

## Criteria of Living Things#

- All living things are made of cells.\*
- All living things must obtain and use energy.\*\*
- All living things grow.
- All living things reproduce.\*\*\*
- All living things can move or adapt to their environment.

\*This criterion was not used since students were only studying organisms at the macroscopic level.

\*\*The process of obtaining energy is too complex for young learners, so this was simplified to the processes of gaining the materials needed for energy formation (e.g., breathing, eating, taking in water).

\*\*\*This criterion was also not used due to the age of the students.#

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## What makes something alive?#

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It's moving

It's breathing

It needs air

It's standing up

It talks

It hears

It looks at you

It's blinking

It has eyes

It eats

It's eyes are open

It drinks

It needs water

It yawns

It has a face

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Living and Non-Living Groupings (after recess exploration) #	
Living	Non-Living#
Birds Flies Ants People Trees Flowers Grass	Rocks Play Structure Fence Sidewalk Sticks Dead Bugs Cars Soccer Balls

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Living and Non-living Assessment Rubric#	
Student Response	Points#
Incorrectly classified (States it is living when it is non-living or non-living when it is living.)	0#
Correctly classified with no justification	1#
Correctly classified and lists 1 of the criteria as justification	2#
Correctly classified and lists 2 of the criteria as justification	3#
Correctly classified and lists 3 of the criteria as justification	4#
Correctly classified and lists all 4 criteria as justification	5#

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Trade Book Suggestions

Lindeen, C. K. 2008. *Living and nonliving*. North Mankato, MN: Capstone Press.

Rissman, R. 2009. *Is it living or nonliving?* North Mankato, MN: Heinemann-Raintree.

Hicks, K. 2011. *Living or nonliving?* Vero Beach, FL: Rourke Publishing.

## Field Trip Safety Preparation

The following strategies should be considered in part of the lesson planning for field experiences:

**School Policy:** The very first thing to do before considering a field experience is to check the board of education policy of out-of-lab learning activities either on or off-site.

**Pre-Visit:** Teachers should always visit potential out-of-doors areas to review safety hazards prior to students carrying out activities.

**Chaperones:** In most cases, the ratio of adult chaperones to students should be around 1:10. However, if there are younger students, students with special needs or other situations requiring closer supervision, a smaller ratio like 1:5 or in extreme cases 1:1 should be considered.

**Behavioral Expectations:** A list of acceptable behaviors is a must. The standards must be shared and also the consequences of not following the rules!

**Hazardous Chemical Exposure:** Keep clear of out-of-doors areas when may have been treated with pesticides, fungicides and other hazardous chemicals. Check with the school district's facilities director to make sure no chemical applications have been made in the areas where students will be working. In the location is off school property, attempt to secure pesticide and any other hazardous chemical application information from the owners or operators of the site.

**Use of PPE:** When working out-of-doors, students should use appropriate personal protective equipment or PPE including safety glasses or safety goggles (when working with hazardous chemicals), gloves, close toed shoes, hat, long sleeve shirt and pants, sunglasses and sun screen protection. When working near deep water, use life preservers or other floatation devices.

**Exposure to Allergens:** Caution students relative to poisonous plants (ivy, sumac, etc.), insects (bees, wasps, ticks, mosquitoes, etc.) and hazardous debris (broken glass, other sharps, etc.). Show pictures of poisonous plants so students can easily identify them. Review habitat locations where ticks and/or mosquitoes are likely to be found; e.g. leaves, ponding water, etc.

**Trip/Fall Hazards:** Caution students about trip/fall hazards like rocks, string/rope, etc. when walking out-of-doors. Also use caution for impalement instruments such as rusty nails, sharp sticks, etc. Make sure students are warned about climbing trees, standing too close to the edge of a cliff, etc.

**Signed Acknowledgement Forms:** Teachers need to inform parents in writing of field trips relative to potential hazards and safety precautions being taken. Require parents and students to sign the acknowledgement forms and keep the forms at least for the balance of the year.

**Medical Issues:** Teachers need to check with the school nurse relative to student medical issues; e.g., allergies, asthma, etc. Be prepared for medical emergencies. The teacher again should let parents know and secure permission to administer appropriate medication should an emergency develop requiring it.

**Communications:** Teachers need to have a form of communications available such as a cell phone or two-way radio in case of emergencies. Always test the communications equipment ahead of time to make sure they are operational and within range.

Hand Washing: Wash hands with soap and water after completing activities dealing with hazardous chemicals, soil, biologicals (insects, leaves, etc.) or other materials. If soap and water are not available, use appropriate hand-wipes.

Contact Administration: Be certain to contact the main office prior to bringing classes out of the building for science activities.

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