

Core Knowledge Digital Engagements, Science

Grade 3, Earth Science, Engagement 2

For the Teacher

Overview of Grade 3, Earth Science, Engagement 2

In this teacher-facilitated, whole-class game, students take turns answering questions to strategically place chips on a game board for their teams. Their objective is to position four chips in a row on a seven-by-six game-board grid.

What You Need

- The means to project this interactive for whole-class viewing
- Forty-two sheets of scrap paper (one side blank) or two small marker boards
- Two bold markers (dry-erase if using marker boards)
- Grade 3 Core Knowledge Science Student Readers, *Weather and Climates* (Students should be allowed to use the book to seek answers. Looking up information on demand is a valuable skill to practice!)

Advance Preparation

- Before you begin, divide the class into two teams, identified as the **red team** and the **black team**. (For added fun, allow students time to choose a team name and mascot and make a small team identification poster.)
- Students represent their teams by playing one at a time. Use reverse alphabetical order of the first letter of students' first names to determine the order in which students will play to represent their teams.
- Prepare two designated answer stations where the players will write their responses. The stations should be far enough apart so that players' opponents cannot see what the players are writing.
- **Download these instructions.** The **answer key** appears at the end of the document.

How to Facilitate

- Beginning with the screen following this one, project the engagement in the largest format possible for whole-class viewing.
- Go over the rules with students before beginning. Emphasize the importance of not shouting out answers.
- Use the **Let's Play!** button to advance to the game board.
- Have Player 1 from each team move to their designated answer station.

- The first player selects a number to reveal a question and start the countdown timer. Numbers can be selected in any order, but within each column, only the question in the lowest position is active and available to choose.
- The player must write their response and have it ready to display by the end of the timer countdown. They can use the Student Reader to find the answer. If they are ready early, click the timer to stop the countdown.
- Without revealing the correct answer yet, determine from the **answer key** below (teacher's eyes only!) whether the player has answered correctly.
 - If the player answered correctly, select the **Reveal Answer** button to reveal the correct response. A colored chip will drop into the game board.
 - If the player answered incorrectly, DO NOT select the **Reveal Answer** button to reveal the correct response. Instead, select **Play On** to return to the game board. The question remains available for another player to select.
- Continue by alternating play between teams, with different students answering for each turn.
- Whenever a team has successfully placed four of their team's colored chips in a row—vertically, horizontally, or diagonally—click on the team's score counter to tally their four-in-a-rows.
- You can choose to play through all forty-two questions or opt for a shorter game with fewer rounds by selecting **End Match**.

Answer Key

1. B. the atmosphere outside at a certain time and place
2. B. Climate describes the conditions over a long period of time
3. False. It happens closer to Earth's surface.
4. D. the weight of air pressing down
5. It gets lower.
6. They spread out and take up more space.
7. condensation
8. A. rise
9. B. sink
10. coming from
11. A. prevailing
12. D. warm
13. A. cold
14. the tilt of Earth's axis
15. B. tornado
16. C. hurricane
17. D. drought

18. C. levees
19. B. Models can be revised.
20. lightning rod
21. B. hurricane-resistant building
22. A. snow fence
23. D. the limits or rule for a design
24. C. barometer
25. tornadoes
26. the weather
27. C. to help drivers see better during storms
28. B. meteorologist
29. B. It is a type of electricity.
30. B. creating the first cloud models and studying weather from space
31. C. precipitation
32. A. evaporation
33. B. condensation
34. cloudy or rainy
35. sunny, or clear
36. C. gravity
37. gas
38. air moving from high to low pressure areas
39. A. wind speed
40. C. temperature
41. B. wind direction
42. D. air pressure

Tiebreaker: 253 mph (408 km/h)