards did it reference in defining sustainability and material issues?

A: Reducing our climate impact and Influencing policy. GRI, TCFD, and SASB standards were referenced.

B. Running a profitable business and Reducing our climate impact. GRI, TCFD, SASB, and UN SDG standards were referenced.

C. Planning for climate-resilient operations and Working with suppliers. GRI, TCFD, and SASB standards were referenced.

D. Planning for climate-resilient operations and Reducing our climate impact. GRI, TCFD, SASB, and UN SDG standards were referenced.

(Answer: A, found on page 65)

Estimated time requirements:

- Lesson: 15 to 20 minutes
- Resources: 20 minutes (2021 Nutrien ESG Report; 2021 IAG ESG Report)
- Quiz: 10 minutes (4 MCQ)

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