

Lesson 1: WHAT IS A SKYSCRAPER?

grade level: elementary (2-6)

► OVERVIEW

In this lesson, students will examine images of buildings to understand the unique characteristics of skyscrapers, evaluate the elements of tall building construction, and consider how skyscrapers shape the urban environment and skyline.

► GUIDING QUESTIONS

- What is a skyscraper?
- What makes a skyscraper different from other buildings?

► MATERIALS

- Copies of Activity Sheet for each student
- Magazines or pictures of different buildings including skyscrapers
- *Optional:* Overhead projector and transparency of Activity Sheet

► MATERIALS to DOWNLOAD

- Activity Sheet: Skyscraper Detectives

► VOCABULARY

Base: The part of a building that sits on the ground

Proportion: The comparative measurement or size of different parts of a building

Reinforced Concrete: Concrete that is made stronger by adding steel rods or wires

Skeleton Frame: A system of columns and beams that supports the weight of a building

Skyscraper: A tall building with a steel or concrete skeleton frame, an elevator, and floors where people live or work

Story: A floor or level in a building

LEARNING OBJECTIVES

Students will:

- Identify the characteristics of skyscrapers
- Evaluate images to distinguish skyscrapers from other structures



The Bankers Trust Building. See the Museum's complete collection of construction photographs at www.skyscraper.org/bankerstrust

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► I. INTRODUCTION: *WHAT IS A SKYSCRAPER?*

Distribute magazines and scissors to students, inviting them to cut out pictures of buildings; or distribute an array of pictures of buildings. Ask students to sort the pictures into two groups: skyscrapers and other buildings. Have them decide on one or two criteria they used to distinguish the structures from one another.

Invite students to share their responses. As they report, record their responses on a chart visible to the whole class. You may also make a master T chart of “skyscrapers” and “other buildings.”

skyscrapers	other buildings

► II. INSTRUCTION:

WHAT MAKES SKYSCRAPERS DIFFERENT FROM OTHER BUILDINGS?

Ask students, “Are all tall buildings skyscrapers?” In fact, not all tall buildings are skyscrapers. Skyscrapers share four characteristics:

1. **Construction:** Skyscrapers have a **skeleton frame**, made of internal steel or **reinforced concrete**, which is strong enough to support the weight of a building with many **stories**.
2. **Construction:** Skyscrapers must have **elevators** that allow people to travel between floors quickly and easily.
3. **Purpose:** A skyscraper must have floors that are used for living, working, or recreation.
4. **Height:** Skyscrapers must be taller than they are wide. In other words, the building’s height much be greater than the width of its base.

Discuss these characteristics with students, clarifying any new vocabulary, and post them where they are visible to the whole class. For a quick assessment of student understanding, have them return to their building pictures and evaluate their earlier categorizations. They should correct any pictures they may have miscategorized.

Optional

A vocabulary building activity may be incorporated into the discussion. For example, students may create a list of synonyms for ‘tall,’ such as lofty, giant, soaring, etc.

► New York State LEARNING STANDARDS:

- English Language Arts 1.1

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► III. DETECTIVE WORK: *HOW CAN WE IDENTIFY SKYSCRAPERS?*

Distribute Activity Sheet: Skyscraper Detectives. Students should work in small groups to determine whether the tall buildings pictured on the document exhibit the characteristics of skyscrapers. If students feel that the evidence is unclear, ask them to make an educated guess and explain their reasoning.

Younger or ELL students

It may be helpful to model the activity with the first structure, the Banker's Trust Building, on a transparency or chart paper. Think aloud for students regarding your decision-making process for each question.

Older or advanced students

Ask students to include a written justification for their decisions. In some cases, students may not be able to identify all four characteristics but may still choose to identify the building as a skyscraper. In these cases, students should explain why they believe the building is a skyscraper.

When groups have completed the activity, begin a class discussion regarding their findings. It may be helpful to display each image on an overhead projector in order to facilitate discussion of the following questions:

- *Which buildings are skyscrapers and which are not? How can we tell?*
- *Are there any buildings that you are not sure about? What information would you need to be convinced?*
- *Are all the tall buildings skyscrapers? Why not?*
- *In most of the images, you could not see the elevators. How did you know they were there?*

► IV. EVALUATION

For homework, students must find a newspaper, magazine, or computer image of a skyscraper and label the evident characteristics.

Older or advanced students

Write a paragraph justifying why the image is a skyscraper. Describe characteristics that are not visible in the image.