



## Magnify Your PLT Activities with The Private Eye!

PLT helps students learn how to think, not what to think, about the environment.

The Private Eye helps students discover the wonder of looking closely at nature, thinking by analogy, changing scale and theorizing.

“The Private Eye is designed to develop higher order thinking skills, creativity, literacy and scientific literacy — across subjects and grades. The Private Eye is based on a simple set of ‘tools’ that produce ‘gifted’ results. Hands-on, investigative, The Private Eye — using everyday objects, a jeweler's loupe, and simple questions — accelerates science, writing, art, math, social studies, and more. K-16 through life, The Private Eye develops ‘the interdisciplinary mind.’”

-excerpt from *The Private Eye – (5X) Looking/Thinking by Analogy: A Guide to Developing the Interdisciplinary Mind.* (Ruef 2003, 1998, 1992).

In the table below, see how The Private Eye enhances many PLT activities. \*marks those PLT activities that are a *perfect* match with The Private Eye!®

Project Learning Tree and The Private Eye®			
PLT ACTIVITY	PLT TITLE	SKILLS	SUGGESTED PRIVATE EYE LOUPE EXTENSION(S) and page numbers of selected Private Eye activities**
*1	The Shape of Things	Observing	Look for shapes in nature with the loupe.
*5	Poet-Tree	Observing, Making Analogies and Metaphors, Identifying Relationships and Patterns, Composing	Use The Private Eye process of loupe looking and thinking by analogy to inspire poetry writing. Loupe-look at various parts of trees such as the bark, stems, leaves, buds, flowers, seed pods, fruits or nuts. Make a border or frame around your poem using a pattern seen with the loupe.
6	Picture This!	Observing, Making Analogies and Metaphors	Pocket Museum p. 76-77, Naming by Analogy p. 143
7	Habitat Pen Pals	Observing, Making Analogies and Metaphors, Composing	Change scale with the loupe and write from the perspective of the animal as in “Honey I Shrunk the Kids”
8	The Forest of S.T. Shrew	Observing, Making Analogies and Metaphors,	Use loupes to explore a decaying log, examine an earthworm or tiny rootlets of a potted plant.
9	Planet Diversity	Observing, Making Analogies and Metaphors, Identifying Relationships and Patterns, Inferring	Loupe-look for biodiversity. What is it? Enlarge small section of object found in your study plot for a loupe drawing and see if classmates can guess what your object is. / Aliens & Mutants trading cards inspired by loupe-looking and drawing from your study plot. p. 134.
12	Invasive Species	Observing, Making Analogies and Metaphors, Interpreting, Problem-solving, Reasoning	If available, loupe-look at various invasive species. Count plant seeds. By looking closely and thinking in analogies, are there any clues as to why these species are such successful invaders?
13	We All Need Trees	Observing, Making Analogies and Metaphors,	Loupe-look at items collected for Part B.

16	Pass the Plants, Please	Observing, Making Analogies and Metaphors, Comparing and Contrasting, Inferring	Examine vegetables, fruits, seeds close up. / Use the loupe-look as your introduction to the overall activity. / What is it? Enlarge small section of your plant-based food item for a loupe drawing and see if classmates can guess what your object is. / Take a recipe from a cookbook. Loupe-look at some of the ingredients – fresh whole spices are wonderful to study with a loupe. p.201 / Visit an Herb Farm or bring in plants to the classroom. Loupe-look at the plants. “What else does it look like?” “What else does it <i>smell</i> like?” p.146
18	Tale of the Sun	Observing, Making Analogies and Metaphors, Composing	Loupe-looking with analogy lists allow creative writing juices to flow.
*20	Environmental Exchange Box	Observing, Making Analogies and Metaphors, Classifying and Categorizing, Synthesizing and Creating	Prepare an environmental exchange box filled with loupe-able items. Create an “analogy field guide” to accompany the items. Include a loupe-drawing for each item in your guide.
*21	Adopt a Tree	Observing, Making Analogies and Metaphors, Composing	Loupe-look at various parts of trees such as the bark, stems, leaves, buds, flowers, seed pods, fruits or nuts. Loupe-draw aspects of their tree. Use The Private Eye process of loupe looking and thinking by analogy to inspire student authors for their portfolios, poems, essays, books, creative stories,
*23	The Fallen Log	Observing, Making Analogies and Metaphors, Composing	Use loupes to explore a decaying log. Examine an earthworm, termite, sow bug, beetle, lichens, moss, fungi close up with a loupe. Loupe-look, think by analogy and loupe-draw. Using analogies compose a poem about your decaying log.
*24	Nature’s Recyclers	Observing, Making Analogies and Metaphors, Comparing and Contrasting, Identifying Attributes and Patterns	Examine a sow bug and a pill bug with a loupe first and then change scale by putting each into a magnifying box and then use the loupe to increase magnification. Compare and contrast the two organisms through observations and analogies. Loupe-draw your entire “bug” or draw a portion of it. Do a detailed, accurate drawing or decorate your bug drawing with a pattern found in nature as seen with your loupe.
*28	Air Plants	Observing, Making Analogies and Metaphors, Interpreting, Summarizing	Use loupes to examine lenticels on plant stems and stomata on the underside of leaves. Ask the students to explain photosynthesis by using analogies.
41	How Plants Grow	Observing, Making Analogies and Metaphors, Composing	Fresh bean sprouts are loupe-wonderful! Write a poem about the bean sprout. Adopt a Seed p. 114
*43	Have Seeds, Will Travel	Observing, Making Analogies and Metaphors, Estimation, Proportional Reasoning, Graphing, Synthesizing and Creating	Collect different kinds of seeds. Loupe-look, write, draw and theorize. Seed travel is linked to seed pod structure. p. 144-145 / Old & New p. 147 / How many seeds do you think one foxglove plant produces? p. 180 / Pocket Museum featuring seeds p. 76-77 / Create trading cards of seedy super heroes or aliens. Take details from your loupe observations and analogies to create your cartoon drawing. Describe the cartoon figure’s super powers in terms of seed structure and form. p. 108 & 134.
*46		Observing, Making Analogies and Metaphors,	Go on a safari loupe hunt. Loupe-look for tiny animals and signs of animals living in your study site.
47	Are Vacant Lots Vacant?	Observing, Making Analogies and Metaphors,	Loupe-look for biodiversity in your study plot. What was the most interesting thing found with your loupe? Would you have noticed this if you didn’t have a loupe? / Instead of a hand lens use a loupe to go on a Mini Loupe Safari.
49	Tropical Treehouse	Observing, Making Analogies and Metaphors,	Loupe-look at various items produced from tropical forests.

51	Make Your Own Paper	Observing, Making Analogies and Metaphors,	Loupe-look at different kinds of paper made out of different fibers. / Take the patterns that you found in nature with your loupe to decorate your paper. / Use your paper and patterns to make a Frieze p. 131
56	We Can Work It Out	Observing, Making Analogies and Metaphors,	To help set the stage, before you start the activity, loupe-look at an acorn.
*61	The Closer You Look	Observing, Making Analogies and Metaphors	Loupe-look, write, draw and theorize. Add an additional column to your graphic organizer chart with the heading "Loupe Analogies". Add "Loupe Boxes" or "Loupe Circles" to the 2 <sup>nd</sup> student drawing showing a close up detailed view of the tree. For example a leaf margin close up, bark close up, flower bud close up, etc.
*64	Looking at Leaves	Observing, Making Analogies and Metaphors, Identifying Relationships and Patterns	Loupe-look, write, draw and theorize. Make note of a loupe observation that you wouldn't have noticed if you hadn't been looking at the leaf with a loupe. Share with the class. / Leaf Art – p. 130, p. 131, and p. 135
*65	Bursting Buds	Observing, Making Analogies and Metaphors, Ordering and Arranging, Elaborating	Loupe-look, write, draw and theorize. Many leaf and flower buds are loupe-wonderful! Make loupe-drawings to record the changes of the bud over time. / Flower Power p. 131
66	Germinating Giants	Observing, Making Analogies and Metaphors	Change scale by using a jeweler's loupe.
*68	Name That Tree	Observing, Making Analogies and Metaphors, Classifying and Categorizing, Interpreting, Synthesizing and Creating	Create an "analogy field guide" to aid in tree identification. / Or, give a new name to each tree or shrub by using an analogy. p143.
*76	Tree cookies	Observing, Making Analogies and Metaphors, Composing	Use a loupe to examine your tree cookies. A loupe may make it easier for some students to focus and concentrate on counting the rings. Plus a loupe will help find small markings or clues that might be missed by the naked eye. What analogies do the tree rings remind the student of? Compose a story or poem based on the tree ring analogies.
78	Signs of Fall	Observing, Making Analogies and Metaphors, Composing	Loupe-look, write, draw and theorize. Make note of a loupe observation that you wouldn't have noticed if you hadn't been looking at the leaf with a loupe. Share with the class.
93	Paper Civilizations	Observing, Making Analogies and Metaphors, Composing	Loupe-look, write, draw and theorize. Make note of a loupe observation that you wouldn't have noticed if you hadn't been looking at the various kinds of papers with a loupe. / Use your loupes to discover the history of textiles too p. 205

For more information of The Private Eye, please visit their web site: <http://www.theprivateeye.com>

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A "work in progress" so please send additional comments or ideas for using Private Eye and PLT to the contact above.