STEMscopes™ CA NGSS 3D
K-12 SCIENCE

**3RD GRADE**
LESSON SAMPLE

# SOCIAL AND GROUP BEHAVIOR

## LESSON SAMPLE

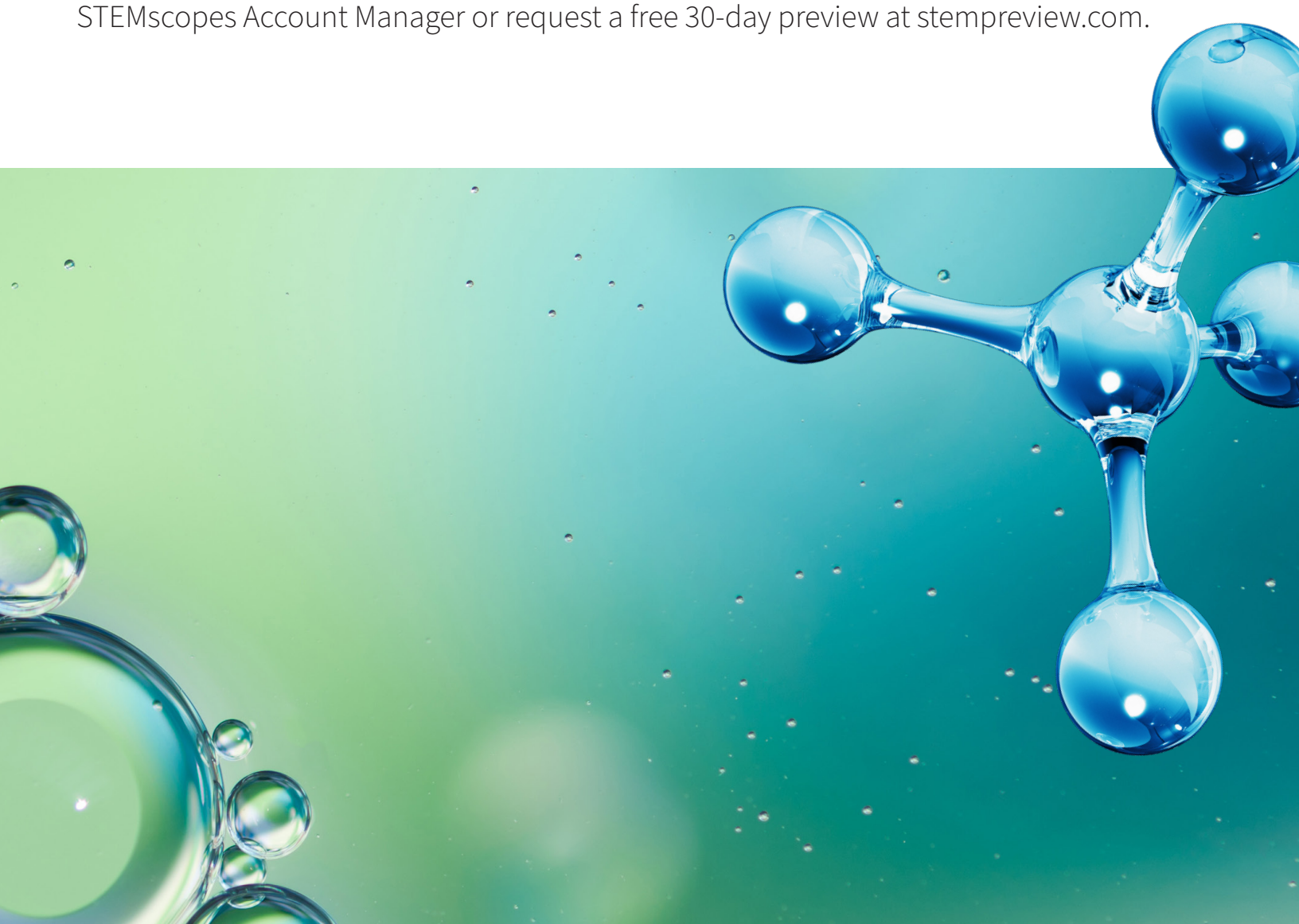
www.acceleratelearning.com/science/ca

# Welcome to STEMscopes Science!

Using the proven 5E learning model, STEMscopes California NGSS 3D allows teachers to seamlessly align their instruction with California's Next Generation Science Standards with hands-on activities and inquiry-based lessons.

The lesson sample includes activities from the Social and Group Behavior scope of our 3rd Grade science curriculum. These hands-on activities are found within the Explore section of the scope. You'll notice a teacher set-up video, materials list, and facilitation points, as well as the student handouts that coincide with each activity.

To learn more about the STEMscopes California NGSS 3D curriculum, reach out to your STEMscopes Account Manager or request a free 30-day preview at stempreview.com.



# Social and Group Behavior

## Investigative Phenomena

**STEMcoach in Action**

Facilitating Questioning and Discourse
Site

## Description

The Investigative Phenomena is designed to help engage students in working toward the goal of figuring out why or how something happens. Students should build their knowledge and understanding of the phenomena as they move through the scope.

## Materials

1 Investigative Phenomena Table (per student or class)
1 Investigative Phenomena Video (per class)

## Preparation

- Display or project the Investigative Phenomena video.
- The Investigative Phenomena Table can be printed for each student, or the Student Wondering of Phenomena question can be written on the board to be referred to throughout the scope.

**Teacher note:** These are sample phenomena events and possible Student Wondering of Phenomena questions. You may choose to adapt or change these to meet the needs of your students or allow students to generate their own questions.

## Facilitation

**Part I: At the Beginning of the Scope**

1. Allow students to view the following video.

2. Ask students if they have ever wondered if living in a group can help or hurt an animal's survival?  Allow students time to generate possible answers to the question or even generate their own questions.  You could record the student responses to create a driving question board.
3. Let students know that, in order to explain the phenomena they have just seen, they are going to be investigating how living in a group can affect an animal's survival.
4. Introduce students to the sample Student Wondering of Phenomena question below:
    a. How can living in a group help or hurt an animal's chances of survival?
5. Let students know that, as they move through the scope, they will be doing a number of activities to help them answer the Student Wondering of Phenomena question and to learn the information needed to help them describe the events happening in the Investigative Phenomena. The content they learn during the scope can be recorded on the Investigative Phenomena Table. Each time they learn something new, they should discuss how the information relates to the Investigative Phenomena question and record their ideas in the Investigative Phenomena Table.
6. Students will interact with the following everyday phenomena:
    a. How do animals work together?
    b. How does hunting in a group help the group?
    c. How does living in a group provide protection?
7. When the scope is completed, have students look back at the Investigative Phenomena. As you lead them in answering the question, encourage them to use the information they learned throughout the scope. Ask students to record their responses and ideas in the last column of the Investigative Phenomena Table prior to completing the summative CER assessment.
8. Encourage students to ask any additional questions about this or other related phenomena.

**Part II: During the Scope**

1. Each time the students complete one of the elements in the scope, they should revisit the Investigative Phenomena and revise their thinking. Each time they learn something new, they should discuss how the information relates to the Student Wondering of Phenomena question and record their ideas.
2. When the scope is complete, have students look back at the Investigative Phenomena. As you lead them in answering the question, encourage them to use the information they learned throughout the scope. Ask students to record their responses and ideas prior to completing the summative Claim-Evidence-Reasoning assessment.
3. Encourage students to ask any additional questions about this or other related phenomena.

# Social and Group Behavior

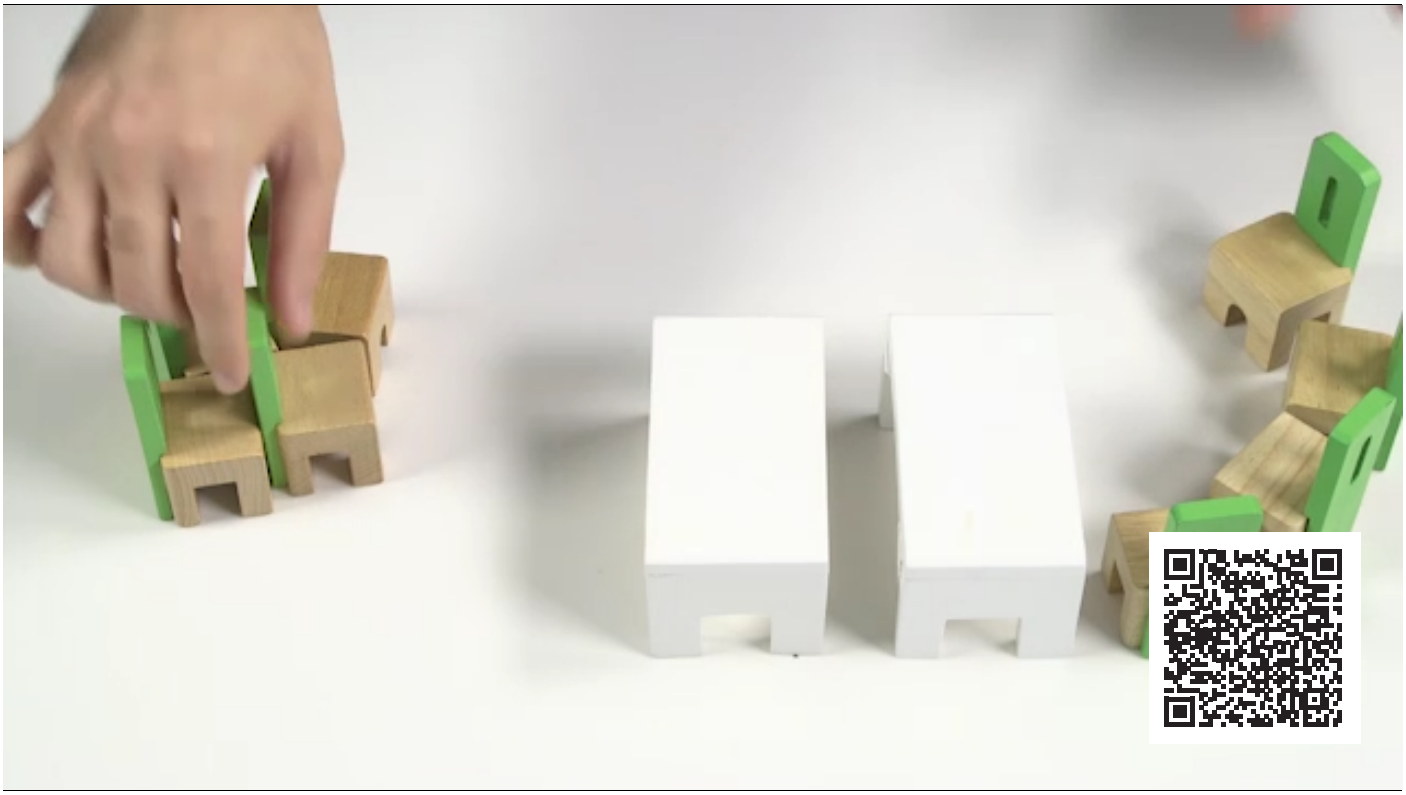
## Hook

### Everyday Phenomena

How do animals work together?

**The hands-on or demonstrative format of this activity does not allow it to feature a digitized version that would allow students to submit responses online.**

**Setup Video**



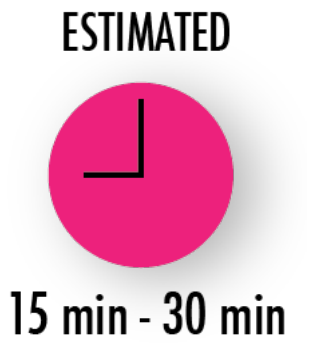
### STEMcoach in Action

Cooperative learning involves more than students working together on a lab or field project. It requires teachers to structure cooperative interdependence among the students, holds students individually accountable, and enables students to experience face-to-face academic interaction with peers. It also fosters interpersonal and small-group social skills. For further information regarding establishing cooperative learning, please click the provided link.

Site

## Description

Students observe how animals work together and what happens when they are left alone.




## Materials

**Reusable**

6 Blindfolds (per class)

**Consumable**

1 Piece of string (2 yds) (per class)

4–6 Pieces of blue construction paper as the water source (per class)

## Preparation

- This activity will need to be set up like a maze. Set up the desks in the classroom to allow for adequate crawling spaces between desks or around tables.

## Procedure and Facilitation Points

1. Students should listen as you read the following scenario: "You are a group of zebras migrating toward your new water source. The pack leader has the strongest instincts for where to go. You must follow the leader to reach the water source."
2. Choose five to six students as the "pack" to demonstrate the activity for the class. Students who are not members of the pack should sit along the perimeter of the room.
3. Blindfold all the members of the pack but the leader.
4. Place a "water source" somewhere around the room that is visible to the "pack leader."
5. Blindfold the pack leader after he or she has seen the water source. Note: there should be one pack leader per class.
6. Students may not tell each other where to go.
7. The pack leader holds one end of the string.
8. Have the pack hold on to the string and crawl behind the pack leader while blindfolded.
9. The pack leader should make his or her way to the water source as well as possible and lead the pack carefully through the classroom.
10. The last student should let go of the string when the pack is halfway through the maze.
11. The lone student now has to find the water source on his or her own.
12. Once the pack reaches the water source, the lone student has 1 minute to find his or her way to the water source. If the lone student does not get to it, then he or she perishes.
13. Repeat a few times to see if students notice a pattern.
14. Discuss:
    - What do you think was the purpose of this activity? The purpose was to see how animals work together.
    - **(CCC-2)** What happened to the animal who got separated? It got lost and couldn't find the water.
    - **(SEP-7)** Why is it important for all group members to stay with the group? When group members get left behind, it is hard for them to survive, because they might not be the strongest.

## Connection to the Investigative Phenomena

Once students have completed the activity, have them refer to the Investigative Phenomena question, anchor their learning, and revise their thinking.

### English Language Development

**Follow the Leader**

After students complete the blindfolded-zebra activity, allow them to work with a partner. One student will be blindfolded, while the other student will try to get the blindfolded student to do something. The blindfolded student will have to listen carefully to be successful. Examples of actions include writing on something, washing their hands, lining up at the door, etc. Have students switch roles and repeat.

Mix, Pair, Share

After completing the above activity, students will discuss the activity and how it relates to animals.

When you say, “Mix,” students will walk around the room or group until you say, “Pair.” Then, each student should pair up with the closest person. When you say, “Share,” students will share their answers to questions led by you. Continues saying, “Mix, pair, share!” until all questions have been answered.

Sentence Stems: It was difficult to follow my partner, because __ . It was important to listen carefully, because __ . How does this activity apply to animals? What happens to animals that do not follow the group?

### Intervention Strategies

**Roadblock: Easily Stressed or Upset**

Some students may become stressed at the thought of being blindfolded during this activity. Allow them either to not participate in the activity and instead watch their classmates or to be the pack leader. Another option is to allow them to participate without wearing the blindfold. Provide choices for students to decide what will result in the least amount of stress. Read more strategies for students who are easily stressed or upset in the Intervention Toolbox.

# Social and Group Behavior

## Explore 1: Activity - Collect and Conquer!

### Everyday Phenomena

How does hunting in a group help the group?

**Setup Video**

## Description

Students explore the differences between hunting in groups and hunting alone.


## Materials

**Printed Material**

1 Collect and Conquer! (per student)
1 Student CER (per student)

**Reusable**

5 Bowls (per class)
1 Pencil (per student)

**Consumable**

4 Bags of pasta shells (per class)

## Preparation

- Divide pasta between the bowls and place them across the room from where students will begin.
- This activity may require varying levels of participation. You may want to begin with five students gathering food individually or allow all students to go at one time.
- Refer to the CCC and SEP Scoring Rubrics in the Home section to access the standards covered in this Explore.

**STEMcoach in Action**

Project-based learning (PBL) not only more accurately reflects the nature of how skills are applied in the real world, but also creates a learning environment more likely to engage students. When we say "implementing project-based learning," we are describing the practices that are related to the successful implementation of PBLs. For further information regarding implementing project-based learning, please click the provided link.
Site

## Procedure and Facilitation Points

As students work through the activity, look for teachable moments to introduce students to the following vocabulary terms. Try to point out examples of the terms as students are working so that they can connect the meaning of the word with their experiences. Encourage students to use the following words as they record and discuss their findings.

- **Defense**: protection against harm
- **Survive**: the process of staying alive and in existence
- **Function**: what something does
- **Group**: a number of individuals assembled together or having some unifying relationship
- **Member**: a part of a group

1. Place students into groups of five.
2. Allow students to select (or you may identify) one student in each group to represent a less skilled gatherer of food.
3. The less skilled gatherer will only be allowed to pick up as much pasta as he or she can grasp with a thumb and forefinger.
4. The remaining students in the group represent highly skilled food gatherers. They will be allowed to pick up as much pasta as they can using their entire hand.
5. On your signal, allow the students to walk across the room and gather their pasta (food) in the appropriate manner (either with a whole hand or with a thumb and finger).
6. Have students complete the first part of their Student Journal, identifying the amount of food they were able to collect on their own.
7. Direct students to combine all the food gathered by the members their group into a single pile, then divide it equally back out among the members of the group.
8. Have students complete the second part of the Student Journal.
9. Discuss:
    a. Do you think skilled hunters are always successful in getting food? Yes or no; they may sometimes not do as well.
    b. **(CCC-2)** What could be the reason they would not do as well? If they are sick or hurt, they may not hunt as well.
    c. **(CCC-2)** Did you get more food when you hunted alone or when your group shared all portions evenly? I got more food when my group shared food.
    d. **(SEP-7)** How does belonging to a group benefit you? I get more food. I don't have to worry if I am not successful at hunting every time.
    e. **(SEP-7)** How else does living in a group benefit animals? They have protection from predators.
10. Have students complete the Student CER based on their experience.
11. Now that we have completed this activity, what can we add to our Graphic Organizer? Answers will vary based upon students' understanding, but can include the following: we can include fish, because living in a school offers them protection from predators, makes it easier to find a mate, allows them to go after large amounts of prey, and helps them camouflage.

## Connection to the Investigative Phenomena

After completing this activity, students revisit the Investigative Phenomena and discuss how living in a group helps the members of the group survive (e.g., for predators, it helps ensure that everyone gets enough food because skilled hunters often catch more than they need, and hunters can work together).

### Math Moment

You can extend this learning task by connecting it to math standard *3.NBT Number and Operations in Base Ten.*

In the number of piece collected sections of the Student Journal, have students practice **rounding** each number to the nearest 10.

# Explore

Name: _____ Date: _____

## Collect and Conquer!

### Procedure

1. Gather into groups as directed by your teacher.
2. Select a member of your group to be the member who isn't very good at gathering food. This person is only allowed to use his or her thumb and forefinger to pick up the pasta. The other members of the group may use their entire hand.
3. When your teacher tells you to go, walk to the tray of pasta and take as much as you can, using the right method.
4. Count how many pieces of pasta you were able to get on your own.

   How many pieces of pasta were you able to get on your own?

   _____

5. Combine your pieces of pasta with the pasta gathered by the other members of your group into one big pile.
6. Divide the big pile of pasta evenly among the members of your group.
7. Count how many pieces of pasta you have after combining and dividing.

   How many pieces of pasta do you have after combining with the group?

   _____

What do you notice is different between the time you gathered your pasta alone and the time you combined it with the group?

_____
_____
_____
_____

# Explore

## Reflection

Did you get more food when you hunted alone or when your group shared all portions evenly?

_____
_____
_____
_____

How does belonging to a group benefit you?

_____
_____
_____
_____

How else does living in a group benefit animals?

_____
_____
_____
_____