Statewide Transportation, Distribution, and Logistics (TDL) Curriculum  
Contextualized Science Module

Students will:

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>CONTENT</th>
<th>ACTIVITIES/RESOURCES</th>
<th>ASSESSMENT</th>
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</table>
| 1. Define & describe biomes                        | Ecosystems & Aquatic and Terrestrial Biomes | • [http://apps.cmsfq.edu.ec/biologyexploringlife/text/chapter34/concept34.3.html](http://apps.cmsfq.edu.ec/biologyexploringlife/text/chapter34/concept34.3.html)  
• [http://apps.cmsfq.edu.ec/biologyexploringlife/text/chapter34/concept34.4.html](http://apps.cmsfq.edu.ec/biologyexploringlife/text/chapter34/concept34.4.html)  
• [http://www.youtube.com/watch?v=v7cZ3b6PH2s](http://www.youtube.com/watch?v=v7cZ3b6PH2s)  
• i-Pathways: Science Unit 2 Lesson 6 – Interdependence of Organisms & Lesson 7 – Behavior of Organisms | Teacher assessment of student created compare and contrast list  
Teacher assessment of student Concept Check Questions |
| 2. Identify the layers of the Earth’s atmosphere & discuss weather conditions | Earth’s Atmosphere Layers  
• [http://www.illinoishomepage.net/story/d/story/weather-101-layers-of-the-atmosphere/14683/c5aVYxH4yEmAosw_I_lgwg](http://www.illinoishomepage.net/story/d/story/weather-101-layers-of-the-atmosphere/14683/c5aVYxH4yEmAosw_I_lgwg)  
• [http://usatoday30.usatoday.com/weather/wearadar.htm](http://usatoday30.usatoday.com/weather/wearadar.htm)  
• i-Pathways: Science Unit 4 Lesson 1 – Energy in the Earth’s System | Teacher assessment of student discussion  
Teacher assessment of student Concept Check Questions |
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• [http://hyperphysics.phy-astr.gsu.edu/hbase/newt.html](http://hyperphysics.phy-astr.gsu.edu/hbase/newt.html)  
• Explanation of Newton’s First Law: [http://www.youtube.com/watch?v=CQYELiTtUs8](http://www.youtube.com/watch?v=CQYELiTtUs8)  
• Explanation of Newton’s Second Law: [http://www.youtube.com/watch?v=3FQ58lVtbCg](http://www.youtube.com/watch?v=3FQ58lVtbCg)  
• Explanation of Newton’s Third Law: [http://www.youtube.com/watch?v=By-ggTfeuJU](http://www.youtube.com/watch?v=By-ggTfeuJU)  
• Newton’s Law of Inertia: [http://www.youtube.com/watch?v=8zsE3mpZ6Hw](http://www.youtube.com/watch?v=8zsE3mpZ6Hw)  
• i-Pathways Science: Unit 3 Lesson 3 – Motions and Forces | Teacher assessment of student created compare and contrast list  
Teacher assessment of student Concept Check Questions |
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| 4. Review & discuss friction and driving | Static and Kinetic Friction Driving and Friction Tire Tread | • [http://www.studyphysics.ca/newnotes/20/unit01_kinematicsdynamics/chp05_forces/lesson20.htm](http://www.studyphysics.ca/newnotes/20/unit01_kinematicsdynamics/chp05_forces/lesson20.htm)  
• [http://hyperphysics.phy-astr.gsu.edu/hbase/mechanics/frictire.html#c1](http://hyperphysics.phy-astr.gsu.edu/hbase/mechanics/frictire.html#c1)  
• Tire Tread Video/Penny Test: [http://www.youtube.com/watch?v=hFuUE567mTU](http://www.youtube.com/watch?v=hFuUE567mTU)  
• Driving in winter weather: [http://www.youtube.com/watch?v=W8G66WM2zmA](http://www.youtube.com/watch?v=W8G66WM2zmA) | Teacher assessment of student Concept Check Questions |
• i-Pathways Science Unit 3 Lesson 5 – Interactions of Energy and Matter | Conduct Concept Check experiment |
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| 6.       | Determine the characteristics of speed, velocity, and acceleration in motion | Speed, Velocity, Acceleration | Classroom activities for calculating speed, velocity, and acceleration: [http://www.physicsclassroom.com/class/1DKin/Lesson-1/Speed-and-Velocity](http://www.physicsclassroom.com/class/1DKin/Lesson-1/Speed-and-Velocity)  
http://www2.franciscan.edu/academic/mathsci/mathscienceintegration/MathScienceIntegration-827.htm  
http://www2.franciscan.edu/academic/mathsci/mathscienceintegration/MathScienceIntegration-836.htm | Teacher assessment of student Concept Check Questions |
States of Matter Song: [http://www.youtube.com/watch?v=vDZhUkp30tE](http://www.youtube.com/watch?v=vDZhUkp30tE)  
i-Pathways Science: Unit 3 Lesson 5 – Interactions of Energy and Matter | Teacher assessment of student Concept Check Questions |
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| 8.       | Describe & discuss differences between non-renewable and renewable resources | • EPA: [http://www.epa.gov/otaq/fuels/alternative-renewablefuels/](http://www.epa.gov/otaq/fuels/alternative-renewablefuels/)  
• Non-renewable resources: [http://www.youtube.com/watch?v=jSTGDBkMeRY](http://www.youtube.com/watch?v=jSTGDBkMeRY)  
• Classroom activity: [www.stopwaste.org/docs/schools/Lesson01.pdf](http://www.stopwaste.org/docs/schools/Lesson01.pdf)  
• Biodiesel explained: [http://www.youtube.com/watch?v=HCBa7te1thk](http://www.youtube.com/watch?v=HCBa7te1thk)  
• Simple Machines: [http://www.youtube.com/watch?v=okYcBt1aU3Y](http://www.youtube.com/watch?v=okYcBt1aU3Y)  
• Brakes: [http://auto.howstuffworks.com/auto-parts/brakes/brake-types/brake.htm](http://auto.howstuffworks.com/auto-parts/brakes/brake-types/brake.htm)  
• Drum brakes vs. Disc brakes [http://www.youtube.com/watch?v=4Ts5hQFi9Hw](http://www.youtube.com/watch?v=4Ts5hQFi9Hw) | Teacher assessment of student Concept Check Questions |
• Brakes: [http://auto.howstuffworks.com/auto-parts/brakes/brake-types/brake.htm](http://auto.howstuffworks.com/auto-parts/brakes/brake-types/brake.htm)  
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| Simple Machines & Compound Machines | Alternators | Brakes |