

Conditional Statements (Part One: Exploring If Statements)

Grade Level: Second, Third

Common Core State Standards Alignment

- **RL.2.1 / RL.3.1:** Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
 - **RI.2.3 / RI.3.3** – Describe the relationship between a series of ideas or steps in a process
 - **RI.2.7 / RI.3.7:** Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
 - **W.2.2 / W.3.2:** Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.
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Lesson Objectives & Relevance

Understanding **if-then** statements helps students develop logical reasoning, problem-solving, and decision-making skills. These skills are essential for reading comprehension, recognizing cause-and-effect relationships, and understanding patterns in stories.

By the end of the lesson, students will:

- Listen to and engage with *Coding with Cornell: Conditional Statements* through discussion and guided activities.
- Identify key details and main ideas in the text.
- Recognize and explain **if-then** relationships in the story and in real life.
- Describe how **if-then** statements help computers and people make decisions.
- Write and illustrate their own if-then scenarios.

Note for educators: While Python does not use the word *then*, this lesson introduces *if-then* logic to mirror natural language and support comprehension of cause-and-effect. This prepares students for coding syntax without confusion.

Resources and Materials

- *Coding with Cornell: Conditional Statements* book
- Chart paper and markers
- Printed if-then scenario cards
- Writing journals or lined paper

Vocabulary

- **Condition** – A rule that tells us when something should happen.
 - **If** – A word that helps us make a decision based on a condition.
 - **Then** – What we do *next* if the condition is true.
 - **Choice** – Picking between two or more options.
 - **Consequence** – What happens *because of* a choice or action.
 - **Code** – A set of instructions that tells a computer what to do.
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Lesson Introduction

- Have students gather on the carpet or at their desks.
 - Begin by writing the words **if** and **then** on the board. Ask, “What do you think these words mean when we use them together?”
 - Guide students to understand that **if** tells us when something might happen, and **then** tells us what happens next.
 - Prompt students to think about real-life decisions using if-then logic.
 - “What do we do **if** it rains outside?” (Guide students to responses like: “**Then** we use an umbrella.”)
 - “What do we do **if** we’re hungry?” (Guide responses like: “**Then** we eat something.”)
 - Explain that these are examples of **conditions**—rules that help us decide what to do based on what’s happening.
 - Let students know that today they’ll read *Coding with Cornell: Conditional Statements* to see how Cornell and Cori use **if** statements to make decisions in coding.
 - Encourage them to listen for examples of choices and consequences and to look closely at the pictures to see how conditions appear in both everyday life and computer code.
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Lesson Activities

Activity 1: Read-Aloud and Discussion

- Read *Coding with Cornell: Conditional Statements* aloud to the class, making sure to show each illustration clearly. Emphasize rhyming phrases and how they reinforce the logic of coding choices.
- As you read, pause at key pages where Cornell or Cori faces a decision. Ask:
 - “**What is the condition in this sentence?**”

English/Language Arts Lesson Plan: 2nd and 3rd Grade

Coding with Cornell: Conditional Statements

- **“What happens when the condition is true?”** (Example: “If it rains, we stay inside.” → staying inside is the action for when the condition is true.)
 - **“What happens if the condition is false?”** (If it doesn't rain, then maybe we go outside. Help students consider both sides.)
 - Use illustrations to prompt deeper discussion:
 - Show the image of Cornell holding an umbrella. Ask: **“What does this picture tell us about the condition?”** (Guide students to connect the rain in the image to the decision Cornell makes.)
 - Highlight a later image of Cornell and Cori making a different choice. Ask: **“What new condition are they reacting to? What are they choosing to do?”**
 - Reinforce that conditions in the book work like decisions we make in everyday life:
 - **“If I wake up early, then I can eat breakfast before school.”**
 - **“If I’m finished with my homework, then I can go play.”**
 - Close the read-aloud by asking:
 - **“How did Cornell and Cori use conditions to make choices?”**
 - **“Do computers need help making choices too? What do they use?”** (Introduce or reinforce the idea that coders use **if-then** statements to help computers make decisions, just like we do.)
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Activity 2: If-Then Matching Game

- **Educator Preparation:** Print and cut matching card sets with common if-then scenarios. Use one color for the “if” conditions and another for the “then” outcomes. Examples include:
 - If it is raining → then bring an umbrella.
 - If you’re hungry → then eat a snack.
 - If it is bedtime → then brush your teeth.
 - If you finish your homework → then play outside.
- Lay the cards face up in two separate areas: one for the “if” cards and one for the “then” cards.
- Call on students to come up and match an “if” condition with its correct “then” result. Each student reads the full sentence aloud after making a match.
- As a class, review each matched pair. Ask, “Why do these two cards go together?” to encourage reasoning and reflection.
- **Guidance:** This activity helps students recognize how if-then statements show cause and effect. It builds comprehension and supports the understanding that coders use these same types of statements to give instructions to computers.

Activity 3: If-Then Story Writing

- **Educator Preparation:** Provide writing paper, journals, or templates with space for both writing and drawing. You may pre-print sentence starters or display them on the board.
- Begin by reviewing what an if-then statement is with the class. Offer a few familiar examples to spark ideas:
 - “If I’m hungry, then I eat lunch.”
 - “If it’s my birthday, then I eat cake.”
- Ask students to come up with their own if-then ideas from daily life, hobbies, or school routines. Provide sentence starters like:
 - “If I finish my homework, then I can _____.”
 - “If it’s cold outside, then I will _____.”
 - “If I wake up early, then I will _____.”
- Have students write their own if-then sentence and draw a picture to go with it.
- Once students have finished, invite a few volunteers to share their sentence and illustration with the class.
- **Guidance:** This activity helps reinforce how if-then statements represent choices and consequences. It encourages students to apply logical thinking while strengthening sentence construction, creativity, and expressive writing.

Activity 4: Workbook Integration

- Have students complete several worksheets in the Coding with Cornell Activity Workbook as classroom and homework activities, including:
 - The Conditional Statements Book Cover coloring sheet
 - Conditional Statements Coloring Sheet 1
 - Conditional Statements Coloring Sheet 2
 - Equality Line Matching
 - Conditional Statements and Equality
 - If Statements – Matching
 - Equality Operators – Equal
 - Equality Operators – Not Equal
 - Equality Operators – Equal and Not Equal
 - If Statements (page 34 – 37)
 - **Conditional Statements Word Search**
 - **If Statements (page 38)**

* Workbook integration includes all pages that are recommended for grades lower than 2. Bold worksheet pages are recommended for grade 2 + 3.

Lesson Conclusion & Assessment

Wrap-Up Discussion

- “What is an if-then statement, and how does it work?”
- “Why do coders use if-then statements when writing code?”
- “Can you share an if-then decision you wrote or heard during our lesson today?”

Exit Ticket

- Ask each student to complete and write one if-then sentence using what they’ve learned.
Example prompt:
 - “If it is snowing, then I _____.”
- Collect responses as students line up or transition to the next activity to check for understanding.

Tip: Look for whether students demonstrate an understanding of cause-and-effect logic in their if-then statements. Use this as a quick check to determine if follow-up or reinforcement is needed in the next lesson.