



Teacher's Guide – 1-1 General science

CEFR Level: B1

ELPA 21: Intermediate

CA ELD: Expanding

AZ: Int. - Low

WIDA Level: Developing

TELPAS: Intermediate

NY: Transitioning

Estimated Time: 65-75 minutes

Language Objectives

Students will read and match basic science vocabulary with definitions.

Students will use

observation/hypothesis/theory language correctly in short sentences.

Students will identify common prefixes and suffixes and use them to form science words.

Materials Needed

- Off2Class lesson and projector
- Off2Class teacher notes
- Notebook/paper and pens/pencils

Optional:

- Printed worksheet with vocabulary matching and practice activities (one per student)
- Index cards with vocabulary words and definitions (for matching activity)
- Word-bank cards for differentiation (support)

Vocabulary

animal, air, water, sun, plant, Earth, atom, rock, cell, energy, force, gravity, biology, chemistry, physics, experiment, laboratory, observations, hypothesis, theory, rotate, transform, rise, attract, prefix, suffix, bio-, micro-, hydro-, -ology, -meter, -scope, -lysis, -osis

Language Prerequisites

Ability to read and comprehend short sentences

Familiarity with simple verb forms

Ability to participate in short oral responses

Content Objectives

Students will match vocabulary words to definitions and images.

Students will distinguish observation, hypothesis, and theory and classify example sentences.

Students will identify and match prefixes and suffixes to meanings and complete word-building practice tasks.

Related Lessons

Science Unit 1 Lesson 2 - Experiments and Data, Vocabulary review lesson (prefixes/suffixes reinforcement)



Lesson Procedure

Stage	Domain	Time	Slides	Activities	Diff – Lower	Diff – Higher
Warm-up / Hook	Listening & Speaking	2-3 min	1	1. Show slide 1 and say: "General Science. What do you think we will learn?" and wait for 2–3 student responses. 2. Ask: "Can anyone tell me one thing they already know about science?" and take 3 quick answers. 3. Say: "Our goal today is to learn common science words and how scientists think. Let's begin."	1. Write down the name of the science class the students are currently taking. Complete the prompt "In __, we learn about __."	1. Ask advanced students to brainstorm all the science words they know in two minutes.
Intro / Activation of prior knowledge	Speaking & Listening	3-4 min	2	1. Show slide 2 and read the header. 2. Prompt students to use the images to help them name things they learn about in science class. 3. Write ideas on the board.	1. Give students a choice board with 3 images (plant, microscope, sun) and ask them to point or use thumbs-up to show which they would talk about. 2. Model one full answer: Say: "I learn about plants in science."	1. Ask students to explain why asking questions is important in science and say: "Use the word 'investigate' in your answer."
Presentation / Vocabulary matching	Reading & Vocabulary	6-8 min	3-4	1. Show slide 3 and read each definition aloud. 2. Say: "Match the words at the top to the numbers. Talk with your partner and decide." and give students 1 minute to discuss. 3. Ask pairs: "Which word matches number 1?" and elicit answers, writing correct answers on the board. 4. Repeat for numbers 2–6 and say the full pairing aloud after students answer.	1. Allow students to point to the picture and say the word chorally before matching.	1. Ask students to create a sentence using two matched words (e.g., 'Plants need water and sunlight from the sun to grow.').

5. Repeat for Slide 4.

Concept check / Classification	Critical thinking & Vocabulary	3-4 min	5	1. Show slide 5 and explain the task. 2. Ask students to share matches and confirm. 3. Ask: "Why is D Biology?" and prompt one student to explain: Say: "D shows a microscope and microbes, which we study in biology."	1. Use think-pair-share: students first point to the image then share with partner before answering aloud.	1. Ask students to name one class activity you could do in each subject (e.g., 'In Chemistry we mix safe chemicals to see reactions') and say it aloud.
Reading / Cloze activity	Reading & Vocabulary	4-5 min	6	1. Show slide 6 and explain the task. 2. Read the paragraph aloud, pausing at each blank: "A (1) _____ is a person who studies..." 3. Ask students to write their answers individually (1–2 minutes) and then compare with a partner. 4. Confirm answers aloud.	1. Read the paragraph line-by-line and have students repeat each completed sentence chorally.	1. Ask a student to explain why 'observations' are important before forming a hypothesis.
Presentation / Concept explanation	Listening & Comprehension	4-5 min	7	1. Show slide 7 and read the definitions and examples aloud. 2. Ask: "Can someone put these in their own words?" and call on one or two students. 3. Say: "Remember: observations are facts we see, hypotheses are test ideas, theories explain why."	1. Provide a 1-sentence frame for each term (Observation: 'I see ____.') and have students fill the frame.	1. Ask students to give another real-world example of each (observation, hypothesis, theory) and explain briefly. 2. Ask an advanced student to describe how a theory differs from a hypothesis in terms of evidence.
Practice / Classification	Reading & Critical thinking	8-10 min	8-9	1. Show slide 8, explain the task, and read the example. 2. Ask for answers and confirm using teacher notes. 3. Repeat for Slide 9. 4. Say: "Great. Two-minute recap: what is	1. Allow students to discuss in small groups and choose answers together rather than alone.	1. Ask advanced students to articulate why each choice matches its category with one supporting reason. 2. Challenge students to create a new A/B/C set (one

				the difference between a hypothesis and a theory?" and accept 1–2 student answers.		observation, one hypothesis, one theory) and share it.
Vocabulary in context / Verb matching	Reading & Speaking	4-5 min	10	1. Show slide 10 and read the four sentences that contain bold verbs (rotates, transform, rise, attracts). 2. Explain the task. 3. Elicit answers from students and confirm. 4. Ask: "Can someone make a sentence with 'rotate' or 'transform'?" and call on one student to respond.	1. Provide a mini-dictionary card for each verb with a picture and simple definition to support matching. 2. Allow students to say the verbs chorally before matching to build confidence.	1. Ask advanced students to write a two-step sentence using two of the verbs (e.g., 'The sun rotates and this helps planets move.').
Speaking / Photo description	Speaking	4-5 min	11	1. Show slide 11 and explain the task. 2. Ask groups: "In your group, decide which verb goes with each photo and make one short sentence." and give 90 seconds. 3. Call on groups to present answers. 4. Provide quick corrective feedback and repeat strong examples.	1. Provide sentence frames for each photo: 'Photo A: The Earth ____ (rotates).' and have students complete them.	1. Ask advanced students to add a scientific reason to one sentence (e.g., 'The Earth rotates, which causes day and night.').
Presentation / Morphology (affixes)	Vocabulary & Word analysis	4-5 min	12	1. Show slide 12 and introduce prefixes and suffixes. 2. Say each example sentence aloud and ask: "Find the affix and predict its meaning." 3. Ask students to write the affix and predicted meaning next to each sentence. 4. Confirm answers.	1. Provide a list of common affixes with meanings on a handout for reference during the activity. 2. Model one full example with think-aloud: Say: "impossible -> im- means not, so impossible means not possible."	1. Ask students to brainstorm three other affixes and give an example word and meaning. 2. Challenge students to explain how adding an affix changes the word class (e.g., noun to adjective).
Practice / Prefix matching	Reading & Vocabulary	10-12 min	13-15	1. Show slide 13 and read the prefix table aloud so students hear each prefix and meaning. 2. Say: "Using the information, match each	1. Provide matching cards (prefix on one card, meaning on another) for students to physically pair.	1. Have advanced students assist lower level students.



word with its meaning (1–6 to A–F). Work with a partner." and give 90 seconds.
 3. Ask pairs to share answers; confirm using notes.
 4. Ask: "Which prefix means 'water'?" and accept answer: "hydro-."
 5. Repeat for Slide 14 and 15.
 6. Ask: "What does '-ology' mean?" and have students answer: "the study of."

2. Let students use the picture cues on the slide (water glass, oil etc.) to help choose meanings.
 3. Allow students to use bilingual glossaries if available for challenging prefix meanings.

Reading comprehension & Affix identification	Reading	5-6 min	16	1. Show slide 16 and instruct students to point out the prefixes and suffixes in the text. 2. Say: "Turn to your partner and compare which affixes you found." and allow 60 seconds for discussion. 3. Ask volunteers to name affixes they found and write them on the board.	1. Provide a printed copy with the affixes highlighted for students who need support. 2. Allow students to work in pairs to find affixes rather than alone.	1. Ask students to explain the meaning of the affixes that they found in the text.
Practice / Word-building	Writing & Vocabulary	5-6 min	17-18	1. Show slide 17 and explain the task. 2. Ask students to swap papers with a partner and check answers. 3. Provide corrective feedback. 4. Repeat for Slide 18.	1. Allow struggling students to use their notes from previous slides to complete each blank. 2. Allow peer support: pair a lower-level student with a higher-level peer to complete tasks together.	1. Ask advanced students to write a new sentence using one of the completed words and read it aloud. 2. Challenge students to create one additional fill-in item using a prefix or suffix not on the slide.

Assessment ideas

Formative Assessment

Summative Assessment



1. Warm-up oral check

When: During slide 1-2 (first 5 minutes)

How: Listen to student responses about what they already know; note vocabulary use and ability to express simple science ideas.

2. Pair matching checks

When: During slides 3-5 (vocabulary matching)

How: Observe pairs as they match words to definitions and circulate to check correct pairings; record students who need reteaching.

3. Observation/Hypothesis classification

When: During slides 8-9

How: Collect quick written O/H/T answers or use whiteboards to see if students can classify correctly; give immediate corrective feedback.

4. Affix identification

When: During slide 16 (reading)

How: Check student underlines and partner discussion for correct affix identification; note students who miss common affixes.

1. End-of-lesson worksheet

When: At the end of the lesson (slides 17-18 or as exit ticket)

How: Collect completed practice slides/worksheets (fill-in/cloze and prefix/suffix practice). Score for correct vocabulary usage and affix application.

2. Oral application check

When: During slide 11 presentations

How: Use a rubric to rate 2-3 students on correct use of verbs and clarity of spoken description (accuracy, vocabulary use, sentence structure).