Connecticut PreK - 10
Science
Curriculum Framework

Scientific Inquiry, Literacy, and Numeracy, PreK – 2

A INQ.1 Make observations and ask questions about objects, organisms and the environment.	
PLT 1 – The Shape of Things (PreK-3) PLT 2 – Get in Touch With Trees (PreK-6) PLT 3 – Peppermint Beetle (PreK-6) PLT 62 – To Be a Tree PLT 4 – Sounds Around PreK-8) PLT 16 – Pass the Plan (K-8) PLT 20 – Environmental Exchange Box (K-8) PLT 67 – How Big Is Your Tree? PLT 21 – Adopt a Tree (PreK-8) PLT 22 – Trees as Habitats (PreK-8) PLT 24 – Nature's Recyclers (1-6) PLT 36 – Pollution Search (PreK-6) PLT 41 – How Plants Grow (4-8) PLT 87 – Earth Manners PLT 43 – Have Seeds Will Travel (K-8)	PLT 46 – Schoolyard Safari (PreK-5) PLT 61 – The Closer you Look (PreK-6) PLT 62 – To Be a Tree (PreK-4) PLT 64 – Looking At Leaves (K-4) PLT 65 – Bursting Buds (K-6) PLT 67 – How Big is Your Tree? (4-8) PLT 68 – Name That Tree (2-8) PLT 70 – Soil Stories (K-8) PLT 77 – Trees In Trouble (1-8) PLT 78 – Signs of Fall (K-6) PLT 87 – Earth Manners (PreK-4) PLT 78 – Signs of Fall

A INQ.2 Use senses and simple measuring tools to collect data.	
PLT 1 – The Shape of Things (PreK-3) PLT 2 – Get in Touch With Trees (PreK-6) PLT 3 – Peppermint Beetles (PreK-6) PLT 21 – Adopt a Tree (PreK-8) PLT 24 – Nature's Recyclers (1-6) PLT 25 – Birds and Worms (K-6) PLT 36 – Pollution Search (PreK-6) PLT 41 – How Plants Grow (4-8)	PLT 43 – Have Seeds Will Travel (K-8) PLT 46 – Schoolyard Safari (PreK-5) PLT 64 – Looking At Leaves (K-4) PLT 65 – Bursting Buds (K-6) PLT 70 – Soil Stories (K-8) PLT 77 – Trees in Trouble (1-8) PLT 87 - Earth Manners (PreK-4)

A INQ.3 Make predictions based on observed patterns.	
PLT 65 – Bursting Buds (K-6) PLT 77 – Trees in Trouble (1-8)	PLT 78 – Nothing Succeeds Like Succession (K-6)

A INQ.4 Read, write, listen and speak about observations of the natural world.	
PLT 1 – The Shape of Things (PreK-3) PLT 2 – Get in Touch with Trees (PreK-6) PLT 3 – Peppermint Beetle (PreK-6) PLT 16 – Pass the Plants, Please (K-8) PLT 20 – Environmental Exchange Box (K-8) PLT 21 – Adopt a Tree (PreK-8) PLT 22 – Trees as Habitats (PreK-8) PLT 24 – Nature's Recyclers (1-6)	PLT 36 –Pollution Search (PreK-6) PLT 41 – How Plants Grow (4-8) PLT 43 – Have Seeds Will Travel (K-8) PLT 46 – Schoolyard Safari PreK-5) PLT 54 – I'd Like to Visit a Place Where … (PreK-8) PLT 78 – Signs of Fall (K-6) PLT 87 – Earth Manners (preK-4) PLT 89 – Trees for Many Reasons (2-8)

A INQ.5	Seek information in books, magazines and pictures.
PLT 3 – Peppermint Beetle (PreK-6) **PLT 6 – Picture This (PreK-5)** **PLT 8 – The Forest of S.T. Shrew (1-6)** **PLT 13 – We All Need Trees PreK-6)** **PLT 17 – People of the Forest (5-8)** **PLT 20 – Environmental Exchange Box(K-8)** **PLT 22 – Trees as Habitats (PreK-8)** **PLT 32 – A Forest of Many Uses (1-8)**	**PLT 34 – Who Works In This Forest? (3-6)** **PLT 36 – Pollution Search (PreK-6)** **PLT 39 – Energy Sleuths (K-8)** **PLT 68 – Name That Tree (2-8)** **PLT 77 – Trees in Trouble (1-8)** **PLT 87 – Earth Manners (PreK-4)** **PLT 89 – Trees for Many Reasons (2-8)**

A INQ.6	Present information in words and drawings.
PLT 1 – The Shape of Things (PreK-3) **PLT 2 – Get in Touch With Trees (PreK-6)** **PLT 6 – Picture This (PreK-5)** **PLT 8 – The Forest of S.T. Shrew (1-6)** **PLT 16 – Pass the Plants, Please (K-8)** **PLT 20 – Environmental Exchange Box(K-8)** **PLT 21 – Adopt a Tree (PreK-8)** **PLT 24 – Nature's Recyclers (1-6)** **PLT 30 – Three Cheers For Trees (1-4)** **PLT 39 – Energy Sleuths (K-8)**	**PLT 43 – Have Seeds Will Travel (K-8)** **PLT 46 – Schoolyard Safari (PreK-5)** **PLT 54 – I'd Like to Visit a Place Where …. (PreK-8)** **PLT 61 – The Closer You Look (PreK-6)** **PLT 62 – To Be a Tree (PreK-4)** **PLT 67 – How Big is Your Tree? (4-8)** **PLT 70 – Soil Stories (K-8)** **PLT 80 – Nothing Succeeds Like Succession (3-8)** **PLT 87 – Earth Manners (PreK-4)**

A INQ.7	Use standard tools to measure and describe physical properties such as weight, length and temperature.
PLT 21 – Adopt a Tree (PreK-8) **PLT 64 – Looking at Leaves (K-4)**	**PLT 67 – How Big is Your Tree? (4-8)**

A INQ.8	Use nonstandard measures to estimate and compare the sizes of objects.
PLT 64 – Looking at Leaves (K-4) **PLT 67 – How Big Is Your Tree? (4-8)**	**PLT 70 – Soil Stories (K-8)**

A INQ.9	Count, order and sort objects by their properties.
PLT 6 – Picture This (PreK-5) **PLT 10 – Charting Diversity (4-8)** **PLT 13 – We All Need Trees (PreK-6)**	**PLT 25 – Birds and Worms (K-6)** **PLT 43 – Haves Seeds Will Travel (K-8)** **PLT 64 – Looking at Leaves (K-4)**

A INQ.10	Represent information in bar graphs.
PLT 16 – Pass the Plants, Please (K-8) **PLT 22 – Trees As Habitats (PreK-8)**	**PLT 25 – Birds and Worms (K-6)** **PLT 46 – Schoolyard Safari (PreK-5)**

Content Standard K.1 Objects have properties that can be observed and used to describe similarities and differences.

CMT Connection – A 1 Use the senses and simple measuring tools, such as rulers and equal-arm balances, to observe common objects and sort them into groups based on size, weight, shape or color.

PLT 1 – The Shape of Things (PreK-3)	**PLT 43 – Have Seeds Will Travel (K-8)**
PLT 2 – Get in Touch with Trees (PreK-6)	**PLT 64 – Looking at Leaves (K-4)**
PLT 10 – Charting Diversity (4-8)	**PLT 67 – How Big is Your Tree? (4-8)**
PLT 25 – Birds and Worms (K-6)	

CMT Connection – A 2 Sort objects made of materials such as wood, paper and metal into groups based on properties such as flexibility, attraction to magnets, and whether they float or sink in water.

No Connections

CMT Connection – A 3 Count objects in a group and use mathematical terms to describe quantitative relationships such as: same as, more than, less than, equal, etc.

PLT 1 – The Shape of Things (PreK-3)	**PLT 43 – Have Seeds Will Travel (K-8)**
PLT 6 – Picture This PreK-5)	**PLT 64 – Looking at Leaves (K-4)**
PLT 25 – Birds and Worms (K-6)	

Content Standard K.2 Many different kinds of living things inhabit the Earth.

CMT Connection – A 4 Describe similarities and differences in the appearance and behaviors of plants, birds, fish, insects, and mammals (including humans).

PLT 1 – The Shape of Things (PreK-3)	**PLT 61 – The Closer You Look (PreK-6)**
PLT 2 – Get in Touch with Trees (PreK-6)	**PLT 62 – To Be a Tree (PreK-6)**
PLT 6 – Picture This (PreK-5)	**PLT 64 - Looking at Leaves (K-4)**
PLT 20 – Environmental Exchange Box(K-8)	**PLT 65 – Bursting Buds (K-6)**
PLT 21 – Adopt a Tree (PreK-8)	**PLT 78 – Signs of Fall (K-6)**
PLT 25 – Birds and Worms (K-6)	

CMT Connection – A 5 Describe the similarities and differences in the appearance and behaviors of adults and their offspring.

PLT 87 – Earth Manners (PreK-6)

CMT Connection – A 6 Describe characteristics that distinguish living from nonliving things.

PLT 78 – Signs of Fall (K-6)

Content Standard K.3 Weather conditions vary daily and seasonally.

CMT Connection – A 7 Describe and record daily weather conditions.

No Connections

CMT Connection – A 8 Relate seasonal weather patterns to appropriate choices of clothing and activities.

No Connections

Content Standard K.4 Some objects are natural, while others have been designed and made by people to improve the quality of life.

CMT Connection – A 9 Describe the types of materials used by people to build houses, and the properties that make the materials useful.

PLT 61 – The Closer You Look (PreK-6)	**PLT 62 – To Be a Tree (PreK-4)**

CMT Connection – A 10 Describe how the motion of objects can be changed by pushing and pulling.

No Connections

Content Standard 1.1 The sun appears to move across the sky in the same way every day, but its path changes gradually over the seasons.

CMT Connection – A 11 Describe the apparent movement of the sun across the sky and the changes in the length and direction of shadows during the day.

No Connections

Content Standard 1.2 Living things have different structures and behaviors that allows them to meet their basic needs.

CMT Connection – A 12 Describe the different ways that animals, including humans, obtain food and water.

PLT 3 – Peppermint Beetles (PreK-6) **PLT 8 – The Forest of S.T. Shrew (1-6)**	**PLT 24 – Nature's Recyclers (1-6)**

CMT Connection – A 13 Describe the different structures plants have for obtaining water and sunlight.

PLT 16 – Pass the Plants, Please (K-8) **PLT 61 – The Closer You Look (PreK-6)** **PLT 62 – To Be a Tree (PreK-4)**	**PLT 64 – Looking at Leaves (K-4)** **PLT 65 – Bursting Buds (K-6)**

CMT Connection – A 14 Describe the structures that animals, including humans, use to move around.

PLT 4 – Sounds Around (PreK-8) **PLT 6 – Picture This (PreK-5)**	**PLT 8 – The Forest of S.T. Shrew (1-6)**

Content Standard 1.3 Organisms change in form and behavior as part of their life cycles.

CMT Connection – A 15 Describe the changes in organisms, such as frogs and butterflies, as they undergo metamorphosis.

No Connections	

CMT Connection – A 16 Describe the life cycles of organisms that grow but do not metamorphose.

PLT 65 – Bursting Buds (K-6)	**PLT 78 – Signs of Fall (K-6)**

Content Standard 1.4 The properties of materials and organisms can be described more accurately through the use of standard measuring units.

CMT Connection – A 17 Estimate, measure and compare the sizes and weights of different objects and organisms using standard and non-standard measuring tools.

PLT 64 – Looking at Leaves (K-4)	**PLT 67 – How Big Is Your Tree? (4-8)**

Content Standard 2.1 Materials can be classified as solid, liquid or gas based on their observable properties.

CMT Connection – A 18 Describe differences in the physical properties of solids and gases.

No Connections

Content Standard 2.2 Plants change their forms as part of their life cycles.

CMT Connection – A 19 Describe the life cycles of flowering plants as they grow from seeds, proceed through maturation and produce new seeds.

PLT 21 – Adopt a Tree (PreK-8)	**PLT 77 – Trees In Trouble (1-8)**
PLT 43 – Have Seeds Will Travel (K-8)	**PLT 79 - Tree Lifecycle (3-6)**
PLT 65 – Bursting Buds (K-6)	**PLT 87 – Earth Manners (PreK-4)**
PLT 76 – Tree Cookies (3-8)	

CMT Connection – A 20 Explore and describe the effects of light and water on seed germination and plant growth.

PLT 41 – How Plants Grow (4-8)	**PLT 77 – Trees in Trouble (1-8)**

Content Standard 2.3 Earth materials have varied physical properties which make them useful in different ways.

CMT Connection – A 21 Sort different soils by properties, such as particle size, color and composition.

PLT 70 – Soil Stories (K-8)

CMT Connection - A 22 Relate the properties of different soils to their capacity to retain water and support the growth of certain plants.

PLT 70 – Soil Stories (K-8)

Content Standard 2.4 Human beings, like all other living things, have special nutritional needs for survival.

CMT Connection – A 23 Identify the sources of common foods and classify them by their basic food groups.

PLT 16 – Pass the Plants, Please

CMT Connection – A 24 Describe how people in different cultures use different food sources to meet their nutritional needs.

No Connections

Scientific Inquiry, Literacy, and Numeracy, Grades 3 – 5

B INQ.1 Make observations and ask questions about objects, organisms and the environment.

PLT 1 – The Shape of Things (PreK-3)	**PLT 62 – To Be A Tree (PreK-4)**
PLT 2 – Get in Touch with Trees (PreK-6)	**PLT 63 – Tree Factory (3-6)**
PLT 3 – Peppermint Beetles (PreK-6)	**PLT 64 – Looking at Leaves (K-4)**
PLT 4 – Sounds Around ((PreK-8)	**PLT 65– Bursting Buds (K-6)**
PLT 9 – Planet Diversity (4-6)	**PLT 66 – Germinating Giants (4-6)**
PLT 11 – Can It Be Real? (4-8)	**PLT 67 – How Big is Your Tree? (4-8)**
PLT 16 – Pass the Plants, Please (K-8)	**PLT 68 – Name That Tree (2-8)**

PLT 20 – Environmental Exchange Box(K-8) PLT 21 – Adopt a Tree (PreK-8) PLT 22 – Trees as Habitats (PreK-8) PLT 23 – The Fallen Log (4-8) PLT 25 – Birds and Worms (K-6) PLT 36 – Pollution Search (PreK-6) PLT 37 – Reduce, Reuse, Recycle (5-8) PLT 38 – Every Drop Counts (4-8) PLT 41 – How Plants Grow (4-8) PLT 42 – Sunlight and Shades of Green (3-8) PLT 43 – Have Seeds, Will Travel (K-8) PLT 46 – Schoolyard Safari (PreK-5) PLT 47 – Are Vacant Lots Vacant? (4-8) PLT 61 – The Closer You Look (PreK-6)	PLT 69 – Forest for the Trees (4-8) PLT 70 – Soil Stories (K-8) PLT 75 – Tipi Talk (4-8) PLT 76 – Tree Cookies (3-8) PLT 77 – Trees In Trouble (1-8) PLT 78 – Signs of Fall (K-6) PLT 79 – Tree Lifecycle (3-6) PLT 80 - Nothing Succeeds Like Succession (3-8) PLT 82 – Resource-Go-Round (4-8) PLT 86 – Our Changing World (5-8) PLT 87 – Earth Manners (PreK-4) PLT 88 – Life on the Edge (4-8) PLT 96 – Improve Your Place (5-8)

B INQ.2	Seek relevant information in books, magazines and electronic media.
PLT 6 – Picture This (PreK-5) PLT 8 – The Forest of S.T. Shrew (1-6) PLT 9 – Planet Diversity (4-6) PLT 10 – Charting Diversity (4-8) PLT 12 – Invasive Species (5-8) PLT 13 – We All Need Trees (PreK-6) PLT 17 – People of the Forest (5-8) PLT 20 – Environmental Exchange Box(K-8) PLT 22 – Trees As Habitats (PreK-8) PLT 32 – A Forest of Many Uses (1-8) PLT 39 – Energy Sleuths (K-8) PLT 45 – Web Of Life (4-8) PLT 68 – Name That Tree (2-8)	PLT 76 – Tree Cookies (3-8) PLT 77 – Trees in Trouble (1-8) PLT 79 – Tree Lifecycle (3-6) PLT 82 – Resource-Go-Round (4-8) PLT 85 – In the Driver's Seat (5-8) PLT 86 – Our Changing World (5-8) PLT 88 – Life on the Edge (4-8) PLT 90 – Native Ways (4-8) PLT 92 – A Look at Lifestyles (5-8) PLT 95 – Did You Notice? (K-8) Energy & Society 2 – May the Source Be With You (PreK-8) Energy & Society 5 – In the Driver's Seat (4-8)

B INQ.3	Design and conduct simple experiments.
PLT 24 – Nature's Recyclers (1-6) PLT 37 – Reduce, Reuse, Recycle (5-8) PLT 41 – How Plants Grow (4-8) PLT 44 – Water Wonders (4-8)	PLT 70 – Soil Stories (K-8) PLT 77 – Trees in Trouble (1-8) PLT 78 – Signs of Fall (K-6)

B INQ.4	Employ simple equipment and measuring tools to gather data and extend the senses.
PLT 2 – Get in Touch with Trees (PreK-6) PLT 21 – Adopt a Tree (PreK-8) PLT 37 – Reduce, Reuse, Recycle (5-8) PLT 38 – Every Drop Counts (4-8) PLT 64 – Looking at Leaves (K-4) PLT 66 – Germinating Giants (4-6)	PLT 67 – How Big is your Tree? (4-8) PLT 73 – Waste Watchers (4-8) PLT 77 – Trees in Trouble (1-8) PLT 78 – Signs of Fall (K-6) PLT 85 – In the Driver's Seat (5-8) Energy & Society 5 – In The Driver's Seat (4-8)

B INQ.5	Use data to construct reasonable explanations.
PLT 12 – Invasive Species (5-8) PLT 16 – Pass the Plants, Please (K-8)	PLT 69 – Forest for the Trees (4-8) PLT 70 – Soil Stories (K-8)

PLT 25 – Birds and Worms (K-6) **PLT 37 – Reduce, Reuse, Recycle (5-8)** **PLT 38 – Every Drop Counts (4-8)** **PLT 41 – How Plants Grow (4-8)**	**PLT 73 – Waste Watchers (4-8)** **PLT 77 – Trees in Trouble (1-8)** **PLT 78 – Signs of Fall (K-6)**

B INQ.6	Analyze, critique and communicate investigations using words, graphs and drawings.

PLT 2 – Get in Touch With Trees (PreK-6) **PLT 3 – Peppermint Beetles (PreK-6)** **PLT 16 – Pass the Plants, Please (K-8)** **PLT 17 – People of the Forest (5-8)** **PLT 20 – Environmental Exchange Box(K-8)** **PLT 21 – Adopt a Tree (PreK-8)** **PLT 22 – Trees as Habitats (PreK-8)** **PLT 23 – The Fallen Log (4-8)** **PLT 24 – Nature's Recyclers (1-6)** **PLT 25 – Birds and Worms (K-6)** **PLT 36 – Pollution Search (PreK-6)** **PLT 37 – Reduce, Reuse, Recycle (5-8)** **PLT 38 – Every Drop Counts (4-8)** **PLT 39 – Energy Sleuths (K-8)** **PLT 41 – How Plants Grow (4-8)**	**PLT 44 – Water Wonders (4-8)** **PLT 46 – Schoolyard Safari (PreK-5)** **PLT 47 – Are Vacant Lots Vacant? (4-8)** **PLT 53 – On The Move (4-8)** **PLT 60 – Publicize It! (5-8)** **PLT 62 – To Be a Tree (PreK-4)** **PLT 66 – Germinating Giants (4-6)** **PLT 67 – How Big is Your Tree? (4-8)** **PLT 70 – Soil Stories (K-8)** **PLT 77 – Trees In Trouble (1-8)** **PLT 80 – Nothing Succeeds Like Succession (3-8)** **Energy & Society 2 – May the Source Be With You (PreK-8)**

B INQ.7	Read and write a variety of science-related fiction and non-fiction texts.

PLT 11 – Can It Be Real? (4-8) **PLT 12 – Invasive Species (5-8)** **PLT 18 – Tale of the Sun (K-6)** **PLT 21 – Adopt a Tree (PreK-8)** **PLT 39 – Energy Sleuths (K-8)** **PLT 49 – Tropical Treehouse (3-8)**	**PLT 82 – Resource-Go-Round (4-8)** **PLT 87 – Earth Manners (PreK-4)** **PLT 88 – Life on The Edge (4-8)** **PLT 89 – Trees for Many Reasons (2-8)** **PLT 90 – Native Ways (4-8)**

B INQ.8	Search the Web and locate relevant science information.

PLT 9 – Planet Diversity (4-6) **PLT10 – Charting Diversity (4-8)** **PLT 11 – Can It Be Real? (4-8)** **PLT 12 – Invasive Species (5-8)** **PLT 17 – People of the Forest (5-8)** **PLT 39 – Energy Sleuths K-8)** **PLT 45 – Web Of Life (4-8)** **PLT 76 – Tree Cookies (3-8)**	**PLT 77 – Trees in Trouble (1-8)** **PLT 79 – Tree Lifestyle (3-6)** **PLT 85 – In the Driver's Seat (5-8)** **PLT 86 – Our Changing World (5-8)** **PLT 88 – Life on the Edge (4-8)** **PLT 89 – Trees for Many Reasons (2-8)** **PLT 90 – Native Ways (4-8)** **PLT 92 – A Look at Lifestyles (5-8)**

B INQ.9 Use measurement tools and standard units (e.g. centimeters, meters, kilograms) to describe objects and materials.

PLT 21 – Adopt a Tree (PreK-8) PLT 37 – Reduce, Reuse, Recycle (5-8) PLT 41 – How Plants Grow (4-8) PLT 64 – Looking at Leaves (K-4)	PLT 66 – Germinating Giants (4-6) PLT 67 – How Big is Your Tree? (4-8) PLT 85 – In The Driver's Seat (5-8) Energy & Society 5 – In the Driver's Seat (4-8)

B INQ.10 Use mathematics to analyze, interpret and present data.

PLT 12 – Invasive Species (5-8) PLT 16 – Pass the Plants, Please (K-8) PLT 25 – Birds and Worms (K-6) PLT 37 – Reduce, Reuse, Recycle (5-8) PLT 38 – Every Drop Counts (4-8) PLT 41 – How Plants Grow (4-8)	PLT 53 – On the Move (4-8) PLT 66 – Germinating Giants (4-6) PLT 67 – How Big is Your Tree? (4-8) PLT 85 – In the Driver's Seat (5-8) Energy & Society 5 - In the Driver's Seat (4-8)

Content Standard 3.1 Materials have properties that can be identified and described through the use of simple tests.

CMT Connection – B 1 Sort and classify materials based on properties such as dissolving in water, sinking and floating, conducting heat, and attracting to magnets.

PLT 70 – Soil Stories (K-8)

CMT Connection – B 2 Describe the effect of heating on the melting, evaporation, condensation and freezing of water.

No Connections

Content Standard 3.2 Organisms can survive and reproduce only in environments that meet their basic needs.

CMT Connection – B 3 Describe how different plants and animals are adapted to obtain air, water, food and protection in specific land habitats.

PLT 3 – Peppermint Beetles (PreK-6) PLT 4 – Sounds Around (PreK-8) PLT 7 – Habitat Pen Pals (3-6) PLT 8 – The Forest of S.T. Shrew (1-6) PLT 10 – Charting Diversity (4-8) PLT 11 – Can It Be Real? (4-8) PLT 21 – Adopt a Tree (PreK-8) PLT 24 – Nature's Recyclers (1-6)	PLT 25 – Birds and Worms (K-6) PLT 41 – How Plants Grow (4-8) PLT 61 – The Closer You Look (PreK-6) PLT 62 – To Be a Tree (PreK-4) PLT 63 – Tree Factory (3-6) PLT 78 – Signs of Fall (K-6) PLT 79 – Tree Lifecycles (3-6)

CMT Connection – B 4 Describe how different plants and animals are adapted to obtain air, water, food and protection in water habitats.

PLT 10 – Charting Diversity (4-8)	**PLT 11 – Can It Be Real? (4-8)**

Content Standard 3.3 Earth materials have different physical and chemical properties.

CMT Connection – B 5 Describe the physical properties of rocks and relate them to their potential uses.

No Connections

CMT Connection – B 6 Relate the properties of rocks to possible environmental conditions during their formation.

No Connections

Content Standard 3.4 Earth materials provide resources for all living things , but these resources are limited and should be conserved.

CMT Connection – B 7 Describe how earth materials can be conserved by reducing the quantities used, and by reusing and recycling materials rather than discarding them.

PLT 13 – We All Need Trees (PreK-6) **PLT 14 – Renewable or Not? (4-8)** **PLT 15 – A Few of My Favorite Things (2-8)** **PLT 37 – Reduce, Reuse, Recycle (5-8)** **PLT 38 – Every Drop Counts (4-8)** **PLT 39 – Energy Sleuths (K-8)** **PLT 51 – Make Your Own Paper (1-8)** **PLT 52 – A Look at Aluminum (5-8)** **PLT 69 – Forest For The Trees (4-8)**	**PLT 73 – Waste Watchers (4-8)** **PLT 82 – Resource-Go-Round (4-8)** **PLT 83 – A Peek at Packaging (5-8)** **PLT 85 - In The Driver's Seat (5-8)** **PLT 87 – Earth Manners (PreK-4)** **PLT 89 – Trees For Many Reasons (2-8)** **Energy & Society 2 – May the Source Be With You (PreK-8)** **Energy & Society 5 – In the Driver's Seat (4-8)**

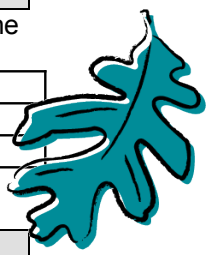
Content Standard 4.1 The position and motion of objects can be changed by pushing or pulling.

CMT Connection – B 8 Describe the effects of the strengths of pushed and pulls on the motions of objects.

No Connections

CMT Connection – B 9 Describe the effect of the mass of an object on its motion.

No Connections



Content Standard 4.2 All organisms depend on the living and non-living features of the environment for survival.

CMT Connection – B 10 Describe how animals, directly or indirectly, depend on plants to provide the food and energy they need in order to grow and survive.

PLT 7 – Habitat Pen Pals (3-6) **PLT 8 – The Forest of S.T. Shrew (1-6)** **PLT 9 – Planet Diversity (4-6)** **PLT10 – Charting Diversity (4-8)** **PLT 11 – Can It Be Real? (4-8)**	**PLT 12 – Invasive Species (5-8)** **PLT 23 – The Fallen Log (4-8)** **PLT 24 – Nature's Recyclers (1-6)** **PLT 66 – Germinating Giants (4-6)** **PLT 67 – How Big Is Your Tree? (4-8)**

CMT Connection – B 11 Describe how human phenomena and some human activities may cause changes to habitats and their inhabitants.

PLT 17 – People of the Forest (5-8) **PLT 19 – Viewpoints On The Line (6-8)**	**PLT 69 – Forest for the Trees (4-8)** **PLT 76 – Tree Cookies (3-8)**

PLT 21 – Adopt a Tree (PreK-8) **PLT 22 – Trees as Habitats (PreK-8)** **PLT 32 – A Forest of Many Uses (1-8)** **PLT 36 – Pollution Search (PreK-6)** **PLT 47 – Are Vacant Lots Vacant? (4-8)** **PLT 54 – I'd Like to Visit a Place Where… PreK-8)** **PLT 63 – Tree Factory (3-6)**	**PLT 77 – Trees in Trouble (1-8)** **PLT 80 – Nothing Succeeds Like Succession (3-8)** **PLT 81 – Living With Fire (4-8)** **PLT 87 – Earth Manners (PreK-4)** **PLT 88 – Life on the Edge (4-8)** **PLT 89 – Trees for Many Reasons (2-8)**

Content Standard 4.3 Water has a major role in shaping the Earth's surface.

CMT Connection – B 12 Describe how the sun's energy impacts the water cycle.

No Connections

CMT Connection – B 13 Describe the role of water in erosion and river formation.

PLT 44 – Water Wonders (4-8)	**PLT 70 – Soil Stories (K-8)**

Content Standard 4.4 Electrical and magnetic energy can be transferred and transformed.

CMT Connection – B 14 Describe how batteries and wires can transfer energy to light a light bulb.

No Connections

CMT Connection – B 15 Explain how simple electrical circuits can be used to determine which materials conduct electricity.

No Connections

CMT Connection – B 16 Describe the properties of magnets, and how they can be used to identify and separate mixtures of solid materials.

No Connections

Content Standard 5.1 Sound and light are forms of energy.

CMT Connection – B 17 Describe the factors that affect the pitch and loudness of sound produced by vibrating objects.

No Connections

CMT Connection – B 18 Describe how sound is transmitted, reflected and/or absorbed by different materials.

No Connections

CMT Connection – B 19 Describe how light is absorbed and/or reflected by different surfaces.

No Connections

Content Standard 5.2 Perceiving and responding to information about the environment is critical to the survival of organisms.

CMT Connection – B 20 Describe how light absorption and reflection allow one to see the shapes and colors of objects.

No Connections

CMT Connection – B 21 Describe the structure and function of the human senses and the signals they perceive.

PLT 3- Peppermint Beetle (K-6)	**PLT 4 - Sounds Around (K-8)**

Content Standard 5.3 Most objects in the solar system are in regular and predictable motions.

CMT Connection – B 22 Explain the cause of day and night based on the rotation of Earth on its axis.

No Connections

CMT Connection – B 23 Describe the monthly changes in the appearance of the moon, based on the moon's orbit around the Earth.

No Connections

Content Standard 5.4 Humans have the capacity to build and use tools to advance the quality of their lives.

CMT Connection – B 24 Compare and contrast the structures of the human eye with those of the camera.

No Connections

CMT Connection – B 25 Describe the uses of different instruments, such as eye glasses, magnifiers, periscopes and telescopes, to enhance our vision.

No Connections

Scientific Inquiry, Literacy, and Numeracy, Grades 6 - 8

C INQ.1 Identify questions that can be answered through scientific investigation.

PLT 29 – Rain Reasons (6-8)	**PLT 71 – Watch on Wetlands (7-8)**
PLT 41 – How Plants Grow (4-8)	**PLT 72 – Air We Breathe (6-8)**
PLT 42 – Sunlight and Shades of Green (3-8)	**PLT 77 – Trees in Trouble (1-8)**
PLT 70 – Soil Stories (K-8)	

C INQ.2 Read, interpret and examine the credibility of scientific sources of information.

PLT 11 – Can It Be Real? (4-8)	**PLT 86 – Our Changing World (5-8)**
PLT 29 – Rain Reasons (6-8)	**PLT 91 – In the Good Old Days (6-8)**
PLT 33 – Forest Consequences 6-8)	**PLT 94 – By the Rivers of Babylon (6-8)**
PLT 84 – The Global Climate (6-8)	

C INQ.3 Design and conduct appropriate types of scientific investigations to answer different questions.

PLT 9 – Planet Diversity (4-6)	**PLT 69 – Forest for the Trees (4-8)**
PLT 29 – Rain Reasons (6-8)	**PLT 70 – Soil Stories (K-8)**
PLT 41 – How Plants Grow (4-8)	**PLT 72 – Air We Breathe (6-8)**
PLT 42 – Sunlight and Shades of Green (3-8)	**PLT 77 – Trees in Trouble (1-8)**
PLT 45 – Web of Life (4-8)	**PLT 78 – Signs of Fall (K-6)**
PLT 47 – Are Vacant Lots Vacant? (4-8)	

C INQ.4 Identify independent and dependent variables, and those variables that are kept constant, when designing an experiment.

PLT 77 – Trees in Trouble (1-8)

C INQ.5	Use appropriate tools and techniques to make observations and gather data.
PLT 9 – Planet Diversity (4-6)	PLT 60 – Publicize It! (5-8)
PLT 20 – Environmental Exchange Box(K-8)	PLT 66 – Germinating Giants (4-6)
PLT 23 – The Fallen Log (4-8)	PLT 67 – How Big is Your Tree? (4-8)
PLT 24 – Nature's Recyclers (1-6)	PLT 68 – Name That Tree (2-8)
PLT 29 – Rain Reasons (6-8)	PLT 69 – Forest for the Trees (4-8)
PLT 36 – Pollution Search (PreK-6)	PLT 72 – Air We Breathe (6-8)
PLT 41 – How Plants Grow (4-8)	PLT 73 – Waste Watchers (4-8)
PLT 42 – Sunlight and Shades of Green (3-8)	PLT 77 – Trees in Trouble (1-8)
PLT 48 – Field, Forest, and Stream (4-8)	PLT 78 – Signs of Fall (K-6)
PLT 50 – 400 – Acre Wood (7-8)	PLT 85 – In the Driver's Seat (5-8)

C INQ.6	Use mathematical operations to analyze and interpret data.
PLT 12 – Invasive Species (5-8)	PLT 50 – 400-Acre Wood (7-8)
PLT 16 – Pass the Plants, Please (K-8)	PLT 66 – Germinating Giants (4-6)
PLT 21 – Adopt a Tree (PreK-8)	PLT 67 – How Big Is Your Tree? (4-8)
PLT 29 – Rain Reasons (6-8)	PLT 73 – Waste Watchers (4-8)
PLT 35 – Loving It Too Much (6-8)	PLT 84 – The Global Climate (6-8)
PLT 38 – Every Drop Counts (4-8)	PLT 85 – In the Driver's Seat (5-8)
PLT 41 – How Plants Grow (4-8)	

C INQ.7 Identify and present relationships between variables in. appropriate graphs

PLT 50 – 400-Acre Wood (7-8)	PLT 84 – The Global Climate (6-8)
PLT 77 – Trees in Trouble (1-8)	

C INQ.8	Draw conclusions and identify sources of error.
PLT 72 – Air We Breathe (6-8)	PLT 77 – Trees in Trouble (1-8)
PLT 76 – Tree Cookies (3-8)	

C INQ.9	Provide explanations to investigated problems or questions.
PLT 16 – Pass the Plants, Please (K-8)	PLT 60 – Publicize It! (5-8)
PLT 17 – People of the Forest (5-8)	PLT 70 – Soil Stories (K-8)
PLT 29 – Rain Reasons (6-8)	PLT 72 – Air We Breathe (6-8)
PLT 42 – Sunlight and Shades of Green (3-8)	PLT 76 – Tree Cookies (3-8)
PLT 50 – 400-Acre Wood (7-8)	PLT 77 – Trees in Trouble (1-8)
PLT 52 – A Look at Aluminum (5-8)	

C INQ.10	Communicate about science in different formats, using relevant science vocabulary, supporting evidence and clear logic.

PLT 9 – Planet Diversity (4-6) PLT10 – Charting Diversity (4-8) PLT 11 – Can It Be Real? (4-8) PLT 12 – Invasive Species (5-8) PLT 17 – People of the Forest (5-8) PLT 18 – Tale Of The Sun (K-6) PLT 20 – Environmental Exchange Box(K-8) PLT 21 – Adopt A Tree (PreK-8) PLT 26 – Dynamic Duos (5-8) PLT 29 – Rain Reasons (6-8) PLT 30 - Three Cheers for Trees (1-4) PLT 31 – Plant A Tree (1-8) PLT 32 – A Forest Of Many Users (1-8) PLT 33 – Forest Consequences (6-8) PLT 36 – Pollution Search (PreK-6) PLT 37 – Reduce, Reuse, Recycle (5-8) PLT 38 – Every Drop Counts (4-8) PLT 39 – Energy Sleuths (K-8) PLT 40 – Then and Now (4) PLT 47 – Are Vacant Lots Vacant? (4-8)	PLT 60 – Publicize It! (5-8) PLT 63 – Tree Factory (3-6) PLT 67 – How Big is Your Tree? (4-8) PLT 73 – Waste Watchers (4-8) PLT 79 – Tree Lifecycles (3-6) PLT 80 – Nothing Succeeds Like Succession (3-8) PLT 81 – Living With Fire (4-8) PLT 86 – Our Changing World (5-8) PLT 88 – Life on the Edge (4-8) PLT 89 – Trees for Many Reasons (2-8) PLT 92 – A Look At Lifestyles (5-8) PLT 94 – By the Rivers of Babylon (6-8) PLT 96 – Improve Your Place (5-8) Energy & Society 1 – Energy Detectives (4-8) Energy & Society 4 – May The Source Be with You (4-8) Energy & Society 5 – In the Driver's Seat (5-8)

Content Standard 6.1 Materials can be classified as pure substances or mixtures, depending on their chemical and physical properties.

CMT Connection – C 1 Describe the properties of common elements, such as oxygen, hydrogen, carbon, iron and aluminum**.**

PLT 52 – A Look at Aluminum (5-8)	PLT 84 – The Global Climate (6-8)

CMT Connection – C 2 Describe how the properties of simple compounds, such as water and table salt, are different from the properties of the elements of which they are made.

PLT 84 – The Global Climate (6-8)

CMT Connection – C 3 Explain how mixtures can be separated by using properties of the substances from which they are made, such as particle size, density, solubility and boiling point.

PLT 70 – Soil Stories (K-8)

Content Standard 6.2 An ecosystem is composed of all the populations that are living in a certain space and the physical factors with which they interact.

CMT Connection – C 4 Describe how abiotic factors, such as temperature, water and sunlight, affect the ability of plants to create their own food through photosynthesis.

PLT 28 – Air Plants (3-6) PLT 29 – Rain Reasons (6-8) PLT 42 – Sunlight and Shades of Green (3-8) PLT 63 – Tree Factory (3-6)	PLT 69 – Forest for the Trees (4-8) PLT 86 – Our Changing World (5-8) PLT 88 – Life on the Edge (4-8)

CMT Connection – C 5 Explain how populations are affected by predator-prey relationships.

PLT 26 – Dynamic Duos (5-8)	

CMT Connection – C 6 Describe common food webs in different Connecticut ecosystems.

PLT 9 – Planet Diversity (4-6) **PLT10 – Charting Diversity (4-8)** **PLT 11 – Can It Be Real? (4-8)** **PLT 12 – Invasive Species (5-8)** **PLT 20 – Environmental Exchange Box(K-8)** **PLT 21 – Adopt a Tree (PreK-8)**	**PLT 22 – Trees as Habitats (PreK-8)** **PLT 23 – The Fallen Log (4-8)** **PLT 24 – Nature's Recyclers (1-6)** **PLT 45 – Web of Life (4-8)** **PLT 71 – Watch on Wetlands (7-8)**

Content Standard 6.3 Variations in the amount of the sun's energy hitting the Earth's surface affect daily and seasonal weather patterns.

CMT Connection – C 7 Describe the effect of heating on the movement of molecules in solids, liquids and gases.

No Connections

CMT Connection – C 8 Explain how local weather conditions are related to the temperature, pressure and water content of the atmosphere and the proximity to a large body of water.

No Connections

CMT Connection – C 9 Explain how the uneven heating of the Earth's surface causes winds.

No Connections

Content Standard 6.4 Water moving across and through earth materials carries with it the products of human activities.

CMT Connection – C 10 Explain the role of septic and sewage systems on the quality of surface and ground water.

PLT 70 – Soil Stories (K-8)

CMT Connection – C 11 Explain how human activity may impact water resources in Connecticut, such as ponds, rivers, and the Long Island Sound ecosystem.

PLT 48 – Field, Forest, and Stream (4-8) **PLT 54 – I'd Like to Visit a Place Where… PreK-8)** **PLT 70 – Soil Stories (K-8)**	**PLT 85 – In the Driver's Seat (5-8)** **PLT 86 – Our Changing World (5-8)**

Content Standard 7.1 Energy provides the ability to do work and can exist in many forms.

CMT Connection – C 12 Explain the relationship among force, distance and work, and use the relationship (W = F x D) to calculate work done in lifting heavy objects.

No Connections

CMT Connection – C 13 Explain how simple machines, such as inclined planes, pulleys and levers, are used to create mechanical advantage.

No Connections

CMT Connection – C 14 Describe how different types of stored (potential) energy can be used to make objects move.

Energy & Society 1 – Energy Detectives (PreK-8)

Content Standard 7.2 Many organisms, including humans, have specialized organ systems that interact with each other to maintain dynamic internal balance.

CMT Connection – C 15 Describe the basic structures of an animal cell, including nucleus, cytoplasm, mitochondria and cell membrane, and how they function to support life.

No Connections

CMT Connection – C 16 Describe the structures of the human digestive, respiratory and circulatory systems, and explain how they function to bring oxygen and nutrients to the cells and expel waster materials.

No Connections

CMT Connection – C 17 Explain how the human musculo-skeletal system supports the body and allows movement.

No Connections

Content Standard 7.3 Landforms are the result of the interactions of constructive and destructive forces over time.

CMT Connection – C 18 Describe how folded and faulted rock layers provide evidence of the gradual up and down motion of the Earth's crust.

No Connections

CMT Connection – C 19 Explain how glaciation, weathering and erosion create and shape valleys and floodplains.

No Connections

CMT Connection – C 20 Explain how the boundaries of tectonic plates can be inferred from the location of earthquakes and volcanoes.

No Connections

Content Standard 7.4 Technology allows us to improve food production and preservation, thus improving our ability to meet the nutritional needs of growing populations.

CMT Connection – C 21 Describe how freezing, dehydration, pickling and irradiation prevent food spoilage caused by microbes.

PLT 96 – Improve Your Place (5-8)

Content Standard 8.1 An object's inertia causes it to continue moving the way it is moving unless it is acted upon by a force to change its motion.

CMT Connection – C 22 Calculate the average speed of a moving object and illustrate the motion of objects in graphs of distance over time.

No Connections

CMT Connection – C 23 Describe the qualitative relationships among force, mass and changes in motion.

No Connections

CMT Connection – C 24 Describe the forces acting on an object moving in a circular path.

No Connections

Content Standard 8.2 Reproduction is a characteristic of living systems and it is essential for the continuation of every species.

CMT Connection – C 25 Explain the similarities and differences in cell division in somatic and germ cells.

No Connections

CMT Connection – C 26 Describe the structure and function of the male and female human reproductive systems, including the process of egg and sperm production.

No Connections

CMT Connection – C 27 Describe how genetic information is organized in genes on chromosomes, and explain sex determination in humans.

No Connections

Content Standard 8.3 The solar system is composed of planets and other objects that orbit the sun.

CMT Connection – C 28 Explain the effect of gravity on the orbital movement of planets in the solar system.

No Connections

CMT Connection – C 29 Explain how the regular motion and relative position of the sun, Earth and moon affect the seasons, phases of the moon and eclipses.

PLT 78 – Signs of Fall (K-6)

Content Standard 8.4 In the design of structures there is a need to consider factors such as function, materials, safety, cost and appearance.

CMT Connection – C 30 Explain how beam, truss and suspension bridges are designed to withstand the forces that act on them.

No Connections

Scientific Inquiry, Literacy, and Numeracy, Grades 9 – 10

D INQ.1 Identify questions that can be answered through scientific investigations.

PWL 3 – Mapping Your Community Through Time (9-12)	**PWL 5 – Green Space (9-12)**

D INQ.2 Read, interpret and explain the credibility and validity of scientific claims in different sources of information.

PWL 1 – Personal Places (9-12) **PWL 3 – Mapping Your Community Through Time (9-12)**	**PWL 5 – Green Spaces (9-12)** **PWL 6 – A Vision for the Future (9-12)** **PWL 7 – Far-Reaching Decisions (-12)**

D INQ.3 Formulate a testable hypothesis and demonstrate logical connections between the scientific concepts guiding the hypothesis and the design of the experiment.

No Connections

D INQ.4 Design and conduct appropriate types of scientific investigations to answer different questions.	
PWL 1 – Personal Places (9-12) **PWL 2 – Community Character (9-12)**	**PWL 5 – Green Spaces (9-12)**

D INQ.5 Identify independent and dependent variables, including those that are kept constant and those used as controls.
No Connections

D INQ.6 Use appropriate tools and techniques to make observations and gather data.	
PWL 1 – Personal Places (9-12) **PWL 2 – Community Character (9-12)** **PWL 3 – Mapping Your Community Through Time (9-12)**	**PWL 5 – Green Spaces (9-12)** **PWL 6 – A Vision for the Future (9-12)** **PWL 7 – Far-Reaching Decisions (9-12)**

D INQ.7 Assess the reliability of the data that was generated in the investigation.	
PWL 1 – Personal Places (9-12) **PWL 2 – Community Character (9-12)**	**PWL 3 – Mapping Your Community Through Time (-12)** **PWL 5 – Green Spaces (9-12)**

D INQ.8 Use mathematical operations to analyze and interpret data, and present relationships between variables in appropriate forms.
PWL 7 – Far-Reaching Decisions (9-12)

D INQ.9 Articulate conclusions and explanations based on research data, and assess results based on the design of the investigation.	
PWL 3 – Mapping Your Community through Time (9-12)	**PWL 5 – Green Spaces (9-12)** **PWL 6 - A Vision for the Future (9-12)**

D INQ.10 Communicate about science in different formats, using relevant science vocabulary, supporting evidence and clear logic.
PWL 5 – Green Spaces (9-12)

Content Standard 9.1 Energy cannot be created or destroyed; however, energy can be converted from one form to another.

CAPT Connection – D 1 Describe the effects of adding energy to matter in terms of the motion of atoms and molecules, and the resulting phase changes.

No Connections

CAPT Connection – D 2 Explain how energy is transferred by conduction, convection and radiation.

No Connections

CAPT Connection – D 3 Describe energy transformations among heat, light, electricity and motion.

No Connections

Content Standard 9.2 The electrical force is a universal force that exists between any two charged objects.

CAPT Connection – D 4 Explain the relationship among voltage, current and resistance in a simple series circuit.

No Connections

CAPT Connection – D 5 Explain how electricity is used to produce heat and light in incandescent bulbs and heating elements.

No Connections

CAPT Connection – D 6 Describe the relationship between current and magnetism.

No Connections

Content Standard 9.3 Various sources of energy are used by humans and all have advantages and disadvantages.

CAPT Connection – D 7 Explain how heat is used to generate electricity.

No Connections

CAPT Connection – D 8 Describe the availability, current uses and environmental issues related to the use of fossil and nuclear fuels to produce electricity.

PWL 7– Far-Reaching Decisions (9-12)

CAPT Connection – D 9 Describe the availability, current uses and environmental issues related to the use of hydrogen fuel cells, wind and solar energy to produce electricity.

PWL 7 – Far-Reaching Decisions (9-12)

Content Standard 9.4 Atoms react with one another to form new molecules.

CAPT Connection – D 10 Describe the general structure of the atom, and explain how the properties of the first 20 elements in the Periodic Table are related to their atomic structure.

No Connections

CAPT Connection – D 11 Describe how atoms combine to form new substances by transferring electrons (ionic bonding) or sharing electrons (covalent bonding).

No Connections

CAPT Connection – D 12 Explain the chemical composition of acids and bases, and explain the change of pH in neutralization reactions.

No Connections

Content Standard 9.5 Due to its unique chemical structure, carbon forms many organic and inorganic compounds.

CAPT Connection – D 13 Explain how the structure of the carbon atom affects the type of bonds it forms in organic and inorganic molecules.

No Connections

CAPT Connection – D 14 Describe combustion reactions of hydrocarbons and their resulting by-products.

No Connections

CAPT Connection – D 15 Explain the general formation and structure of carbon-based polymers, including synthetic polymers, such as polyethylene, and biopolymers, such as carbohydrate.

No Connections

Content Standard 9.6 Chemical technologies present both risks and benefits to the health and well-being of humans, plants and animals.

CAPT Connection – D 16 Explain how simple chemical monomers can be combined to create linear, branched and/or cross-linked polymers.

No Connections

CAPT Connection – D 17 Explain how the chemical structure of polymers affects their physical properties.

No Connections

CAPT Connection – D 18 Explain the short- and long-term impacts of landfills and incineration of waste materials on the quality of the environment.

PWL 7 – Far-Reaching Decisions (9-12)

Content Standard 9.7 Elements on Earth move among reservoirs in the solid earth, oceans, atmosphere and organisms as part of biochemical cycles.

CAPT Connection – D 19 Explain how chemical and physical processes cause carbon to cycle through the major earth reservoirs.

PWL 7 – Far-Reaching Decisions (9-12)

CAPT Connection – D 20 Explain how solar energy causes water to cycle through the major earth reservoirs.

PWL 8 – Regional Community Issues: The Ogallala Aquifer (9-12)

CAPT Connection – D 21 Explain how internal energy of the Earth causes matter to cycle through the magma and the solid earth.

No Connections

Content Standard 9.8 The use of resources by human populations may affect the quality of the environment.

CAPT Connection – D 22 Explain how the release of sulfur dioxide (SO_2) into the atmosphere can form acid rain, and how acid rain affects water sources, organisms and human-made structures.

No Connections

CAPT Connection – D 23 Explain how the accumulation of carbon dioxide (CO_2) in the atmosphere increases Earth's "greenhouse" effect and may cause climate changes.

PWL 7 – Far-Reaching Decisions (9-12)

CAPT Connection – D 24 Explain how the accumulation of mercury, phosphates and nitrates affects the quality of water and the organisms that live in rivers, lakes and oceans.

PWL 8 – Regional Community Issues: The Ogallala Aquifer (9-12)

Content Standard 9.9 Some materials can be recycled, but others accumulate in the environment and may affect the balance of the Earth systems.

CAPT Connection – D 25 Explain how land development, transportation options and consumption of resources may affect the environment.

PWL 1 – Personal Places (9-12) **PWL 2 – Community Character(9-12)** **PWL 3 – Mapping Your Community Through Time (9-12)**	**PWL 5 – Green Spaces (9-12)** **PWL 7 – Far-Reaching Decisions (9-12_** **PWL 8 – Regional Community Issues: The Ogallala Aquifer (9-12)**

CAPT Connection – D 26 Describe human efforts to reduce the consumption of raw materials and improve air and water quality.

PWL 5 – Green Spaces (9-12) **PWL 7 – Far-Reaching Decisions (9-12)**	**PWL 8 – Regional Community Issues: The Ogallala Aquifer (9-12)**

Content Standard 10.1 Fundamental life processes depend on the physical structure and the chemical activities of the cell.

CAPT Connection – D 27 Describe significant similarities and differences in the basic structure of plant and animals cells.

No Connections

CAPT Connection – D 28 Describe the general role of DNA and RNA in protein synthesis.

No Connections

CAPT Connection – D 29 Describe the general role of enzymes in metabolic cell processes.

No Connections

CAPT Connection – D 30 Explain the role of the cell membrane in supporting cell function.

No Connections

Content Standard 10.2 Microorganisms have an essential role in life processes and cycles on Earth.

CAPT Connection – D 31 Describe the similarities and differences between bacterial and viruses.

No Connections

CAPT Connection – D 32 Describe how bacterial and viral infectious diseases are transmitted, and explain the roles of sanitation, vaccination and antibiotic medications in the prevention and treatment of infectious diseases.

No Connections

CAPT Connection – D 33 Explain how bacteria and yeasts are used to produce foods for human consumption.

No Connections

Content Standard 10.3 Similarities in the chemical and structural properties of DNA in all living organisms allow the transfer of genes from one organism to another.

CAPT Connection – D 34 Describe, in general terms, how the genetic information of organisms can be altered to make them produce new materials.

No Connections

CAPT Connection – D 35 Explain the risks and benefits of altering the genetic composition and cell products of existing organisms.

No Connections

Content Standard 10.4	In sexually reproducing organisms, each offspring contains a mix of characteristics inherited from both parents.

CAPT Connection – D 36 Explain how meiosis contributes to the genetic variability of organisms.

No Connections

CAPT Connection – D 37 Use the Punnet Square technique to predict the distribution of traits in mono- and dihybrid crossings.

No Connections

CAPT Connection – D 38 Deduce the probable mode of inheritance of traits (e.g. recessive/dominant, sex-linked) from pedigree diagrams showing phenotypes.

No Connections

CAPT Connection – D 39 Describe the difference between genetic disorders and infectious diseases.

No Connections

Content Standard 10.5	Evolution and biodiversity are the results of genetic changes that occur over time in constantly changing environments.

CAPT Connection – D 40 Explain how the processes of genetic mutation and natural selection are related to the evolution of species.

No Connections

CAPT Connection – D 41 Explain how the current theory of evolution provides a scientific explanation for fossil records of ancient life forms.

No Connections

CAPT Connection – D 42 Describe how structural and behavioral adaptations increase the chances for organisms to survive in their environments.

No Connections

Content Standard 10.6	Living organisms have the capability of producing populations of unlimited size, but the environment can support only a limited number of individuals from each species.

CAPT Connection – D 43 Describe the factors that affect the carrying capacity of the environment,

PWL 1 – Personal Places (9-12)	**PWL 8 – Regional Community Issues: The Ogallala Aquifer (9-12)**

CAPT Connection – D 44 Explain how change in population density is affected by emigration, immigration, birth rate and death rate, and relate these factors to the exponential growth of human populations.

PWL 6 – A Vision for the Future (9-12)	**PWL 8 – Regional Community Issues: The Ogallala Aquifer (9-12)**

CAPT Connection – D 45 Explain how technological advances have affected the size and growth rate of human populations throughout history.

No Connections

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