

3<sup>rd</sup> Grade Fall Lessons Plant Growth and Development

GC = Growing Classroom; LL = Local Lesson; SGP = School Garden Project

3 <sup>rd</sup> Grade Lessons	Garden Lesson ideas to bolster STC Plant Growth and Development and meet NGSS – Fall 2015		
Lesson # and Date	Lessons	Source	Materials
1) 9/7-9/18 Inheritance of traits and variation	A) A Warm Place to Grow Pg 108 – plant radish into area with mulch vs. no mulch	GC	Seeds Mulch Trowel Gloves Thermometer Lab Sheet + clip boards Pencils
	B) Scavenger hunt for parts of plants and relating that to the lifecycle of the plant as Burma Shave Hike. Pg 71	LL - GC	Question sheet with answers for the teacher Cards with pink ribbon to help find them
	C) Have students taste three varieties of tomato or pepper and discuss the inherited traits, observe and record the growth of plants and the favorite based on taste. If they were farmers, which would they grow..... Pg. 179	LL GC	Lab Sheet – local pencils Knife Cutting board Measuring tape
2) 9/21-9/25 Seed Saving	A) Seed Saving Station 1 – corn Corn is not self-pollinating—pollen must be carried by the wind from tassels of one plant to silks of another for pollination to occur. Seeds which do not get pollinated will not form kernels. Allow corn ears to mature and dry on the stalks, but harvest as soon as the ears are dry to keep them from getting rained on. Let corn kernels continue to dry on the cobs in a protected spot. After the kernels are thoroughly dry, rub them off the ears with your hands. Store in dry cool place for up to 3 years Ask students what makes it hard to save seeds?	SGP	Why Save Seeds Seed catalogue Plate or bowl Seed envelopes Life cycle of a corn plant page if available
	B) Seed Saving Station 2 – tomato To clean wet seeds, scoop the seeds from the fruit, pulp and all. Pour the seeds and pulp into a large, sloping bowl and add water. Healthy seeds will sink to the bottom, while dead seeds and most of the pulp will float. Use your fingers to gently separate all the seeds from the pulp. Leave to dry on a plate Show students seed catalogue and ask how many varieties they can find and why it is important to have many types	SGP	Why Save Seeds Seed catalogue Plate or bowl Seed envelopes Jar w/ water Bowls plate life cycle of a tomato plant if available x 2
	C) Seed Saving Station 3 – Beans self-pollinating and crossing is uncommon, Pick beans for seed after the pods are ripe and have dried on the plants. Don't allow dried pods to get rained on as the beans may quickly mildew or sprout in their pods. When very dry many pods will split on their own to drop their seeds; the rest can be easily crumbled in the hands and the finer chaff blown away after removing the big pieces. Finish drying the beans in a dry spot indoors or	SGP	Why Save Seeds Seed catalogue Seed envelopes Life cycle of a bean plant if available

	under cover. Ask Students what are some good reasons for us to save seeds.		
3) 9/28-10/2 Plant needs and effect of environment	A) record temperature readings from A Warm Place to Grow pg 108 – make observation of plants – Final discussion	GC	Lab Sheets + collected data to teacher ahead of time, Thermometer Clip boards Pencils Ruler
	B) Garden Fruit– taste and discuss nutrients of a garden fruit and review parts of the plant, plant life cycle and inheritance of traits - estimate number of seeds in a garden fruit and estimate the number of seeds on a whole plant using multiplication	LL	Cutting boards, knife Fork to distribute pieces Seed catalog White board Dry Erase Markers or Paper and clip board
	C) Plant Needs and their environment – what do plants need to grow well - game	SGP	Lesson Description Plant need cards Plant part cards – if time permits
4) 10/19-23 Garden Animals and flower interactions = pollination	A) Mason Bees-Their life cycle- taking down the mason bee homes and checking for cocoons	LL	Bee life cycle picture Social vs. Solitary Bee descriptions page Bee Quiz
	B) Flower Model and Match Pollinators with flowers - Game	GC	Reason for a Flower book Flower Model Pollinator/Flower Cards
	C) Garden animal illustrations – discussion of insects -		Interview and Organism Sheets Clip Boards Pencils
5) 10/26-30 Wheat, flour, bread	A) Wheat - on the stalk – Threshing wheat -what part of a plant is being collected? How was it created? See 12 different kinds of grain (cereal and non-cereal grains)		Wheat on the stalk, tools to thresh (pillow case, bucket and stick, plate), grain display, laminated pictures of different grains
	B) What kind of nutrients do we find in flour? Is white flour the same as whole wheat? Making dough and making bread sticks		Kitchen aid, dough pre-made, ingredients for new dough, baking pans, bowls, spoons, forks, laminated description of difference between white and whole grain