


Ozobot Lesson Plan

5th	Topic: Physical & Chemical Changes with the Ozobot		
<p>Standard: S5E1. Obtain, evaluate, and communicate information to identify physical and chemical changes.</p> <p>Essential Question: Can you determine the differences between physical and chemical changes?</p>			
<p>Vocabulary: Physical change Chemical change Freezing Melting Steam Burning Decomposition Digestion</p>		<p>Materials: Laptops or I-pads for Ozoblockly website Ozobots Physical and Chemical Changes slides</p>	
<p>Instruction:</p> <ol style="list-style-type: none"> 1. Challenge student to list various chemical and physical changes, possibly on a T-chart. If students struggle, allow students to use I-pads or laptops. 2. Introduce activity and instructions to students: <ol style="list-style-type: none"> a. Instructions: <ul style="list-style-type: none"> • From Safari, go to www.ozoblockly.com • Collaborate with your partner to make certain your Ozobot is calibrated first • Utilize Bit level 2 to program an Ozobot to navigate various physical and chemical changes • Program Ozobot to stop at each component, perform a tornado with a police light • Once your program is loaded, place your Ozobot on start to begin • If you have programmed Ozobot correctly, collect your Physical or Chemical change, if not, you have one more chance to collect that component • Now it's other person's turn to try to collect; leave Ozobot where it is and program from there • Whomever collects the most components at the end, wins the challenge 3. Monitor students throughout activity. 			
<p>Summarizer/Assessment: Teacher observation</p>		<p>Teacher Notes This activity could be modified to cover many subjects.</p>	

5th Grade: Ozobot, Physical and Chemical Changes

Standards: S5E1. Obtain, evaluate, and communicate information to identify physical and chemical changes.

EQ: Can you determine the differences between physical and chemical changes?

Hook: Investigate various physical and chemical changes utilizing an I-pad or laptop and an Ozobot.

Materials: Laptops or I-pads for Ozoblockly website, Ozobots, physical and chemical changes PowerPoint slides.



Resources: www.ozoblockly.com

Physical changes include: solids (freezing), liquids (melting), gases (steam)

Chemical changes include: burning, decomposition, digestion

Lesson: Students will collaborate to program an Ozobot to navigate various physical and chemical changes within given criteria.

Criteria:

- ▶ From Safari, go to www.ozoblockly.com
- ▶ Collaborate with your partner to make certain your Ozobot is calibrated first
- ▶ Utilize **Bit level 2** to program an Ozobot to navigate various physical and chemical changes
- ▶ Program Ozobot to stop at each component, perform a tornado with a police light 
- ▶ Once your program is loaded, place your Ozobot on start to begin
- ▶ If you have programmed Ozobot correctly, collect your Physical or Chemical change, if not, you have one more chance to collect that component
- ▶ Now it's other person's turn to try to collect; leave Ozobot where it is and program from there 
- ▶ Whomever collects the most components at the end, wins the challenge

Differentiation:

- ▶ Step by step instructions on the board
- ▶ Students can work independently