

Multi-Day Lesson Plan

Topic: Landforms

Content: Erosion (Science-4th grade) Duration: 3-4 weeks

1. Content Objectives

At the end of this lesson, students understand that:

d. Waves, wind, water, and ice shape and reshape the Earth's land surface.
(California Science Standards)

1. *Students know* some changes in the earth are due to slow processes, such as erosion, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.

3. *Students know* moving water erodes landforms, reshaping the land by taking it away from some places and depositing it as pebbles, sand, silt, and mud in other places (weathering, transport, and deposition).

2. Language Objectives

Vocabulary:

Landforms

川、なみ、海岸、風、さばく、土、すな、
氷、氷河、谷、石、岩

(river, waves, beach, wind, desert,
soil, sand, ice, glacier, canyon, stone,
rock)

しんじょく、たいせき、じしん、地すべり、
ふんか

(erosion, deposition, earthquake,
landslide, volcanic eruption)

Language Functions:

- Identifying a place:
ここは_____です。
(This is a beach.)
- Expressing inanimate existence (in particular landforms)
_____には_____があります。
(There are rocks on the beach.)
- Stating the cause(s) of change:
_____が_____の形をかえます。
(Waves change the shape of rocks.)
_____が_____をはこびます。
(The wind carries the sand.)

Reading and Writing Objectives (across the languages: Japanese/English)

(Reading Comprehension)

2.5 Distinguish the main idea and supporting details in expository text (3rd grade standard).

(Writing)


1.1 Create a single paragraph: (3rd grade standard)

- a. Develop a topic sentence.
- b. Include simple supporting facts and details.


(Conventions)

- 1.1 Use compound sentences in writing.
- 1.3 Identify and use coordinating conjunctions in writing.

Lesson Procedures

 = pair/group oral language activity

Anticipatory Set: Big Question

- Teacher shows photos of different beaches in California.
- Then, teacher shows photos of shorelines that are eroded by waves.
- Teacher asks students what could have possibly caused this.
-  -Students discuss in their groups and share out.

Front-loading (Oral Language)

- Teacher, using visuals and TPR, inputs the vocabulary below for the incoming content lesson

Vocabulary: Landforms

川、なみ、海岸、風、さばく、土、すな、氷、氷河、谷、石、岩

(river, waves, beach, wind, desert, soil, sand, ice, glacier, canyon, stone, rock)



Reinforcement Activity: What's Missing?

- Then, teacher, using the visuals, reviews the language functions (sentence structures) below for the upcoming content lesson.

Language Functions:

Identifying a place

ここは _____ です。(This is a beach.)

Expressing existence of inanimate objects (in particular landforms)

_____ には _____ があります。(There are rocks on the beach.)



Reinforcement Activity: Ticket Champion

Front-loading (Literacy)

- Students practice writing new content vocabulary, language functions (sentence structures) and appropriate kanji (Chinese characters) on worksheets.

Content Input

A. Experiment/Demonstration (modality: kinesthetic)

1. Erosion Experiment

- Teacher introduces the content vocabulary しみしよく (erosion) and たいせき (deposition) with visuals.
- Teacher demonstrates how erosion works through a science experiment.
- Students repeat the experiment in groups.
- Afterwards, teacher and students re-visit the experiment by labeling a drawing (worksheet) depicting the different parts of the erosion process.

B. Visual Input (modality: visual)

1. Power Point Presentation: Erosion and other changes in landforms

- Teacher introduces content-related language functions (sentence structures):

Stating cause of change:

_____が_____の形をかえます。(Waves change the shape of rocks.)
_____が_____をはこびます。(The wind carries the sand.)

-Teacher reviews previous content vocabulary, しんじょく(erosion) and たいせき (deposition), and introduces new content vocabulary such as デルタ(delta), さき ゆう(dune), じしん(earthquake), ふんか(volcanic eruption), 地すべり(landslide) with PPT slides and videos. Teacher explains how each phenomenon causes change.

Content Reinforcement Activity: Science Song



Content Reinforcement Activity: Find Someone Who

C. Literacy Input

1. Graphic Organizer

-Before reading the text, teacher and students complete a graphic organizer designed to preview the informational structure of the text (topical organization).

2. Reading the Text

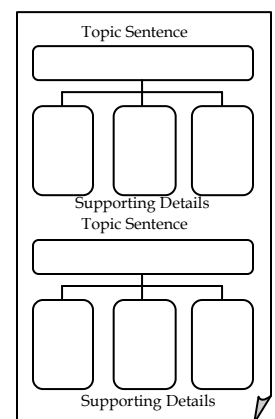
- Teacher distributes the reading text to each student.
- Students first attempt to read the passage by themselves.
- Teacher and students “echo” read the passage; teacher reads only 2-3 words at a time.
- Teacher encourages students to identify any difficult word(s) in the passage that he/she did not understand. Teacher explains these words on the board, and the individual/entire class reads these words.
- Students practice reading the passage in pairs (Buddy Read).
- Teacher and students echo-read the passage for the last time.
- Teacher asks for volunteers to go to the front of the class and read the passage (one student or as a pair).

Reading Comprehension: Main Idea and Supporting Details

-Using the text, the teacher shows how a paragraph is composed with a topic sentence and a number of supporting details. Teacher underlines a topic sentence in a paragraph and reviews how the sentence captures the main idea of that paragraph. Teacher also identifies the details that support the topic sentence in the same paragraph.

-Teacher then guides students to identify a topic sentence and supporting details in another paragraph. This time, teacher uses a graphic organizer (#1). Students fill in the organizer with teacher. Repeat the practice as necessary.

-Teacher informally checks for students’ understanding before moving onto next activity.



#1



Jig Saw (with a graphic organizer)

-First, teacher tells students that they are going to be using the same graphic organizer (#1) for this activity.

-Then, teacher regroups students into semi-heterogeneous groups called expert groups.

- Each group is assigned one paragraph from the text, and the students as a group identify the main idea and supporting details and fill in the graphic organizer.
- Afterwards, each student from the expert group returns to his/her original group, the home group, as “an expert” and shares the main idea and supporting details of his/her paragraph to their home group members. The group members write down the answers and/or correct the mistakes.
- Teacher may quickly go over all the answers at the end of the activity.

Check for Understanding



1. Heads Together

- Teacher distributes a sheet of paper to each group.
- The sheet has 3 sections: 1) しみしよく(erosion), 2) たいせき(deposition)、3) はやい地形のかわりかた(immediate changes of landforms)
- Students in the group come up with *anything* they know about each topic, and one member (a capable Japanese writer) writes down what his/her group members said in the appropriate section within the allotted time limit.
- Teacher may reward the group with the most number of ideas.
- Teacher collects the paper from each group and checks that the group has learned the content objectives.

Writing: Develop a Paragraph with Compound Sentences

- Teacher models how to develop a paragraph on the topic of erosion, using the text as a source. Teacher models how to include a topic sentence and supporting paragraphs from the text.
- Here, teacher also models how to combine two short, simple sentences with a coordinate conjunction *そして*, creating a compound sentence.
- Students write down the model paragraph on a sheet of paper.
- Then, teacher and students develop another paragraph on deposition together, using the text again as a source.
- Teacher informally checks students’ writing before moving onto the next activity. (Do their paragraphs include topic sentences, supporting details, and compound sentences with coordinate conjunctions?)

Application Activity

1. Circle Poster Activity

- Students create a circle poster that explains how the earth surface changes its shape. The contents include both slow and immediate processes of change: erosion, deposition, landslide, eruption, and earthquake.



Content Reinforcement Activity: Stayer and Strayer

- Teacher assesses the student posters in terms of 1) content objectives (erosion, deposition, etc.), 2) language objectives (effective paragraphing, compound sentences), and 3) other criteria (work habits, punctuality, creativity, etc.) with a teacher-made rubric.

Assessments

1. Formal Assessment:
 - a. End-of-lesson quiz
2. Informal Assessment:
 - b. Application activity product (Circle Poster) graded with the rubric.