

# OIL SPILL

Dice Simulation  
with Writing Connection

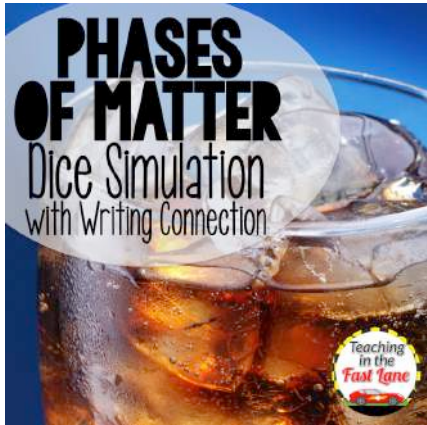




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# Teaching in the Fast Lane

## FOR MORE SIMULATIONS!



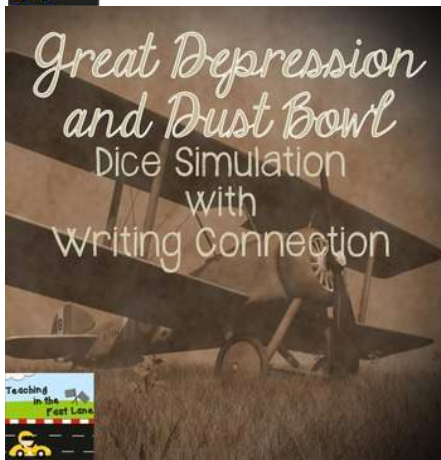
**TURKEY IN HIDING**  
Dice Simulation  
AND WRITING CONNECTION



**CIRCULATION OF A DOLLAR**  
Dice Simulation  
AND WRITING CONNECTION



**REINDEER GAMES**  
Dice Simulation  
AND WRITING CONNECTION



# MANY MORE TO COME!

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# INCLUDED IN THIS PRODUCT:

- Teacher and student directions for simulation
- Recording sheet
- Sample recording sheet
- Teacher directions for narrative
- Sample narrative based on sample recording sheet
- Rubric for narrative
- Signs for each location with directions
  - For larger classes, I would make multiple copies of each poster and directions, so that lines at each don't get too long.

**\*\*You will need six dice to complete this simulation. I recommend the large foam dice that can be found at the dollar store.\*\***

# NOTE TO TEACHER

This is a simulation meant to reinforce students' knowledge of the ways that an oil spill affects the environment. This simulation is a great way to connect science and writing within your curriculum.

# TEACHER DIRECTIONS FOR SIMULATION

- Print and laminate each of the location signs and student directions.
- Hang the location signs and student directions around your classroom and place one die by each poster.
- Hand out recording sheets to students and review the directions with them:
  - Directions are found on the next page.
- Monitor students as they travel around the classroom during the simulation and complete their recording sheet.
- Assign students to their starting location.
  - I do this by numbering students off #1-6 and assign them to the following locations:
    - 1. Oil Tanker
    - 2. In the Ocean
    - 3. On an Animal
    - 4. On Fire
    - 5. Clean Up Crew
    - 6. On the Beach

# DIRECTIONS FOR SIMULATION

- After each student has their starting location, they should begin to circulate.
- At each location, roll the die and read the event associated with the number rolled. Use the underlined words to record your progress and travel to the next location.
- Once you have established your location, travel there quietly and wait in line to roll the die.
  - If your directive is to stay in the same location, then go to the end of the line and take another turn rolling the die.
- Students should continue to travel from location to location until they complete their recording sheet or time is up.
- I would recommend allowing students to complete the simulation for about 10-15 minutes.



# OIL TANKER



# OIL TANKER

1. You are sealed in tight, stay in the oil tanker.
2. There is a leak, and you slowly drift out into the ocean.
3. The tanker runs aground and you are spilled onto a beach.
4. You are sealed in tight, stay in the oil tanker.
5. There is a leak, and you slowly drift out into the ocean.
6. The tanker runs aground and you are spilled onto a beach.



# IN THE OCEAN

# IN THE OCEAN

1. You continue to float in the ocean and disperse further.
2. While floating on the surface you make your way onto an animal.
3. The clean up crew has found you and begins their process.
4. While floating on the surface you make your way onto an animal.
5. You wash up onto a beach.
6. You continue to float in the ocean and disperse further.



# ON AN ANIMAL





# ON AN ANIMAL

1. You remain on an animal slowly causing its health to get worse.
2. The clean up crew finds you and begins their work.
3. You remain on an animal slowly causing its health to get worse.
4. The clean up crew finds you and begins their work.
5. You remain on an animal slowly causing its health to get worse.
6. The clean up crew finds you and begins their work.

# ON FIRE

# ON FIRE

1. You continue to burn on the surface of the ocean, stay on fire.
2. The clean up crew finds you begins their work.
3. You continue to burn on the surface of the ocean, stay on fire.
4. The clean up crew finds you begins their work.
5. You continue to burn on the surface of the ocean, stay on fire.
6. The clean up crew finds you begins their work.





# CLEAN UP CREW

# CLEAN UP CREW

1. You are skimmed off the surface and placed back in a tanker.
2. You are set on fire in a controlled burn.
3. The crew doesn't get to you in time and you wash up on the beach.
4. The crew uses dispersants that break you down in the ocean.
5. You are skimmed off the surface and placed back in a tanker.
6. You are set on fire in a controlled burn.





# ON THE BEACH



# ON THE BEACH

1. The clean up crew finds you and gets to work.
2. A bird walks through you, and you are on an animal.
3. Waves draw you back into the ocean.
4. You are set on fire in a controlled burn.
5. The clean up crew finds you and gets to work.
6. A bird walks through you, and you are on an animal.

Name\_\_\_\_\_ #\_\_\_\_\_ Date\_\_\_\_\_

# OIL SPILL DICE SIMULATION

1	Begin	1 1	
2		1 2	
3		1 3	
4		1 4	
5		1 5	
6		1 6	
7		1 7	
8		1 8	
9		1 9	
10		2 0	

# SAMPLE RECORDING SHEET FOR OIL SPILL DICE SIMULATION

1	Begin on a tanker	11	On fire
2	In the ocean	12	Clean up crew
3	On an animal	13	On a tanker
4	On an animal	14	On a tanker
5	Clean up crew	15	On the beach
6	In the ocean	16	On an animal
7	In the ocean	17	Clean up crew
8	In the ocean	18	On fire
9	On the beach	19	Clean up crew
10	On fire	20	In the ocean



# TEACHER DIRECTIONS FOR NARRATIVE

- After completing the dice simulation, students are ready to write a narrative from the point of view of oil from an oil spill.
- Students should use their recording sheet (the locations they visited) to write a narrative piece about their adventure.
- By following their recording sheet and adding details, students will have a narrative describing their adventure. It is also important for students to use their science vocabulary in the narrative.
- It is alright for students to not use all of the locations on their recording sheet, but they should include at least five events.
- A rubric for the narrative is included.

# SAMPLE NARRATIVE

My oil drop friends and I were partying on a tanker on our way from a deep water drilling platform to a port when all of a sudden we hit something. My friends and I sloshed back and forth violently, and then I felt myself being sucked towards a large split in the hull of the tanker.

I rushed through the hole in the side of the tanker and went out in the deep blue ocean. I started to slowly float towards the surface of the ocean and became separated from my friends. Once I reached the surface I sighed in relief, and thought that my journey was over, but before I knew it I was being sat on by a large pelican.

The pelican suddenly flew away and took me with it. I was buried deep in the feathers of the pelican's wing. The view from the sky was magnificent. I loved every minute of flying over the ocean, but I could tell that me being on the pelican's wing was making it more and more difficult for it to fly. Before I knew it the pelican could no longer fly and was drifting in the ocean. The oil on the pelican's feathers did not allow it to stay waterproof and it soon started to get very cold.

Luckily, the pelican was spotted by the clean up crew that was in the area due to the oil spill. The crew was able to wash the oil off of the pelican and I wound up on the beach. With each wave that rushed over me I felt myself being pulled back into the ocean. Eventually I did wind up back in the ocean and collected on the surface with other oil droplets from the same oil spill.

The clean up crew came up on me once again. This time they decided that a controlled burn was the best way to get rid of us. Last I heard, the burn is planned for tomorrow. Tonight I sit and wait.

# RUBRIC FOR OIL SPILL DICE SIMULATION NARRATIVE

	1 point	3 points	5 points
<b>Grammar, Mechanics, &amp; Spelling</b>	Many mistakes that make it difficult for the reader to understand.	A few mistakes, but the reader can still understand.	Only 1-2 mistakes and the reader can understand.
<b>Organization and Coherence</b>	The story does not make sense or follow order of events.	The story follows order of events, but lacks coherence.	The story follows a logical order and is coherent.
<b>Events from recording sheet</b>	Includes 2 or less events from the simulation.	Includes 4-5 events from the simulation.	Includes 6 or more events from the simulation.
<b>Details and Scientific Vocabulary</b>	No details are added. Academic vocabulary is not present.	A few obvious details are added along with some academic vocabulary.	Many imaginative details are added. Clear use and knowledge of academic vocabulary is present.

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