

## *Design a new playground!*

You have \$100,000 to create a new playground for Peter Howell Elementary School. Maybe we will have a new swimming pool, a skate park, or a laser-tag facility. But you need to stay within your budget! You should also think about landscaping--should we have new grass or trees? Is there shade on the playground? Make sure to have age-appropriate equipment, and the right kind of surface below.

1. Figure out the dimensions of the playground area.
2. Interview Mr. O about the safety requirements of playground equipment (also ask Mrs. Hunley for a sheet of safety standards).
3. Use Google to figure out how much different types of playground equipment cost.
4. Survey your fellow students to find out what type of playground equipment they most want.
5. Present the results of your survey to the class using some type of visual representation, for example, a graph or pie chart.
6. Decide what you will build and can afford (create a budget).
7. Present your proposal to the class and include a blueprint showing the design of the new playground. You will also create a report showing your budget for the new playground, and the results from your survey.



## *Create a new school meal!*

You have been selected to create a new school breakfast or lunch for Peter Howell Elementary School. Maybe we will have steak and eggs, or a salad bar. But you need to keep the cost low and meet the USDA school meal standards.

1. Find out how many kids are at Peter Howell Elementary School.
2. Interview the cafeteria people to find out what makes up a balanced lunch for students. It also needs to match the USDA standards for school breakfast or lunch. (Ask Mrs. Hunley or go to <http://www.gpo.gov/fdsys/pkg/FR-2012-01-26/pdf/2012-1010.pdf>)
3. Use Google to figure out how much different types of food will cost and if they fit in the USDA standards.
4. Survey your fellow students to find out what kind of food they would like to eat for breakfast or lunch.
5. Present the results of your survey to the class using some type of visual representation, for example, a graph or pie chart.
6. Decide what you will plan for your meal and can afford (create a budget).
7. Present your proposal to the class including your budget. Be sure to include a picture showing the new school meal. You will also create a report showing your budget for the new meal, and the results from your survey.



## *Design a new animal enclosure!*




Reid Park Zoo wants to add a new animal enclosure. Decide on an animal, find out how much space that animal needs, and how much it costs to feed that animal. You will also design an enclosure (try to make it feel like home!) Remember, animals can be expensive, so we want to keep costs down.

1. Find what animals are already at Reid Park Zoo. Remember, we want to have a *new* animal. (Go to <http://www.tucsonzoo.org/meet-the-animals/>)
2. Survey students to see what new animal they would most like to see at the zoo.
3. Present the results of your survey to the class using some type of visual representation, for example, a graph or pie chart.
4. Interview a zookeeper to find out how much it costs to take care of the animal you chose.
5. Present the results of your survey to the class using some type of visual representation, for example, a graph or pie chart.
6. Decide what you will purchase for the enclosure and what you can afford (create a budget).
7. Present your proposal to the class including the budget. Include a picture showing blueprint of the new enclosure. You will also create a report showing your budget for the new animal and enclosure, and the results from your survey.



# Playground Standards, U.S. Consumer Product Safety Commission (2012)

**TABLE 1. EXAMPLES OF AGE APPROPRIATE EQUIPMENT**

		
<p><b>Toddler – Ages 6-23 months</b></p> <ul style="list-style-type: none"> <li>• Climbing equipment under 32" high</li> <li>• Ramps</li> <li>• Single file step ladders</li> <li>• Slides*</li> <li>• Spiral slides less than 360°</li> <li>• Spring rockers</li> <li>• Stairways</li> <li>• Swings with full bucket seats</li> </ul>	<p><b>Preschool – Ages 2-5 years</b></p> <ul style="list-style-type: none"> <li>• Certain climbers**</li> <li>• Horizontal ladders less than or equal to 60" high for ages 4 and 5</li> <li>• Merry-go-rounds</li> <li>• Ramps</li> <li>• Rung ladders</li> <li>• Single file step ladders</li> <li>• Slides*</li> <li>• Spiral slides up to 360°</li> <li>• Spring rockers</li> <li>• Stairways</li> <li>• Swings – belt, full bucket seats (2-4 years) &amp; rotating tire</li> </ul>	<p><b>Grade School – Ages 5-12 years</b></p> <ul style="list-style-type: none"> <li>• Arch climbers</li> <li>• Chain or cable walks</li> <li>• Free standing climbing events with flexible parts</li> <li>• Fulcrum seesaws</li> <li>• Ladders – Horizontal, Rung, &amp; Step</li> <li>• Overhead rings***</li> <li>• Merry-go-rounds</li> <li>• Ramps</li> <li>• Ring treks</li> <li>• Slides*</li> <li>• Spiral slides more than one 360° turn</li> <li>• Stairways</li> <li>• Swings – belt &amp; rotating tire</li> <li>• Track rides</li> <li>• Vertical sliding poles</li> </ul>
<p>* See §5.3.6</p>	<p>** See §5.3.2</p>	<p>*** See §5.3.2.5</p>

**Table 2. Minimum compressed loose-fill surfacing depths**

Inches	Of	(Loose-Fill Material)	Protects to	Fall Height (feet)
6*		Shredded/recycled rubber		10
9		Sand		4
9		Pea Gravel		5
9		Wood mulch (non-CCA)		7
9		Wood chips		10
<p>* Shredded/recycled rubber loose-fill surfacing does not compress in the same manner as other loose-fill materials. However, care should be taken to maintain a constant depth as displacement may still occur.</p>				

# USDA Standards for School Breakfast and Lunch, 2012

Meal pattern	Breakfast meal pattern		
	Grades K–5	Grades 6–8	Grades 9–12
	Amount of food <sup>a</sup> per week (Minimum per day)		
Fruits (cups) <sup>b,c</sup> .....	5 (1)	5 (1)	5 (1)
Vegetables (cups) <sup>b,c</sup> .....	0	0	0
Dark green .....	0	0	0
Red/Orange .....	0	0	0
Beans and peas (legumes) .....	0	0	0
Starchy .....	0	0	0
Other .....	0	0	0
Grains (oz eq) <sup>d</sup> .....	7–10 (1)	8–10 (1)	9–10 (1)
Meats/Meat Alternates (oz eq) <sup>e</sup> .....	0	0	0
Fluid milk <sup>f</sup> (cups) .....	5 (1)	5 (1)	5 (1)
<b>Other Specifications: Daily Amount Based on the Average for a 5-Day Week</b>			
Min-max calories (kcal) <sup>g,h</sup> .....	350–500	400–550	450–600
Saturated fat (% of total calories) <sup>h</sup> .....	< 10	< 10	< 10
Sodium (mg) <sup>h,i</sup> .....	≤ 430	≤ 470	≤ 500
Trans fat <sup>h,j</sup> .....	Nutrition label or manufacturer specifications must indicate zero grams of trans fat per serving.		

Meal pattern	Lunch meal pattern		
	Grades K–5	Grades 6–8	Grades 9–12
	Amount of food <sup>a</sup> per week (minimum per day)		
Fruits (cups) <sup>b</sup> .....	2½ (½)	2½ (½)	5 (1)
Vegetables (cups) <sup>b</sup> .....	3¾ (¾)	3¾ (¾)	5 (1)
Dark green <sup>c</sup> .....	½	½	½
Red/Orange <sup>c</sup> .....	¾	¾	1¼
Beans and peas (legumes) <sup>c</sup> .....	½	½	½
Starchy <sup>c</sup> .....	½	½	½
Other <sup>c,d</sup> .....	½	½	¾
Additional Veg to Reach Total <sup>e</sup> .....	1 <sup>e</sup>	1 <sup>e</sup>	1½ <sup>e</sup>
Grains (oz eq) <sup>f</sup> .....	8–9 (1)	8–10 (1)	10–12 (2)
Meats/Meat Alternates (oz eq) .....	8–10 (1)	9–10 (1)	10–12 (2)
Fluid milk (cups) <sup>g</sup> .....	5 (1)	5 (1)	5 (1)
<b>Other Specifications: Daily Amount Based on the Average for a 5-Day Week</b>			
Min-max calories (kcal) <sup>h</sup> .....	550–650	600–700	750–850
Saturated fat (% of total calories) <sup>h</sup> .....	< 10	< 10	< 10
Sodium (mg) <sup>h,i</sup> .....	≤ 640	≤ 710	≤ 740
Trans fat <sup>h</sup> .....	Nutrition label or manufacturer specifications must indicate zero grams of trans fat per serving.		

<sup>a</sup> Food items included in each group and subgroup and amount equivalents. Minimum creditable serving is 1/8 cup.  
<sup>b</sup> One quarter-cup of dried fruit counts as 1/2 cup of fruit; 1 cup of leafy greens counts as 1/2 cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100% full-strength.  
<sup>c</sup> Larger amounts of these vegetables may be served.  
<sup>d</sup> This category consists of "Other vegetables" as defined in § 210.10(c)(2)(iii)(E). For the purposes of the NSLP, the "Other vegetables" requirement may be met with any additional amounts from the dark green, red/orange, and beans/peas (legumes) vegetable subgroups as defined in § 210.10(c)(2)(iii).  
<sup>e</sup> Any vegetable subgroup may be offered to meet the total weekly vegetable requirement.  
<sup>f</sup> Beginning July 1, 2012 (SY 2012–2013), at least half of grains offered must be whole grain-rich. Beginning July 1, 2014 (SY 2014–15), all grains must be whole grain-rich.  
<sup>g</sup> Beginning July 1, 2012 (SY 2012–2013), all fluid milk must be low-fat (1 percent or less, unflavored) or fat-free (unflavored or flavored).  
<sup>h</sup> Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, trans fat, and sodium. Foods of minimal nutritional value and fluid milk with fat content greater than 1 percent are not allowed.  
<sup>i</sup> Final sodium targets must be met no later than July 1, 2022 (SY 2022–2023). The first intermediate target must be met no later than SY 2014–2015 and the second intermediate target must be met no later than SY 2017–2018. See required intermediate specifications in § 210.10(f)(3).  
<sup>j</sup> Trans fat restrictions must be implemented on July 1, 2013 (SY 2013–14).