

IMPROVING KIDS' ENVIRONMENT



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Smart Schools Don't Idle Elementary Lesson Plan¹

Related Indiana Science Standards

<i>Grade Level</i>	<i>Content Area</i>	<i>Standard Identifier</i>	<i>Standard</i>
1 st	Physical Setting	1.3	Students investigate, describe, and discuss their natural surroundings. They question why things move and change.
1 st	Living Environment	1.4	Students ask questions about a variety of living things and everyday events that can be answered through observations. They become aware of plant and animal interaction. They consider things and processes that plants and animals need to stay alive.
1 st	Living Environment	1.4.4	Explain that most living things need water, food, and air.
2 nd	Living Environment	2.4	Students ask questions about a variety of living things and everyday events that can be answered through observations. They become aware of plant and animal interaction. They consider things and processes that plants and animals need to stay alive.
3 rd	Physical Setting	3.3	Students observe changes of the Earth and sky. They continue to explore the concepts of energy and motion.
4 th	Physical Setting	4.3	Students continue to investigate changes of the Earth and sky and begin to understand the composition and size of the universe. They explore, describe, and classify materials, motion, and energy.
4 th	Physical Setting	4.3.2	Begin to investigate and explain that air is a substance that surrounds us, takes up space, and whose movements we feel as wind.
5 th	Scientific Thinking	5.2	Students use a variety of skills and techniques when attempting to answer questions and solve problems. Students describe their observations accurately and clearly using numbers, words, and sketches, and are able to communicate their thinking to others. They compare, contrast, explain, and justify both information and numerical functions.
5 th	Physical Setting	5.3	Students continue to investigate changes of Earth and the sky. They explore, describe, and classify materials, motion, and energy.

Do Now:

¹ Lesson plan materials drawn from U.S. EPA and Clean School Bus USA Idle-Reduction campaign. For more resources and classroom materials, see www.epa.gov/cleanschoolbus

- Show video at <http://pbskids.org/eeoworld/index.html?load=air> to introduce air and air quality
- Summarize key points from video
- Inform students that all living things need air
- Quickly ask the following questions, writing responses to the last two on separate sides of a T-chart:
 - Are plants and animals living things?
 - Are you an animal?
 - Do you breathe air?
 - Is it important that we breathe clean air?
 - Do you think our air is clean?
 - What are things people do to make the air dirty?
 - What are things people do to make the air clean?

First Activity:

- Hold up one card at a time from the **Activity Cards Reproducible**
- Ask students what is going on in each card (take time to act out the “idling” card to ensure that students understand idling) and if the activity is good or bad for the air and why.
- Place the activity card on the correct side of the T-chart
- Once you are through all cards, review activities
- If you’re comfortable doing so, ask students if they or anyone they know has asthma. Inform students that asthma is a common breathing problem that more and more people have due to increased levels of pollution in our air. Ask students how it would feel to breathe polluted air if you struggle to breathe clean air. Relate asthma to the activities that students said were bad for the air.

Second Activity:

- With black butcher paper representing roads, provide instructions for students to act like cars. Students will act like cars by driving on the butcher paper. They will go when you say “go” and stop when you say “stop.” Be sure to instruct students to “drive” slowly so as not to hurt themselves or other students.
- After allowing students to stop their cars and sit with the car “running” a few times, ask them if it that is a good or bad thing to do. Establish that they shouldn’t “idle” their cars and that they should turn the engine off if they are sitting for more than 10 seconds. Restart the stop and go sessions, this time adding instructions for idling, including the amount of time students will be stopped, allowing them to decide for themselves whether they should idle or turn their engine off. Remind students that they are making the air dirtier when they idle longer than ten seconds.

Reflect:

- Ask students where people would idle for longer than ten seconds at school. (Perhaps your school has an area in the parking lot or in front of the school where students are dropped-off and picked-up.)
- Ask how that idling affects the air at our school.
- Ask students what could be done to limit idling at school. Write down activities.

Create:

- Instruct students to create signs or flyers persuading people not to idle.
- They should first draw an idling car, then they should add a sentence or more to educate people about idling and telling them why they shouldn’t idle.
- Allow students to present their pictures and sentences.
- Hang signs and flyers in classroom or around school.



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