SAMPLE LESSON PLAN ON SANDHILL CRANE MIGRATION

Next Generation Science Standards

Grade K	K-LS1.1, ESS3.A
Grade 1	1-LS1-2, LS1.B
Grade 3	3-LS2-1, LS2.C
Grade 5	5-LS2-1, LS2.A
Grade 6	MS-ESS3, MS-ESS3-3
Grade 7	MS-LS2, MS-LS2-1
Grade 8	MS-LS4, MS-LS4-2

PHENOMENON

Sandhill Cranes visit the California San Joaquin Delta each fall and winter.

Lesson Objective:

- Students will create a map of Sandhill Cranes to show their migration to Lodi and describe why they make the migration.

ENGAGE

Access student prior knowledge:

- Raise your hand if you have ever seen a Sandhill Crane.
- Ask students to share their experience.

Introduction:

- Today, we are going to begin learning about the Sandhill Cranes that come to the Lodi area each fall and winter.
- Show a YouTube video: https://www.youtube.com/watch?v=HT4iAwyK0aQ

Set:

- Ask the students to gather in small groups of 3 to 4 to talk about why they think Sandhill Cranes come to the Lodi area.
- Ask groups to share out to the whole group. Record their answers on the board.

EXPLORE

Make connections:

- Say, first let's think about why people move to Lodi. Why do you think people visit Lodi? Raise your hand if you have an idea.
- Guide the students to think about food, shelter, water, jobs, friends, etc. Record these on the board.
- Pass out a map of North America. https://www.google.com/search?q=free+maps+of+north+america&rlz=1C5CHFA_enUS919US919&sxsrf=ALeKk00MF-WLcYRj-zgMPOd-CjGvLTHhkQ:1609607035443&tbm=isch&source=iu&ictx=1&fir=mZQh7V2HPLfYSM%252ClRnzfCMIE1dXOM%252C_&vet=1&usg=AI4_-kR6R5Yuo2TDs_sxz1gsjt_QiqX5yg&sa=X&ved=2ahUKEwjw_sy83f3tAhVJop4

KHRYMDEgQ9QF6BAgbEAE&biw=1234&bih=735#imgrc=mZQh7V2HPLfYSM

- Explain that 200 years ago, most Americans lived on the east coast. Point that out on the map.
- About 170 years ago thousands of Americans moved west to California. Point out the western movement on the map.
- Say, now turn to your neighbor and tell them why you think they all moved to California.
- Remind them that some came for gold, but many came to find jobs, start farms, to be with friends and family, and to look for things they needed.
- Say, when a large group moves to a new place to get the things they need, that is called a migration. People migrate, but so do many animals.

Building conceptualization:

- On your map, put a dot with your pencil to show where Lodi is located. (Model for students) Give students time to discuss and make their claim.
- Think about the furthest you have traveled from Lodi. With your pencil, draw a line from Lodi to that place. (Assist students in locating those places)
- Say, there are two subspecies of Sandhill Cranes and they migrate to different places.
- Lesser Sandhill Cranes start their migration in Alaska. Locate Alaska on the map and draw a blue line from Alaska to Lodi. (Provide time for students to find and draw their line.)
- Then say, some of them start in British Columbia. Locate British Columbia on the map and draw another blue line to Lodi. (Provide time for students to find and draw their line.)
- Say, Greater Sandhill Cranes start their migration in central Oregon. Draw a red line from central Oregon to Lodi. Others start in northeastern California. Draw another red line from northeastern California to Lodi. (Provide time for students to find and draw their line.)
- Ask student to compare how far they have travelled with how far the cranes travel.

EXPLAIN

Direct instruction:

- Explain to the students that there is not enough food in Alaska, Oregon and Northern California in the winter. Say, why do you think there is no food during the winter. Ask students to brainstorm. This is one of the reasons they migrate to Lodi. We grow corn, rice and other crops they can eat.
- Ask the students to look at the reasons people migrate and think about other reasons Sandhill Cranes migrate to Lodi. Have them think for a while without responding.

- Randomly ask a student for a reason. Tell them if they can't think of a reason, they can ask another student in the class. Continue around the class in this way.
- Discuss the three main places Sandhill Cranes gather; Woodbridge Ecological Reserve, Staten Island Preserve, and the Cosumnes River Preserve. These areas are set aside to protect the cranes.

ELABORATE
Review:

- Lesser Sandhill Cranes migrate from Alaska and British Columbia
- Greater Sandhill Cranes migrate from central Oregon and northeast California
- Sandhill Cranes migrate to Lodi for food, water, a safe place to live, and to be with friends.
- Ask students to visit this website. https://www.treehugger.com/greatest-animal-migrations-4869293
- Say, compare the migration of one of the animals shown with the migration of Sandhill Cranes to the California Delta. Ask, what do they have in common? What is different? What questions do you want to ask about their migrations?

EVALUATE
Evaluation:

- Have students write about what they have learned regarding Sandhill Crane migration in their journal.